FEDERAL REGISTER

Vol. 87 Thursday

No. 97 May 19, 2022

Pages 30385–30766

OFFICE OF THE FEDERAL REGISTER

The **FEDERAL REGISTER** (ISSN 0097–6326) is published daily, Monday through Friday, except official holidays, by the Office of the Federal Register, National Archives and Records Administration, under the Federal Register Act (44 U.S.C. Ch. 15) and the regulations of the Administrative Committee of the Federal Register (1 CFR Ch. I). The Superintendent of Documents, U.S. Government Publishing Office, is the exclusive distributor of the official edition. Periodicals postage is paid at Washington, DC.

The **FEDERAL REGISTER** provides a uniform system for making available to the public regulations and legal notices issued by Federal agencies. These include Presidential proclamations and Executive Orders, Federal agency documents having general applicability and legal effect, documents required to be published by act of Congress, and other Federal agency documents of public interest.

Documents are on file for public inspection in the Office of the Federal Register the day before they are published, unless the issuing agency requests earlier filing. For a list of documents currently on file for public inspection, see *www.federalregister.gov.*

The seal of the National Archives and Records Administration authenticates the Federal Register as the official serial publication established under the Federal Register Act. Under 44 U.S.C. 1507, the contents of the **Federal Register** shall be judicially noticed.

The **Federal Register** is published in paper and on 24x microfiche. It is also available online at no charge at *www.govinfo.gov*, a service of the U.S. Government Publishing Office.

The online edition of the **Federal Register** is issued under the authority of the Administrative Committee of the Federal Register as the official legal equivalent of the paper and microfiche editions (44 U.S.C. 4101 and 1 CFR 5.10). It is updated by 6:00 a.m. each day the **Federal Register** is published and includes both text and graphics from Volume 1, 1 (March 14, 1936) forward. For more information, contact the GPO Customer Contact Center, U.S. Government Publishing Office. Phone 202-512-1800 or 866-512-1800 (toll free). E-mail, *gpocusthelp.com.*

The annual subscription price for the **Federal Register** paper edition is $860 plus postage, or $929, for a combined **Federal Register, Federal Register** Index and List of CFR Sections Affected (LSA) subscription; the microfiche edition of the **Federal Register** including the **Federal Register** Index and LSA is $330, plus postage. Six month subscriptions are available for one-half the annual rate. The prevailing postal rates will be applied to orders according to the delivery method requested. The price of a single copy of the daily **Federal Register,** including postage, is based on the number of pages: $11 for an issue containing less than 200 pages; $22 for an issue containing 200 to 400 pages; and $33 for an issue containing more than 400 pages. Single issues of the microfiche edition may be purchased for $3 per copy, including postage. Remit check or money order, made payable to the Superintendent of Documents, or charge to your GPO Deposit Account, VISA, MasterCard, American Express, or Discover. Mail to: U.S. Government Publishing Office—New Orders, P.O. Box 979050, St. Louis, MO 63197-9000; or call toll free 1-866-512-1800, DC area 202-512-1800; or go to the U.S. Government Online Bookstore site, see *bookstore.gpo.gov.*

There are no restrictions on the republication of material appearing in the **Federal Register.**

How To Cite This Publication: Use the volume number and the page number. Example: 87 FR 12345.

Postmaster: Send address changes to the Superintendent of Documents, Federal Register, U.S. Government Publishing Office, Washington, DC 20402, along with the entire mailing label from the last issue received.

SUBSCRIPTIONS AND COPIES

PUBLIC

Subscriptions:

Paper or fiche	**202–512–1800**
Assistance with public subscriptions	**202–512–1806**
General online information	**202–512–1530; 1–888–293–6498**

Single copies/back copies:

Paper or fiche	**202–512–1800**
Assistance with public single copies	**1–866–512–1800 (Toll-Free)**

FEDERAL AGENCIES

Subscriptions:

Assistance with Federal agency subscriptions:	
Email	*FRSubscriptions@nara.gov*
Phone	**202–741–6000**

The Federal Register Printing Savings Act of 2017 (Pub. L. 115-120) placed restrictions on distribution of official printed copies of the daily **Federal Register** to members of Congress and Federal offices. Under this Act, the Director of the Government Publishing Office may not provide printed copies of the daily **Federal Register** unless a Member or other Federal office requests a specific issue or a subscription to the print edition. For more information on how to subscribe use the following website link: *https://www.gpo.gov/frsubs.*

Contents

Federal Register

Vol. 87, No. 97

Thursday, May 19, 2022

Administrative Conference of the United States
NOTICES
Disclosure of Agency Legal Materials, 30445–30446

Agriculture Department
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals, 30446–30447

Centers for Disease Control and Prevention
NOTICES
Requests for Nominations:
Advisory Committee to the Director Data and Surveillance Workgroup, 30497–30498

Centers for Medicare & Medicaid Services
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals, 30498

Children and Families Administration
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals:
Evaluation of the Child Welfare Capacity Building Collaborative, 30498–30500
Generic Clearance for Disaster Information Collection Forms, 30500–30501

Civil Rights Commission
NOTICES
Meetings:
Florida Advisory Committee, 30447–30448

Coast Guard
RULES
Drawbridge Operation:
Keweenaw Waterway, between Houghton and Hancock, MI, 30418–30420

Commerce Department
See Foreign-Trade Zones Board
See International Trade Administration
See National Oceanic and Atmospheric Administration

Consumer Product Safety Commission
PROPOSED RULES
Safety Standard:
Play Yards to Require a Minimum Thickness for Play Yard Mattresses, and to Standardize the Size of Play Yards and Play Yard Mattresses, 30436–30437

Defense Department
See Navy Department
RULES
Privacy Act; Implementation, 30416–30418

Drug Enforcement Administration
NOTICES
Decision and Order:
Fares Jeries Rabadi, M.D., 30564–30608

Education Department
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals:
Guaranty Agency Financial Report, 30474–30475

Energy Department
See Federal Energy Regulatory Commission
PROPOSED RULES
Energy Conservation Program:
Standards for Commercial Water Heating Equipment, 30610–30728
Standards for Residential Clothes Washers, 30433–30434

Environmental Protection Agency
RULES
Air Quality State Implementation Plans; Approvals and Promulgations:
Michigan; Partial Approval and Partial Disapproval for Infrastructure State Implementation Plan Requirements for the 2015 Ozone National Ambient Air Quality Standards; Correction, 30420–30423
Nevada; Clark County Department of Environment and Sustainability, 30423–30425
Pesticide Tolerance; Exemptions, Petitions, Revocations, etc.:
Flonicamid, 30425–30429
Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, Participation by Disadvantaged Business Enterprises in United States Environmental Protection Agency Programs, State and Local Assistance, Research and Demonstration Grants, National Environmental Education Act Grants, 30393–30402
PROPOSED RULES
Air Quality State Implementation Plans; Approvals and Promulgations:
Missouri; St. Louis Area Vehicle Inspection and Maintenance Program, 30437–30442
NOTICES
Meetings:
Clean Air Act Advisory Committee, 30479–30480

Federal Aviation Administration
RULES
Airspace Designations and Reporting Points:
Palestine, TX, 30414–30415
Airworthiness Directives:
Airbus SAS Airplanes, 30402–30405
Rolls-Royce Deutschland Ltd and Co KG (Type Certificate previously held by Roll-Royce plc) Turbofan Engines, 30411–30413
Viking Air Limited (Type Certificate Previously Held by Bombardier, Inc. and de Havilland, Inc.) Airplanes, 30405–30411
PROPOSED RULES
Airworthiness Directives:
Airbus SAS Airplanes, 30434–30436
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals:
Certification of Airports, 30550–30551

Federal Communications Commission
RULES
Television Broadcasting Services:
Weston, WV, 30429–30430
Wichita, KS, 30429
PROPOSED RULES
Interoperable Video Conferencing Service, 30442–30444

Federal Deposit Insurance Corporation
NOTICES
Meetings; Sunshine Act, 30480

Federal Election Commission
NOTICES
Meetings; Sunshine Act, 30480

Federal Energy Regulatory Commission
NOTICES
Application:
Village of Swanton, VT, 30477–30478
Combined Filings, 30477–30479
Environmental Impact Statements; Availability, etc.:
Driftwood Pipeline, LLC, Line 200 and Line 300 Project, 30475–30477
Filing:
Florida Power and Light Co., 30475

Federal Housing Finance Agency
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals, 30480–30494

Federal Mediation and Conciliation Service
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals:
Stakeholder Surveys for Facilitation and Other Purposes, 30494–30495

Federal Motor Carrier Safety Administration
NOTICES
Exemption Application:
Commercial Driver's License Standards; Recreation Vehicle Industry Association, 30553–30555
Entry-Level Driver Training; Oak Harbor Freight Lines, Inc., 30551–30553

Federal Trade Commission
NOTICES
Analysis of Proposed Consent Order:
Lions not Sheep, 30495–30497

Fish and Wildlife Service
NOTICES
Habitat Conservation Plan:
Three Species in Los Alamos, CA; Categorical Exclusion for the Legacy Homes Development Project; Santa Barbara County, CA, 30513–30514

Foreign Assets Control Office
NOTICES
Sanctions Actions, 30557–30559

Foreign-Trade Zones Board
NOTICES
Proposed Production Activity:
AbbVie, Ltd. (Pharmaceutical Products), Foreign-Trade Zone 7, Mayaguez, PR, 30448

Health and Human Services Department
See Centers for Disease Control and Prevention
See Centers for Medicare & Medicaid Services
See Children and Families Administration
See Health Resources and Services Administration
See National Institutes of Health
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals, 30507–30508

Health Resources and Services Administration
NOTICES
Criteria for Determining Maternity Care Health Professional Target Areas, 30501–30506

Homeland Security Department
See Coast Guard
See U.S. Customs and Border Protection

Housing and Urban Development Department
NOTICES
Changes in Certain Office of Healthcare Programs Insurance Premiums, 30510–30513

Interior Department
See Fish and Wildlife Service
See Land Management Bureau
See National Park Service

International Trade Administration
NOTICES
Antidumping or Countervailing Duty Investigations, Orders, or Reviews:
Certain Walk-Behind Snow Throwers and Parts Thereof from the People's Republic of China, 30448–30450
Circular Welded Carbon Steel Standard Pipe and Tube Products from Turkey, 30453
Determinations in the Less-Than-Fair-Value Investigations:
Certain Lemon Juice from Brazil and the Republic of South Africa, 30452–30453
Developing a Framework on Competitiveness of Digital Asset Technologies, 30450–30452

Justice Department
See Drug Enforcement Administration

Labor Department
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals:
Pilot Study and Prospective Analysis of the Draft Revised Form 33, Safety and Health Program Assessment Worksheet, 30515–30516

Land Management Bureau
NOTICES
Mailing/Street Address Change:
Owyhee Field Office and Ware Yard, 30514

National Highway Traffic Safety Administration
NOTICES
Petition for Decision of Inconsequential Noncompliance:
Toyo Tire Holdings of Americas, Inc., 30556–30557

National Institutes of Health
NOTICES
Meetings:
Center for Scientific Review, 30508–30510

National Oceanic and Atmospheric Administration
RULES
Fisheries off West Coast States:
Modification of the West Coast Salmon Fisheries; Inseason Actions #3 through #11, 30430–30432
PROPOSED RULES
Fisheries of the Caribbean, Gulf of Mexico, and South Atlantic:
Comprehensive Fishery Management Plans for Puerto Rico, St. Croix, and St. Thomas and St. John, 30730–30765
NOTICES
Taking or Importing of Marine Mammals:
Ocean Wind II Marine Site Characterization Surveys, New Jersey, 30453–30474

National Park Service
NOTICES
National Register of Historic Places:
Pending Nominations and Related Actions, 30514–30515

National Science Foundation
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals, 30516–30517

Navy Department
NOTICES
Secretarial Authorization to Serve on the Board of Directors, Navy-Marine Corps Relief Society, 30474

Nuclear Regulatory Commission
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals:
Equal Employment Opportunity Electronic Complaint System, 30518–30519
Guidance:
Spent Fuel Heat Generation in an Independent Spent Fuel Storage Installation, 30517–30518

Presidential Documents
PROCLAMATIONS
Special Observances:
Emergency Medical Services Week (Proc. 10395), 30385–30386
National Defense Transportation Day and National Transportation Week (Proc. 10396), 30387–30388
Peace Officers Memorial Day and Police Week (Proc. 10397), 30389–30390
World Trade Week (Proc. 10398), 30391–30392

Privacy and Civil Liberties Oversight Board
NOTICES
Meetings:
Public Forum on Domestic Terrorism, 30519

Securities and Exchange Commission
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals, 30519–30520, 30534, 30542, 30548–30550
Self-Regulatory Organizations; Proposed Rule Changes:
Cboe BZX Exchange, Inc., 30520–30524, 30546–30548
Cboe C2 Exchange, Inc., 30542–30546
Cboe EDGX Exchange, Inc., 30538–30542
Cboe Exchange, Inc., 30534–30538
NYSE Arca, Inc., 30524–30531
The Options Clearing Corp., 30531–30533

Transportation Department
See Federal Aviation Administration
See Federal Motor Carrier Safety Administration
See National Highway Traffic Safety Administration

Treasury Department
See Foreign Assets Control Office
NOTICES
Mandatory Survey of Foreign Ownership of U.S. Securities, 30559–30560

U.S. Customs and Border Protection
RULES
List of User Fee Airports:
Removal of One Airport, 30415–30416

Veterans Affairs Department
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals:
Application Request to Add and/or Remove Dependents, 30560–30561
Meetings:
Advisory Committee on Cemeteries and Memorials, 30561
National Academic Affiliations Council, 30560

Separate Parts In This Issue

Part II
Justice Department, Drug Enforcement Administration, 30564–30608

Part III
Energy Department, 30610–30728

Part IV
Commerce Department, National Oceanic and Atmospheric Administration, 30730–30765

Reader Aids

Consult the Reader Aids section at the end of this issue for phone numbers, online resources, finding aids, and notice of recently enacted public laws.

To subscribe to the Federal Register Table of Contents electronic mailing list, go to https://public.govdelivery.com/accounts/USGPOOFR/subscriber/new, enter your e-mail address, then follow the instructions to join, leave, or manage your subscription.

CFR PARTS AFFECTED IN THIS ISSUE

A cumulative list of the parts affected this month can be found in the Reader Aids section at the end of this issue.

2 CFR
1500 30393

3 CFR
Proclamations:
10395 30385
10396 30387
10397 30389
10398 30391

10 CFR
Proposed Rules:
430 30433
431 30610

14 CFR
39 (4 documents) 30402, 30405, 30408, 30411
71 30414
Proposed Rules:
39 30434

16 CFR
Proposed Rules:
Ch. II 30436

19 CFR
122 30415

32 CFR
310 30416

33 CFR
117 418

40 CFR
33 30393
35 30393
45 30393
46 30393
47 30393
52 (2 documents) 30420, 30423
180 30425
Proposed Rules:
52 30437

47 CFR
73 (2 documents) 30429
Proposed Rules:
14 30442

50 CFR
660 30430
Proposed Rules:
600 30730
622 30730

Federal Register
Vol. 87, No. 97
Thursday, May 19, 2022

Presidential Documents

Title 3—

The President

Proclamation 10395 of May 13, 2022

Emergency Medical Services Week, 2022

By the President of the United States of America

A Proclamation

Every day, emergency medical service (EMS) providers put the needs of their communities above their own as they respond to crises, treat injuries, and save lives. Their heroism has been on full display throughout the COVID–19 pandemic, as resilient EMS workers across the country have provided essential care to Americans. This year's Emergency Medical Services Week theme, ''Rising to the Challenge,'' pays tribute to the brave frontline professionals who work tirelessly to help their fellow Americans get immediate medical attention in their hours of greatest need.

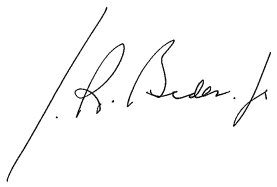
With compassion, determination, and skill, EMS providers embody the best of our Nation—from paramedics, 911 dispatchers, and emergency medical technicians to nurses, law enforcement officers, and firefighters. Collectively, they distributed COVID–19 vaccinations, provided aid after medical emergencies and disasters, and eased our suffering in countless ways. The unwavering commitment of EMS providers to public service often comes at the cost of their own physical well-being, mental health, and precious time with loved ones.

That is why my American Rescue Plan included billions of dollars to support women and men who serve in EMS roles. I have also made it a priority to ensure that our State, local, Tribal, and territorial partners have the resources they need to train and equip EMS providers so they can respond to public health emergencies safely and effectively.

During Emergency Medical Services Week, we share our appreciation for the selfless EMS professionals who provide lifesaving services every day and risk their lives each time they answer the call of service. We also honor the EMS providers who have made the ultimate sacrifice in the line of duty to protect their fellow Americans. Our Nation owes a tremendous debt of gratitude to these heroes and their loved ones. May God bless our Nation's EMS workers and their families.

NOW, THEREFORE, I, JOSEPH R. BIDEN JR., President of the United States of America, by virtue of the authority vested in me by the Constitution and the laws of the United States, do hereby proclaim May 15 through May 21, 2022, as National Emergency Medical Services Week. I call upon public officials, doctors, nurses, paramedics, EMS providers, and all the people of the United States to observe this week with appropriate programs, ceremonies, and activities to honor our brave EMS workers and to pay tribute to the EMS providers who lost their lives in the line of duty.

IN WITNESS WHEREOF, I have hereunto set my hand this thirteenth day of May, in the year of our Lord two thousand twenty-two, and of the Independence of the United States of America the two hundred and forty-sixth.



[FR Doc. 2022–10879
Filed 5–18–22; 8:45 am]
Billing code 3395–F2–P

Presidential Documents

Proclamation 10396 of May 13, 2022

National Defense Transportation Day and National Transportation Week, 2022

By the President of the United States of America

A Proclamation

In 1919, Army Lieutenant Colonel Dwight D. Eisenhower joined a cross-country convoy of trucks and tanks to determine if our Nation had the capacity to transport military assets. He discovered a poorly connected patchwork of roads that were unsafe for civilians and unsuitable for our military needs. When he became the President 34 years later, Dwight Eisenhower made connecting the Nation a top priority by creating the unprecedented Interstate Highway System that linked the country to coast-to-coast travel and commerce, revolutionized public safety, and unleashed America's unrivaled sense of discovery and exploration.

Today, America's transportation system weaves together distant communities into one Nation, making our economy more competitive in the global market and enabling our American way of life. On National Defense Transportation Day and during National Transportation Week, we recognize the importance of our Nation's infrastructure to our national and economic security.

We also recognize that our transportation systems are not equally accessible to all groups. They link some neighborhoods while undermining, dividing, and leaving others behind. They create pollution and contribute to climate change. In addition, many of our roads, bridges, waterways, and airports that were once ranked among the best in the world have fallen into disrepair due to neglect and lack of investment.

That is why last year I signed the Bipartisan Infrastructure Law—the largest investment in America's infrastructure since President Dwight Eisenhower and the largest single investment ever in our roads, bridges, passenger rail, and public transit. These historic investments are funding crucial repairs to the infrastructure that our Nation relies on so heavily for interstate commerce and national security. The law also modernizes our Nation's ports and waterways, strengthening our supply chains, our economic growth, and our global competitiveness while protecting communities from the accelerating impact of climate change.

Working together, governments at every level will be positioned to deliver tangible results for the American people—safer roads, better public transit options, and a national network of electric vehicle charging infrastructure. We will reconnect communities and create good-paying jobs, building and maintaining infrastructure projects that are funded by this landmark legislation.

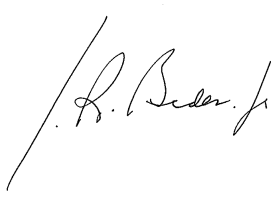
During National Transportation Week, we acknowledge the importance of our transportation infrastructure and honor the men and women who design, build, operate, and maintain it. We also recognize transportation workers who serve traveling Americans every day. As we enter a new era in transportation infrastructure, my Administration will continue to support our Nation's evolving transportation needs to fuel long-term economic growth and improve the quality of life for all Americans.

In recognition of the ongoing contributions of our Nation's transportation system and in honor of the devoted professionals who work to sustain

its tradition of excellence, the United States Congress has requested, by joint resolution approved May 16, 1957, as amended (36 U.S.C. 120), that the President designate the third Friday in May of each year as ''National Defense Transportation Day'' and, by joint resolution approved May 14, 1962 (36 U.S.C. 133), that the week in which that Friday falls be designated as ''National Transportation Week.''

NOW, THEREFORE, I, JOSEPH R. BIDEN JR., President of the United States of America, do hereby proclaim Friday, May 20, 2022, as National Defense Transportation Day and May 15 through May 21, 2022, as National Transportation Week. I urge all Americans to observe these occasions with appropriate ceremonies, programs, and activities as we show our appreciation to those who build and operate our Nation's transportation systems.

IN WITNESS WHEREOF, I have hereunto set my hand this thirteenth day of May, in the year of our Lord two thousand twenty-two, and of the Independence of the United States of America the two hundred and forty-sixth.



[FR Doc. 2022–10882
Filed 5–18–22; 8:45 am]
Billing code 3395–F2–P

Presidential Documents

Proclamation 10397 of May 13, 2022

Peace Officers Memorial Day and Police Week, 2022

By the President of the United States of America

A Proclamation

For generations, courageous men and women of our Nation's law enforcement community have dedicated their lives to protecting us in big cities, small towns, and suburban neighborhoods across America. Each morning, police officers pin on their shield and walk out the door to go to work, hoping they will come home safely. Last year, a record number of law enforcement officers died in the line of duty. On Peace Officers Memorial Day and during Police Week, we express our gratitude for these selfless public servants who put themselves in harm's way to keep us safe and honor those who lost their lives in the line of duty.

As we see a rise in gun violence and other violent crimes, it is critical that we fund law enforcement with the resources and training they need to do their jobs safely and effectively. That is why the American Rescue Plan provided $350 billion that cities, States, counties, and tribes can use to hire more police officers and invest in proven strategies like community violence intervention, youth programming, and other supportive services. It is also why my proposed 2023 budget more than doubles funding for effective community policing through the Community Oriented Policing Services Hiring Program. In addition, my budget increases support for the United States Marshals and the Bureau of Alcohol, Tobacco, Firearms, and Explosives, so they can apprehend fugitives and fight illegal gun trafficking.

Gun violence not only affects community members, it also targets law enforcement officers. Last month at the White House, surrounded by law enforcment, community leaders, and families who have lost loved ones to gun violence, we announced that the Department of Justice is reining in the proliferation of ''ghost guns''—privately-made firearms without serial numbers that are increasingly showing up on our streets and being used to attack law enforcement officers and members of the public.

My Administration is also committed to supporting programs that protect the physical safety of our law enforcement—more bulletproof vests, active shooter trainings, and early warnings of threats targeting officers. We must also do more to protect our officers' mental health and emotional well-being. Suicide and COVID–19 were among the leading causes of death for law enforcement officers in 2021. Last November, I was proud to sign into law three bills that extend critical peer counseling and mental health resources for officers, expand eligibility and benefits for first responders disabled in the line of duty, and protect Federal law enforcement serving abroad. Our officers swear an oath to protect us, and we owe them the same pledge.

We must not abandon our streets or accept the false choice between public safety and equal justice. The solution is not to defund our police. It is to make our streets more secure through policing that treats everyone with dignity and respect. It is to provide officers with the resources, tools, and training they need to keep our neighborhoods safe.

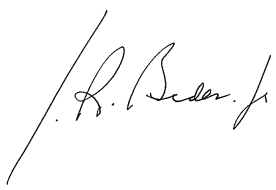
During Police Week, let us demonstrate our appreciation for the unsung heroes who nobly wear the badge and put their lives at risk to protect people each and every day. Let us honor the brave officers whose bright

futures were cut short in the line of duty. Let us come together to help police be the partners and protectors our communities and our Nation need for a safer, more just America.

By a joint resolution approved October 1, 1962, as amended (76 Stat. 676), and by Public Law 103–322, as amended (36 U.S.C. 136–137), the President has been authorized and requested to designate May 15 of each year as ''Peace Officers Memorial Day'' and the week in which it falls as ''Police Week.''

NOW, THEREFORE, I, JOSEPH R. BIDEN JR., President of the United States of America, do hereby proclaim May 15, 2022, as Peace Officers Memorial Day and May 15 through May 21, 2022, as Police Week. I call upon all Americans to observe these events with appropriate ceremonies and activities and salute our Nation's brave law enforcement officers and remember their peace officer brothers and sisters who have given their last full measure of devotion in the line of duty. I also call on the Governors of the United States and its Territories, and appropriate officials of all units of government, to direct that the flag be flown at half-staff on Peace Officers Memorial Day. I further encourage all Americans to display the flag at half-staff from their homes and businesses on that day.

IN WITNESS WHEREOF, I have hereunto set my hand this thirteenth day of May, in the year of our Lord two thousand twenty-two, and of the Independence of the United States of America the two hundred and forty-sixth.



[FR Doc. 2022–10883
Filed 5–18–22; 8:45 am]
Billing code 3395–F2–P

Presidential Documents

Proclamation 10398 of May 13, 2022

World Trade Week, 2022

By the President of the United States of America

A Proclamation

American workers are the finest in the world, and my Administration remains steadfast in our commitment to building a better America by pursuing a trade agenda that puts workers first and helps foster a fairer, more inclusive, more prosperous, and more resilient Nation. During World Trade Week, we highlight the importance of global trade and the role it plays in raising the quality of life of American families while strengthening our economy and our workforce.

There is no limit to what our Nation can achieve when we work together, and I know that we can out-compete any country in the world. Winning the competition for the 21st century requires investing in our country and our people here at home, and that is exactly what my Administration is doing. Last year, we saw an unprecedented revival of American manufacturing and the pride that comes with stamping products ''Made in America.'' From automobiles and semiconductors to clean energy technologies, companies are building here in America again; we added over 350,000 manufacturing jobs to the economy in 2021—the best year for manufacturing jobs in nearly three decades. Through the Bipartisan Infrastructure Law, we are making crucial investments in our Nation's infrastructure, including in our ports, highways, roads, airports, and bridges, which American companies rely on to export goods. Companies have announced billions of dollars in new investments to produce and manufacture more goods right here on American soil.

Not only are we building American products and services here at home—we are selling them around the globe. My Administration has developed a comprehensive trade policy that increases and diversifies the pool of American businesses engaging in international trade. We have set a bold goal to double the number of businesses receiving export assistance from the Department of Commerce, with particular emphasis on engaging with businesses in historically underserved communities. We have made it possible for small and medium enterprises engaged in export-oriented manufacturing projects to benefit from medium- and long-term loans and loan guarantees offered by the Export-Import Bank of the United States.

My Administration continues to marshal a whole-of-government approach to address issues that threaten our economic security and prosperity—from an unprecedented pandemic and the climate crisis to global conflict and geopolitical instability. We are making investments to strengthen our global supply chains even as we strengthen our domestic supply chains in critical industries, and we are standing up to bring an end to unfair foreign trade practices that harm American workers, producers, and businesses.

We are also deepening our crucial bilateral and multilateral economic relationships with partners and allies to ensure a level playing field for United States businesses and workers and build a more stable, fair, and dependable international economic arena. This entails working together to enforce existing trade agreements while establishing new and improved trade frameworks. We are also recommitting the United States to global multilateral institutions, including the World Trade Organization, in pursuit of more durable, resilient,

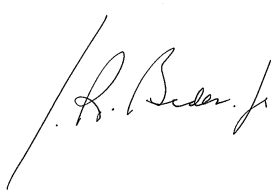
and sustainable trade policies that deliver better results for American workers and families.

At the same time, we are resolving ongoing issues with our trading partners and using trade as a tool to help address our common challenges, including climate change and the threat of unfair competition from non-market and authoritarian regimes. We reached a groundbreaking deal with the European Union that included a commitment to negotiate the world's first emission-based trade arrangement on steel and aluminum trade. We concluded a 17-year international commercial aviation dispute that will support good-paying jobs here at home. We reached deals with the United Kingdom and Japan on steel and aluminum. We addressed environmental protections through the United States-Mexico-Canada Agreement. We are also using trade to rebuild our alliances and meet shared security challenges, which threaten our networks, our quality of life, and the strength of our democracies. We are ushering in a new era of transatlantic cooperation between the United States and the European Union—including the U.S.-EU Trade and Technology Council and Transatlantic Data Privacy Framework—and developing an Indo-Pacific Economic Framework to strengthen our economic and trade relationships with partners in the region.

Now more than ever, we need our trade policies to deliver for American workers and families. With strong investments and resources—and a bold strategy for inclusive and long-lasting economic prosperity—American businesses and workers will continue to meet every challenge and win the competition for the 21st century.

NOW, THEREFORE, I, JOSEPH R. BIDEN JR., President of the United States of America, by virtue of the authority vested in me by the Constitution and the laws of the United States, do hereby proclaim May 15 through May 21, 2022, as World Trade Week. I call upon all Americans to observe this week and to celebrate with appropriate programs, ceremonies, and activities.

IN WITNESS WHEREOF, I have hereunto set my hand this thirteenth day of May, in the year of our Lord two thousand twenty-two, and of the Independence of the United States of America the two hundred and forty-sixth.



[FR Doc. 2022–10884

Filed 5–18–22; 8:45 am]

Billing code 3395–F2–P

Rules and Regulations

Federal Register
Vol. 87, No. 97
Thursday, May 19, 2022

This section of the FEDERAL REGISTER contains regulatory documents having general applicability and legal effect, most of which are keyed to and codified in the Code of Federal Regulations, which is published under 50 titles pursuant to 44 U.S.C. 1510.

The Code of Federal Regulations is sold by the Superintendent of Documents.

ENVIRONMENTAL PROTECTION AGENCY

2 CFR Part 1500

40 CFR Parts 33, 35, 45, 46 and 47

[EPA–HQ OMS–2020–0018; 7573–01–OMS]

Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, Participation by Disadvantaged Business Enterprises in United States Environmental Protection Agency Programs, State and Local Assistance, Research and Demonstration Grants, National Environmental Education Act Grants

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This regulatory action finalizes an interim final rule and revises certain provisions of other Environmental Protection Agency (EPA) financial assistance regulations to make non-substantive technical corrections to the text of the rules. Revisions to these rules are exempt from the notice and comment requirements of the Administrative Procedure Act (APA) because it is a matter relating to agency management concerning grants.

DATES: This final rule is effective May 19, 2022.

FOR FURTHER INFORMATION CONTACT: Suzanne Hersh, Office of Grants and Debarment, Office of Mission Support, U.S. Environmental Protection Agency; email address: *hersh.suzanne@epa.gov;* telephone number: (202) 564–3361.

SUPPLEMENTARY INFORMATION: This Final Rule adopts as final with change the 2 CFR part 1500 revisions that were promulgated in a September 30, 2020 **Federal Register** document as an Interim Final Rule with request for comment. No comments were submitted. The Interim Final Rule was effective as of November 12, 2020, to coincide with the effective date of the Office of Management and Budget's revisions to 2 CFR part 200. This Final Rule will also make technical corrections (described below) to the text in 2 CFR part 1500 and provisions of other EPA financial assistance rules in 40 CFR part 33, 40 CFR part 35, 40 CFR part 40 and 40 CFR part 47.

The Final Rule

1. Amends 2 CFR 1500.3, *Applicability,* to add a citation to 2 CFR part 25, *Universal Identifier and System for Award Management.*

2. Amends 2 CFR 1500.7, *Retention requirements for records,* to update the citation to record retention requirements in 2 CFR part 200 by changing the citation from 2 CFR 200.333 to 2 CFR 200.334 to coincide with OMB's renumbering of certain sections in 2 CFR part 200.

3. Amends 2 CFR 1500.11 *Use of the same architect or engineer during construction,* to update citations to procurement requirements in 2 CFR part 200 and clarify certain terms. The current citations to 2 CFR 200.320(f) and 2 CFR 200.326 have been changed to 2 CFR 200.320(c)(4) and 2 CFR 200.327 respectively based on OMB renumbering certain sections in 2 CFR part 200. Additionally, the term ''subaward'' in 2 CFR 1500.11 has been changed to ''contract'' throughout this provision for consistency with the terminology in 2 CFR part 200 and 2 CFR 1500.10.

4. Amends 2 CFR 1500.12 to update the web addresses to Quality Assurance documents.

5. Amends 2 CFR 1500.14, *Definitions,* to delete the definition of ''Review Official'' at 2 CFR 1500.14(f). The definition is no longer necessary because the Interim Final Rule eliminated the role of the Review Official in the disputes process.

6. Amends 2 CFR 1500.17 *Determination of Dispute,* to clarify in 2 CFR 1500.17(e) the time for requesting reconsideration of a Dispute Decision Official (DDO) decision is 15 calendar days from the issuance of a DDO decision.

7. Amends 40 CFR 33.103, *Definitions,* to update the citation to the definition of *Equipment* by changing the citation from 2 CFR 200.33 to 2 CFR 200.1 to coincide with OMB's renumbering of certain sections in 2 CFR part 200.

8. Amends 40 CFR 33.105, *What are the compliance and enforcement provisions of this subpart,* to update the citation to the remedies for non-compliance provisions in 2 CFR part 200 by changing the citation from 2 CFR 200.338 to 2 CFR 200.339 to coincide with OMB's renumbering of certain sections in 2 CFR part 200.

9. Amends 40 CFR 35.113, *Reimbursement for pre-award costs,* to clarify that the only requirements for the allowability of pre-award costs is that the costs be incurred during the EPA approved budget period for the assistance agreement award, that the costs be otherwise allowable if incurred after award, and that the applicant identify pre-award costs in the application for EPA funding. This clarification will make the regulation consistent with EPA's intent as described in the Preamble to the final rule for 40 CFR part 35, subpart A (66 FR 1726, 1728 (January 9, 2001)).

10. Amends 40 CFR 35.114, *Amendments and other changes,* to clarify that all adjustments to amounts of environmental program grants require prior EPA approval through grant amendments. Adjustments requiring prior EPA approval include increases or decreases in the amount of Federal funding as well as increases or decreases in the amount of recipients' cost shares.

11. Amends 40 CFR 35.115, *Evaluation of performance,* to update the citations to the provisions for performance reporting in 2 CFR part 200 by changing the citation from 2 CFR 200.328 to 2 CFR 200.329 and to update the citation to the remedies for non-compliance provisions in 2 CFR part 200 by changing the citation from 2 CFR 200.338 to 2 CFR 200.339–200.243 to coincide with OMB's renumbering of certain sections in 2 CFR part 200.

12. Amends 40 CFR 35.133(b), *Changes in eligible programs,* by adding a reference to an EPA website that provides current list of environmental programs eligible for inclusion in Performance Partnership Grants.

13. Revises 40 CFR 35.503, *Deviation from this subpart,* to update the citation to EPA's provisions for regulatory exceptions from 2 CFR 1500.3 to 2 CFR 1500.4 to coincide with EPAs' renumbering of certain sections in 2 CFR part 1500. Additionally, the heading of the section and the text has

been revised to use the term ''Exception'' rather than ''Deviation'' to be consistent with the terminology in 2 CFR 1500.4.

14. Amends 40 CFR 35.513(a), *Reimbursement for pre-award costs,* to clarify that the only requirements for the allowability of pre-award costs is that the costs be incurred during the EPA approved budget period for the assistance agreement award, that the costs be otherwise allowable if incurred after award, and that the applicant identify pre-award costs in the application for EPA funding. This clarification will make the regulation consistent with EPA's intent as described in the Preamble to the final rule for 40 CFR part 35, subpart B (66 FR 3782, 3783 (January 16, 2001)).

15. Amends 40 CFR 35.514, *Amendments and other changes,* to clarify that all adjustments to amounts of environmental program grants require prior EPA approval through grant amendments. Adjustments requiring prior EPA approval include increases or decreases in the amount of Federal funding as well as increases or decreases in the amount of recipients' cost shares.

16. Revises 40 CFR 35.532(b), *Requirements summary,* to correct a typographical error in the numbering of the subsections.

17. Amends 40 CFR 35.515, *Evaluation of performance,* to update the citations to the provisions for performance reporting in 2 CFR part 200 by changing the citation from 2 CFR 200.328 to 2 CFR 200.329 and to update the citation to the remedies for non-compliance provisions in 2 CFR part 200 by changing the citation from 2 CFR 200.338 to 2 CFR 200.339–200.243 to coincide with OMB's renumbering of certain sections in 2 CFR part 200.

18. Amends 40 CFR 35.533(a), *Programs eligible for inclusion,* to change the citation to the list of eligible programs from 40 CFR 35.101(a)(2) through (10) to 40 CFR 35.501(a)(2) through (10) to correct a typographical error. Additionally, the Final Rule amends 40 CFR 35.333(b), by adding a reference to an EPA website that provides current list of environmental programs eligible for inclusion in Performance Partnership Grants.

19. Amends 40 CFR 35.588, *Award limitations,* by changing the citation to the quality assurance provisions in 2 CFR part 1500 from 2 CFR 1500.11 to 2 CFR 1500.12 to coincide with EPA's renumbering of certain sections of 2 CFR part 1500.

20. Amends 40 CFR 35.2036, *Design/build projects,* to update the citations to procurement provisions in 2 CFR part 200 by changing the citations from 2 CFR 200.325 to 2 CFR 200.326 and 2 CFR 200.326 to 2 CFR 200.327 to coincide with OMB's renumbering of certain sections in 2 CFR part 200. Additionally, citations to the procurement provisions in 2 CFR part 1500 are being changed from 2 CFR 1500.9 and 2 CFR 1500.10 to 2 CFR 1500.10 and 2 CFR 1500.11 to coincide with EPA's renumbering of the sections in 2 CFR part 1500. EPA is also correcting a typographical error in 40 CFR 35.2036(d)(2).

21. Revises 40 CFR 35.2105, *Debarment and suspension,* to change the citation to the suspension and debarment provisions of 2 CFR part 200 from 2 CFR 200.113 to 2 CFR 200.214 to correct a typographical error.

22. Amends 40 CFR 35.2300, *Grant payments,* to update the citation to the payment provisions of the Federal grant regulations from 40 CFR part 30 to 2 CFR 200.305. The regulations at 40 CFR part 30 were rescinded.

23. Amends Appendix A to subpart I of 40 CFR part 35 to update the citations to the procurement provisions in 2 CFR part 200 and 2 CFR part 1500 by changing the citations from 2 CFR 200.326 to 2 CFR 200.327; from 2 CFR 1500.9 to 2 CFR 1500.10; from 2 CFR 1500.10 to 2 CFR 1500.11 to coincide with OMB's renumbering of certain sections in 2 CFR part 200 and EPA's renumbering of the sections in 2 CFR part 1500.

24. Amends 40 CFR 35.3025, *Overview of state performance under delegation,* to update the citations to the remedies for noncompliance in 2 CFR part 200 by changing the citations from 2 CFR 200.338 through 2 CFR 200.342 to 2 CFR 200.339 through 2 CFR 200.343 to coincide with OMB's renumbering of certain sections in 2 CFR part 200. EPA is also correcting typographical errors in 40 CFR 35.3025.

25. Amends 40 CFR 35.3585, *Compliance assurance procedures,* to update the citations to the remedies for non-compliance provisions in 2 CFR part 200 by changing the citation from 2 CFR 200.338 through 2 CFR 200.342 to 2 CFR 200.339 through 2 CFR 200.343 to coincide with OMB's renumbering of certain sections in 2 CFR part 200.

26. Amends 40 CFR 35.4012, *If there appears to be a difference between the requirements of 2 CFR parts 200 and 1500 and this subpart, which regulations should my group follow?*, to update the citations to one of the procurement provisions of 2 CFR part 200 by changing the citation from 2 CFR 200.224(b)(2) to 2 CFR 200.225(b)(2) to coincide with OMB's renumbering of certain sections in 2 CFR part 200. Additionally, EPA has made technical corrections to 40 CFR 35.4012 to clarify that 2 CFR 200.320, *Methods of procurement to be followed,* 2 CFR 200.324, *Cost or price analysis,* and 2 CFR 200.325(b)(2), *Federal awarding agency or pass-through entity review,* do not apply to procurements by Technical Assistance Grant recipients on the basis of the program specific procurement requirements in 40 CFR 35.4205 35.4210.

27. Revises 40 CFR 35.4120, *What does my group do next?* and 40 CFR 35.4125, *What else does my group need to do?*, to make technical corrections for consistency with EPA's policy on intergovernmental review published at 85 FR 7510 (November 24, 2020). This revision codifies a class exception to 40 CFR 35.4120 authorized on August 27, 2021.

28. Amends 40 CFR 35.4235, *Are there specific provisions my group's contract(s) must contain?*, to update the citation to the access to records provision in 2 CFR part 200 by changing the citation from 2 CFR 200.336 to 2 CFR 200.337 to coincide with OMB's renumbering of certain sections in 2 CFR part 200.

29. Amends 40 CFR 35.4250, *Under what circumstances would EPA terminate my group's TAG?*, to update the citation to the termination provisions of 2 CFR part 200 by changing the citation from 2 CFR 200.339 to 2 CFR 200.340 to coincide with OMB's renumbering of certain sections in 2 CFR part 200.

30. Revises 40 CFR 35.4245, *How does my group resolve a disagreement with EPA regarding our TAG?*, to update the description of EPA's grant dispute regulations at 2 CFR 1500.17. The regulation currently refers to an outdated version of 2 CFR 1500.17 describing reviews of Dispute Decision Official decisions by EPA Regional Administrators which are no longer available under 2 CFR part 1500 due to streamlining of the dispute procedures in the Interim Final Rule. This revision codifies a class exception to 40 CFR 35.4245 authorized on August 27, 2021.

31. Amends 40 CFR 35.4260, *What other steps might EPA take if my group fails to comply with the terms and conditions of our award?*, to update the citation to the remedies for noncompliance in 2 CFR part 200 by changing the citation from 2 CFR 200.338 to 2 CFR 200.339 to coincide with OMB's renumbering of certain sections in 2 CFR part 200.

32. Revises 40 CFR 35.6025, *Deviation from this subpart,* to update the citation to EPA's regulatory exception provisions in 2 CFR part 1500 by

making technical corrections to the terminology and changing the citation from 2 CFR 1500.3 to 2 CFR 1500.4 for consistency with the terminology and numbering of the sections in 2 CFR part 1500.

33. Amends 40 CFR 35.6055, *State-lead pre-remedial Cooperative Agreements,* to update the citation to the quality assurance provisions of 2 CFR part 1500 by changing the citation from 2 CFR 1500.11 to 2 CFR 1500.12 to coincide with EPA's renumbering of the sections in 2 CFR part 1500.

34. Amends 40 CFR 35.6105, *State-lead remedial Cooperative Agreements,* to update the citation to the quality assurance provisions of 2 CFR part 1500 by changing the citation from 2 CFR 1500.11 to 2 CFR 1500.12 to coincide with EPA's renumbering of the sections in 2 CFR part 1500.

35. Amends 40 CFR 35.6550, *Procurement system standards,* to update the citations to procurement provisions in 2 CFR part 200 by changing the citation from 2 CFR 200.327 to 2 CFR 200.328 to coincide with OMB's renumbering of certain sections in 2 CFR part 200 and to correct the cross references to 40 CFR 35.6565.

36. Amends 40 CFR 35.6565, *Procurement methods,* to update the citations to the procurement provisions in 2 CFR part 1500 by changing the citation from 2 CFR 1500.9 to 2 CFR 1500.10 to coincide with EPA's renumbering of the sections in 2 CFR part 1500.

37. Amends 40 CFR 35.6590, *Bonding and insurance* to update a citation to CFR part 200 by changing the citation from 2 CFR 200.325 to 2 CFR 200.326 to coincide with OMB's renumbering of certain sections in 2 CFR part 200.

38. Amends 40 CFR 35.6650, *Progress reports,* to update the citations to the reporting provisions in 2 CFR part 200 by changing the citations from 2 CFR 200.327 and 2 CFR 200.328 to 2 CFR 200.328 and 2 CFR 200.329 to coincide with OMB's renumbering of certain sections in 2 CFR part 200.

39. Amends 40 CFR 35.6670, *Financial reports,* to update the citation to the reporting provisions in 2 CFR part 200 by changing the citation from 2 CFR 200.327 to 2 CFR 200.328 to coincide with OMB's renumbering of certain sections in 2 CFR part 200.

40. Amends 40 CFR 35.6705, *Records retention,* to update the citations to the record retention provisions in 2 CFR part 1500 by changing the citation from 2 CFR 1500.6 to 2 CFR 1500.7 to coincide with EPA's renumbering of the sections in 2 CFR part 1500.

41. Amends 40 CFR 35.6710, *Records access,* to update the citation to the record access provisions in 2 CFR part 200 by changing the citation from 2 CFR 200.336 to 2 CFR 200.337 to coincide with OMB's renumbering of certain sections in 2 CFR part 200.

42. Revises 40 CFR 35.6755, *Monitoring program performance,* by changing the citation from 2 CFR 200.328 to 2 CFR 200.329 to coincide with OMB's renumbering of certain sections in 2 CFR part 200.

43. Revises 40 CFR 35.6760 *Enforcement and termination,* by changing the title and text to refer to ''Remedies for noncompliance and termination'' and the citations from 2 CFR 200.338 and 2 CFR 200.339 to 2 CFR 200.339 and 2 CFR 200.340 to coincide with the terminology and numbering of certain sections in 2 CFR part 200.

44. Amends 40 CFR 35.6780 *Closeout,* by changing the citations from 2 CFR 200.343 and 2 CFR 200.344 to 2 CFR 200.344 and 2 CFR 200.345 to coincide with OMB's renumbering of certain sections in 2 CFR part 200.

45. Revises 40 CFR 35.6785 *Collection of amounts due,* by changing the citation from 2 CFR 200.345 to 2 CFR 200.346 to coincide with OMB's renumbering of certain sections in 2 CFR part 200.

46. Revises 40 CFR 35.6790 *High risk recipients,* by changing the citations from 2 CFR 200.207 and 2 CFR 200.338 to 2 CFR 200.208 and 2 CFR 200.339 to coincide with OMB's renumbering of certain sections in 2 CFR part 200. The title of the section has also been revised as ''Specific Conditions'' for consistency with the terminology in 2 CFR part 200.

47. Amends 40 CFR 35.6815 *Administrative requirements,* by changing the citation from 2 CFR 200.345 to 2 CFR 200.346 to coincide with OMB's renumbering of certain sections in 2 CFR part 200.

48. Amends 40 CFR 35.9015 *Summary of annual process,* to correct a typographical error in 40 CFR 35.9015(d) by changing ''score of work'' to ''scope of work''.

49. Amends 40 CFR 40.135–1 *Preapplication coordination,* to reference with the requirement in 2 CFR 200.204(a) to post notices of competitive funding opportunities on the OMB-designated governmentwide website for funding and applying for Federal financial assistance as well as EPA policy and remove the reference to soliciting competitive applications on Commerce Business Daily.

50. Amends 40 CFR 40.135–2 *Application requirements,* by changing the citation from 2 CFR 200.206 to 2 CFR 200.207 to coincide with OMB's renumbering of certain sections in 2 CFR part 200.

51. Amends 40 CFR 40.155 *Availability of information,* by changing the citations from 2 CFR 200.211 to 2 CFR 200.212 and from 2 CFR 1500.3 to 2 CFR 1500.4 to coincide with OMB's renumbering of certain sections in 2 CFR part 200 and EPA's renumbering of certain sections of 2 CFR part 1500.

52. Revises 40 CFR 40.160–2 *Financial status report,* by changing the citation from 2 CFR 200.327 to 2 CFR 200.328 to coincide with OMB's renumbering of certain sections in 2 CFR part 200 and to add a citation to 2 CFR 200.344 which extends the date for submitting final financial status reports from 90 days to 120 days. The text of the regulation will be revised accordingly.

53. Amends 40 CFR 40.160–3 *Reporting of inventions,* to correspond to the requirement in 2 CFR 200.344 for submitting all required reports within 120 days of the end date for the period of performance.

54. Revises 40 CFR 40.160–4 *Equipment report,* to reference the definition of *Equipment* at 2 CFR 200.1 and the date for submission of final reports at 2 CFR 200.344.

55. Revises 40 CFR 40.160–5 *Final report,* to correspond to the requirement in 2 CFR 200.344 for submitting all required reports within 120 days of the end date for the period of performance.

56. Amends 40 CFR 45.130, *Evaluation of applications,* to by changing the citation from 2 CFR 200.204 to 2 CFR 200.205 to coincide with OMB's renumbering of certain sections in 2 CFR part 200.

57. Revises 40 CFR 45.140, *Budget and project period,* to provide that the budget and project period for EPA financial assistance awards for training will be specified in the terms of the awards as provided by 2 CFR 200.211. This revision codifies a class exception to the 3-year training period limitation in 40 CFR 45.140 authorized on March 29, 2018.

58. Revises 40 CFR 45.150, *Reports,* to change the citations to 2 CFR 200.327 and 2 CFR 200.328 to 2 CFR 200.328 and 2 CFR 200.329 to coincide with OMB's renumbering of certain sections of 2 CFR part 200 and revises the date for submission of the final report to 120 days from the end of the project period to correspond to 2 CFR 200.344.

59. Revises the Authority of 40 CFR part 46 and 40 CFR 46.105to update the citation to section 104(k)(7) of the Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. 9604(k)(7)) based on a recodification of the statute by the Brownfields Utilization, Investment,

and Local Development Act (BUILD Act).

60. Amends 40 CFR 47.130 *Performance of grant,* to update the citations to procurement provisions in 2 CFR part 200 by changing the citation from 2 CFR 200.326 to 2 CFR 200.327 to coincide with OMB's renumbering of certain sections in 2 CFR part 200.

I. General Information

A. Affected Entities

Entities affected by this action are those that apply for and/or receive Federal financial assistance (grants, cooperative agreements or fellowships) from EPA including but not limited to: State and local governments, Indian Tribes, Intertribal Consortia, Institutions of Higher Education, Hospitals, and other Non-profit Organizations, and Individuals.

II. Background

On September 30, 2020 (85 FR 61571–61575) EPA promulgated an Interim Final Rule revising 2 CFR part 1500, Uniform Administrative Requirements, Cost Principles and Audit Requirements for Federal Awards. These regulations supplement OMB's 2 CFR part 200 regulations covering the same subjects. The Interim Final Rule was effective on November 12, 2020 to coincide with the effective date of OMB's revisions to 2 CFR part 200. EPA offered the public an opportunity to comment on the revisions to 2 CFR part 1500. The preamble to the Interim Rule states that ''[T]he rule will become final without further revision if no changes are warranted based on comments EPA receives.'' No comments were submitted. Consequently, EPA is issuing this Final Rule making technical corrections to 2 CFR part 1500. Additionally, EPA is making technical corrections to other provisions of EPA's financial assistance regulations at 40 CFR part 33, 40 CFR part 35, 40 CFR part 45, and 40 CFR part 47 without making substantive revisions to these regulations.

III. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review

This action is not a ''significant regulatory action'' and was therefore not submitted to the Office of Management and Budget (OMB) for review.

B. Paperwork Reduction Act

This action does not impose any new information collection burden. However, the Office of Management and Budget (OMB) has previously approved the information collection requirements contained in the existing regulations 2 CFR parts 200 and 1500 under the provisions of the *Paperwork Reduction Act,* 44 U.S.C. 3501 *et seq.* and has assigned OMB control number 2030–0020. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR part 9.

C. Regulatory Flexibility Act

This final rule is not subject to the Regulatory Flexibility Act (RFA), which generally requires an agency to prepare a regulatory flexibility analysis for any rule that will have a significant economic impact on a substantial number of small entities. The RFA applies only to rules subject to notice and comment rulemaking requirements under the Administrative Procedure Act (APA) or any other statute. This rule is not subject to notice and comment requirements under the APA or any other statute because this rule pertains to grants, which the APA expressly exempts from notice and comment rulemaking requirements. 5 U.S.C. 553(a)(2).

D. Unfunded Mandates Reform Act

This action contains no Federal mandates under the provisions of Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), 2 U.S.C. 1531–1538 for State, local, or tribal governments or the private sector. The action imposes no enforceable duty on any State, local or tribal governments or the private sector. Therefore, this action is not subject to the requirements of sections 202 or 205 of the UMRA.

This action is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. This action affects all applicants and recipients of EPA financial Federal assistance and therefore no one entity type will be impacted disproportionally or significantly.

E. Executive Order 13132 (Federalism)

This action does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the National Government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This action affects all applicants and recipients of EPA financial Federal assistance and therefore no one entity type will be impacted disproportionally. Thus, Executive Order 13132 does not apply to this action.

F. Executive Order 13175

This action does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). This action affects all applicants and recipients of EPA financial Federal assistance and therefore no one entity type will be impacted disproportionally. Thus, Executive Order 13175 does not apply to this action. Consistent with the EPA Policy on Consultation and Coordination with Indian Tribes, the EPA consulted with tribal officials on these changes.

G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

This action is not subject to E.O. 13045 (62 FR 19885, April 23, 1997) because it is not economically significant as defined in E.O. 12866.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211 (66 FR 28355, May 22, 2001), because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act

This action does not involve technical standards.

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

The EPA believes that it is not practicable to determine whether this action has disproportionately high and adverse effects on minority populations, low-income populations, and/or indigenous peoples, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994).

K. Congressional Review Act

The Congressional Review Act (CRA), 5 U.S.C. 801 *et seq.,* as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. Section 808 allows the issuing agency to make a rule effective sooner than otherwise provided by the CRA if the agency makes a good cause finding that notice and public procedure is impracticable, unnecessary or contrary to the public interest. This determination must be

supported by a brief statement. 5 U.S.C. 808(2). EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

List of Subjects

2 CFR Part 1500

Accounting, Grant programs, Grants administration, Grant programs—environmental protection, Loan programs, Reporting and recordkeeping requirements, Water pollution control, Water supply.

40 CFR Parts 33, 35, 45, 46, and 47

Accounting, Grant programs, Grants administration, Grant programs—environmental protection, Loan programs, Reporting and recordkeeping requirements, Water pollution control, Water supply, Grant programs—Indians.

Kimberly Patrick,

Principal Deputy Assistant Administrator Office of Mission Support.

For the reasons set forth in the preamble, the Environmental Protection Agency amends 2 CFR part 1500 and 40 CFR parts 33, 35, 45, 46 and 47 as follows:

TITLE 2—GRANTS AND AGREEMENTS

CHAPTER XV—ENVIRONMENTAL PROTECTION AGENCY

PART 1500—UNIFORM ADMINISTRATIVE REQUIREMENTS, COST PRINCIPLES, AND AUDIT REQUIREMENTS FOR FEDERAL AWARDS

■ 1. The authority citation for part 1500 continues to read as follows:

Authority: 5 U.S.C. 301, 7 U.S.C. 136 *et seq.,* 15 U.S.C. 2601 *et seq.,* 20 U.S.C. 4011 *et seq., 33 U.S.C. 1251 et seq.,* and 1401 *et seq.,* 42 U.S.C. 241, 242b, 243, 246, 300f *et seq.,* 1857 *et seq.,* 6901 *et seq.,* 7401 *et seq.,* and 9601 *et seq.;* 2 CFR part 200.

■ 2. Revise § 1500.3 (b) to read as follows:

§ 1500.3 Applicability.

* * * * *

(b) Requirements for subrecipient monitoring and management at 2 CFR 200.331 through 200.333 do not apply to loan, loan guarantees, interest subsidies and principal forgiveness, purchases of insurance or local government debt or similar transactions with borrowers by recipients of Clean Water State Revolving Fund (CWSRF) capitalization grants and Drinking Water State Revolving Fund (DWSRF) capitalization grants. Requirements in 2 CFR part 25, Universal Identifier and System for Award Management, 2 CFR part 170, Reporting subaward and executive compensation and internal controls described at 2 CFR 200.303 continue to apply to CWSRF and DWSRF grant recipients and borrowers.

■ 3. Revise § 1500.7(b) to read as follows:

§ 1500.7 Retention requirements for records.

* * * * *

(b) When there is a difference between the retention requirements for records of the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (2 CFR 200.334) and the applicable statute, the non-federal entity will follow to the retention requirements for records in the statute.

■ 4. Amend § 1500.11 by revising paragraphs (a)(2), (a)(3)(i) and (iv), and (b) to read as follows:

§ 1500.11 Use of the same architect or engineer during construction.

(a) * * *

(2) The award official approves noncompetitive procurement under 2 CFR 200.320(c)(4) for reasons other than simply using the same individual or firm that provided facilities planning or design services for the project; or

(3) * * *

(i) The initial request for proposals clearly stated the possibility that the firm or individual selected could be awarded a contract for services during construction; and

* * * * *

(iv) None of the recipient's officers, employees or agents solicited or accepted gratuities, favors or anything of monetary value from contractors or other parties to contracts.

(b) However, if the recipient uses the procedures in paragraph (a) of this section to retain an architect or engineer, any Step 3 contracts between the architect or engineer and the grantee must meet all other procurement provisions in 2 CFR 200.317 through 200.327.

■ 5. Revise § 1500.12(e) to read as follows:

§ 1500.12 Quality Assurance.

* * * * *

(e) EPA Quality Policy is available at: *https://www.epa.gov/quality.*

* * * * *

§ 1500.14 [Amended]

■ 6. Amend § 1500.14 by removing paragraph (f).

■ 7. Revise § 1500.17(e) to read as follows:

§ 1500.17 Determination of Dispute.

* * * * *

(e) The DDO may consider untimely filed reconsideration petitions only if necessary, to correct a DDO Decision that is manifestly unfair and inequitable in light of relevant and material evidence that the Affected Entity could not have discovered during the 15-calendar day period for petitioning for reconsideration. This evidence must be submitted within six months of the date of the DDO Decision. The DDO will advise the Affected Entity within 30 days of receipt of an untimely filed reconsideration petition whether the DDO will accept the petition. Denial of an untimely filed reconsideration petition constitutes final agency action.

TITLE 40—PROTECTION OF THE ENVIRONMENT

CHAPTER I—ENVIRONMENTAL PROTECTION AGENCY

PART 33—PARTICIPATION BY DISADVANTAGED BUSINESS ENTERPRISES IN UNITED STATES ENVIRONMENTAL PROTECTION AGENCY PROGRAMS

■ 8. The authority citation for 40 CFR part 33 continues to read as follows:

Authority: 15 U.S.C. 637 note; 42 U.S.C. 4370d, 7601 note, 9605(f); E.O. 11625, 36 FR 19967, 3 CFR, 1971 Comp., p. 213; E.O. 12138, 49 FR 29637, 3 CFR, 1979 Comp., p. 393; E.O. 12432, 48 FR 32551, 3 CFR, 1983 Comp., p. 198, 2 CFR part 200.

■ 9. Amend § 33.103 by revising the definition of ''Equipment'' to read as follows:

§ 33.103 What do the terms in this part mean?

* * * * *

Equipment means items procured under a financial assistance agreement as defined by 2 CFR 200.1.

* * * * *

■ 10. Amend § 33.105 by revising the introductory text to read as follows:

§ 33.105 What are the compliance and enforcement provisions of this part?

If a recipient fails to comply with any of the requirements of this part, EPA may take remedial action under 2 CFR 200.339, Remedies for noncompliance, or 40 CFR part 35, as appropriate, or any other action authorized by law, including, but not limited to, enforcement under 18 U.S.C. 1001 and/

or the Program Fraud Civil Remedies Act of 1986 (31 U.S.C. 3801 *et seq.*). Examples of the remedial actions under 2 CFR 200.339 or 40 CFR part 35 include, but are not limited to:

* * * * *

PART 35—STATE AND LOCAL ASSISTANCE

■ 11. The authority citation for 40 CFR part 35 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.;* 33 U.S.C. 1251 *et seq.;* 42 U.S.C. 300f *et seq.;* 42 U.S.C. 6901 *et seq.;* 7 U.S.C. 136 *et seq.;* 15 U.S.C. 2601 *et seq.;* 42 U.S.C. 13101 *et seq.;* Pub. L. 104–134, 110 Stat. 1321, 1321–299 (1996); Pub. L. 105–65, 111 Stat. 1344, 1373 (1997), 2 CFR part 200.

Subpart A—Environmental Program Grants

■ 12. Revise § 35.113(a) to read as follows:

§ 35.113 Reimbursement for pre-award costs.

(a) Notwithstanding the requirements of 2 CFR parts 200 and 1500, EPA may reimburse recipients for pre-award costs incurred from the beginning of the budget period established in the grant agreement if such costs would have been allowable if incurred after the award. Pre-award costs must be identified in the grant application EPA approves.

* * * * *

■ 13. Revise § 35.114(b) to read as follows:

§ 35.114 Amendments and other changes.

* * * * *

(b) *Changes requiring approval.* Recipients must request, in writing, grant amendments for changes requiring adjustments in environmental program grant amounts and extensions of the funding period. Recipients may begin implementing a change before the amendment has been approved by EPA but do so at their own risk. If EPA approves the change, EPA will issue a grant amendment. EPA will notify the recipient in writing if the change is disapproved.

* * * * *

■ 14. Amend § 35.115 by revising paragraphs (a) and (c) to read as follows:

§ 35.115 Evaluation of performance.

(a) *Joint evaluation process.* The applicant and the Regional Administrator will develop a process for jointly evaluating and reporting progress and accomplishments under the work plan. A description of the evaluation process and a reporting schedule must be included in the work plan (see § 35.107(b)(2)(iv)). The schedule must require the recipient to report at least annually and must satisfy the requirements for progress reporting under 2 CFR 200.329.

* * * * *

(c) *Resolution of issues.* If the joint evaluation reveals that the recipient has not made sufficient progress under the work plan, the Regional Administrator and the recipient will negotiate a resolution that addresses the issues. If the issues cannot be resolved through negotiation, the Regional Administrator may take appropriate measures under 2 CFR 200.339 through 200.343. The recipient may request review of the Regional Administrator's decision under the dispute processes in 2 CFR part 1500, subpart E.

* * * * *

■ 15. Revise § 35.133(b) to read as follows:

§ 35.133 Programs eligible for inclusion.

* * * * *

(b) *Changes in eligible programs.* The Administrator may, in guidance or regulation, describe subsequent additions, deletions, or changes to the list of environmental programs eligible for inclusion in Performance Partnership Grants. A current list of environmental programs eligible for inclusion in Performance Partnership Grants is available at *www.epa.gov/nepps.*

Subpart B—Environmental Program Grants for Tribes

■ 16. Revise § 35.503 to read as follows:

§ 35.503 Exceptions from this subpart.

EPA will consider and may approve requests for official exceptions from non-statutory provisions of this regulation in accordance with 2 CFR 1500.4.

■ 17. Revise § 35.513(a) to read as follows:

§ 35.513 Reimbursement for pre-award costs.

(a) Notwithstanding the requirements of 2 CFR parts 200 and 1500, EPA may reimburse recipients for pre-award costs incurred from the beginning of the budget period established in the grant agreement if such costs would have been allowable if incurred after the award. Pre-award costs must be identified in the grant application EPA approves.

* * * * *

■ 18. Revise § 35.514(b) to read as follows:

§ 35.514 Amendments and other changes.

* * * * *

(b) *Changes requiring approval.* Recipients must request, in writing, grant amendments for changes requiring adjustments in environmental program grant amounts and extensions of the funding period. Recipients may begin implementing a change before the amendment has been approved by EPA but do so at their own risk. If EPA approves the change, EPA will issue a grant amendment. EPA will notify the recipient in writing if the change is disapproved.

* * * * *

■ 19. Amend § 35.515 by revising paragraphs (a) and (c) to read as follows:

§ 35.515 Evaluation of performance.

(a) *Joint evaluation process.* The applicant and the Regional Administrator will develop a process for jointly evaluating and reporting progress and accomplishments under the work plan (see § 35.507(b)(2)(iv)). A description of the evaluation process and reporting schedule must be included in the work plan. The schedule must require the recipient to report at least annually and must satisfy the requirements for progress reporting under 2 CFR 200.329.

* * * * *

(c) *Resolution of issues.* If the joint evaluation reveals that the recipient has not made sufficient progress under the work plan, the Regional Administrator and the recipient will negotiate a resolution that addresses the issues. If the issues cannot be resolved through negotiation, the Regional Administrator may take appropriate measures under 2 CFR 200.339–200.243. The recipient may request review of the Regional Administrator's decision under the dispute processes in 2 CFR part 1500, subpart E.

* * * * *

■ 20. Revise § 35.532(b) to read as follows:

§ 35.532 Requirements summary.

* * * * *

(b) In order to include funds from an environmental program grant listed in § 35.501(a) of this subpart in a Performance Partnership Grant, applicants must:

(1) Meet the requirements for award of each environmental program from which funds are included in the Performance Partnership Grant, except the requirements at §§ 35.548(c), 35.638(b) and (c), 35.691, and 35.708(c), (d), (e), and (g). These requirements can be found in this regulation beginning at § 35.540. If the applicant is an Intertribal

Consortium, each Tribe that is a member of the Consortium must meet the requirements.

(2) Apply for the environmental program grant.

(3) Obtain the Regional Administrator's approval of the application for that grant.

* * * * *

■ 21. Revise § 35.533(a) to read as follows:

§ 35.533 Programs eligible for inclusion.

(a) *Eligible programs.* Except as provided in paragraph (b) of this section, the environmental programs eligible for inclusion in a Performance Partnership Grant are listed in § 35.501(a)(2) through (10) of this subpart. Funds awarded to tribes under Tribal Response Program Grants (§ 35.501(a)(10)) to capitalize a revolving loan fund for Brownfield remediation or purchase insurance or develop a risk sharing pool, an indemnity pool, or insurance mechanism to provide financing for response actions may not be included in Performance Partnership Grants. A current list of environmental programs eligible for inclusion in Performance Partnership Grants is available at *www.epa.gov/nepps.*

* * * * *

■ 22. Revise § 35.588(a)(1) to read as follows:

§ 35.588 Award limitations.

(a) * * *

(1) All monitoring and analysis activities performed by the Tribe or Intertribal Consortium meets the applicable quality assurance and quality control requirements in 2 CFR 1500.12.

* * * * *

Subpart I—Grants for Construction of Treatment Works

■ 23. Amend § 35.2036 by revising paragraphs (a)(4), (b), and (d)(2) to read as follows:

§ 35.2036 Design/build project grants.

(a) * * *

* * * * *

(4) The grantee obtains bonds from the contractor in an amount the Regional Administrator determines adequate to protect the Federal interest in the treatment works (see 2 CFR 200.326);

* * * * *

(b) *Procurement.* (1) Grantee procurement for developing or supplementing the facilities plan to prepare the pre-bid package, as well as for designing and building the project and performing construction management and contract administration, will be in accordance with the procurement standards at 2 CFR 200.317 through 200.327 and 2 CFR 1500.10 through 1500.11.

(2) The grantee will use the sealed bid (formal advertising) method of procurement to select the design/build contractor.

(3) The grantee may use the same architect or engineer that prepared the facilities plan to provide any or all of the pre-bid, construction management, and contract and/or project administration services provided the initial procurement met EPA requirements (see 2 CFR 1500.11).

* * * * *

(d) * * *

(2) An estimated cost of supplementing the facilities plan and other costs necessary to prepare the pre-bid package (see appendix A.I.1(a) of this subpart); and

* * * * *

■ 24. Revise § 35.2105 to read as follows:

§ 35.2105 Debarment and suspension.

The applicant shall indicate whether it used the services of any individual, organization, or unit of government for facilities planning or design work whose name appears on the master list of debarments, suspensions, and voluntary exclusions. See 2 CFR 200.214 and 2 CFR part 1532. If the applicant indicates it has used the services of a debarred individual or firm, EPA will closely examine the facilities plan, design drawings and specifications to determine whether to award a grant. EPA will also determine whether the applicant should be found non-responsible under 2 CFR parts 200 and 1500 or be the subject of possible debarment or suspension under 2 CFR part 1532.

■ 25. Revise § 35.2300(e)(1) to read as follows:

§ 35.2300 Grant payments.

* * * * *

(e) *Payment under grants to States for advances of allowance*—(1) *Advance payment to State.* Notwithstanding the provisions of the introductory paragraph of this section, the Regional Administrator, under a State grant for advances of allowance (see § 35.2025), may make payments on an advance or letter-of-credit payment method in accordance with the requirements under 2 CFR 200.305. The State and the Regional Administrator shall agree to the payment terms.

* * * * *

■ 26. Amend Appendix A to subpart I of part 35 by:

■ a. Under the heading ''A. Costs Related to Subagreements'' revising paragraph 1.b.; and

■ b. Under the heading ''E. Equipment, Materials and Supplies'' revising paragraph 2.a.

The revisions read as follows:

Appendix A to Subpart I of Part 35—Determination of Allowable Costs

* * * * *

A. Costs Related to Subagreements

1. * * *

b. The costs of complying with the procurement standards in 2 CFR 200.317 through 200.327 and 2 CFR 1500.10 and 1500.11.

* * * * *

E. Equipment, Materials and Supplies

* * * * *

2. * * *

a. The costs of equipment or material procured in violation of the procurement standards in 2 CFR 200.317 through 2 CFR 200.327 and 2 CFR 1500.10 and 1500.11.

* * * * *

Subpart J—Construction Grants Program Delegation to States

■ 27. Revise § 35.3025(c) to read as follows:

§ 35.3025 Overview of State performance under delegation.

* * * * *

(c) *Monitoring and evaluating program performance.* Monitoring and evaluation of program performance (including State reporting) is based on the plan for overview agreed to in advance and should be appropriate to the delegation situation existing between the Region and State. It should take into account past performance of the State and the extent of State experience in administering the delegated functions. An on-site evaluation will occur at least annually and will cover, at a minimum, negotiated annual outputs, performance expected in the delegation agreement and, where applicable, evaluation of performance under the assistance agreement as provided in 40 CFR 35.150. The evaluation will cover performance of both the Region and the State. Upon completion of the evaluation, the delegation agreement may be revised, if necessary, to reflect changes resulting from the evaluation. The Regional Administrator may terminate or annul any section 205(g) financial assistance for cause in accordance with 2 CFR 200.339 through 2 CFR 200.343, *Remedies for Noncompliance.*

Subpart L—Drinking Water State Revolving Funds

■ 28. Revise § 35.3585(a) to read as follows:

§ 35.3585 Compliance assurance procedures.

(a) *Causes.* The RA may take action under this section and the remedies of noncompliance of 2 CFR 200.339 through 200.343, if a determination is made that a State has not complied with its capitalization grant agreement, other requirements under section 1452 of the Act, this subpart, 2 CFR parts 200 and 1500, or has not managed the DWSRF program in a financially sound manner (*e.g.,* allows consistent and substantial failures of loan repayments).

* * * * *

Subpart M—Grants for Technical Assistance

■ 29. Amend § 35.4012 by revising paragraphs (b) and (c) and adding paragraphs (d) and (e) to read as follows:

§ 35.4012 If there appears to be a difference between the requirements of 2 CFR Parts 200 and 1500 and this subpart, which regulations should my group follow?

* * * * *

(b) 2 CFR 200.320, Methods of procurement to be followed.

(c) 2 CFR 200.325(b)(2), Federal awarding agency or pass-through entity review.

(d) 2 CFR 200.324, Cost or price analysis.

(e) 2 CFR part 1500 Subpart E—Disputes.

■ 30. Revise § 35.4120 to read as follows:

§ 35.4120 What does my group do next?

(a) After you submit an LOI, you must determine whether your application is subject to Federal intergovernmental review requirements under 40 CFR part 29 or intergovernmental review procedures established in state or local law.

(b) To determine whether your TAG application is subject to Federal intergovernmental review, you must consult EPA's list of financial assistance programs subject to intergovernmental review under 40 CFR part 29 posted at *https://www.epa.gov/grants/epa-financial-assistance-programs-subject-executive-order-12372-and-section-204-demonstration* (EPA IR List). The EPA IR List identifies the Assistance Listing Numbers for EPA financial assistance programs that have Federal intergovernmental review requirements. The Assistance Listing Number for the TAG program is 66.806.

■ 31. Revise § 35.4125 to read as follows:

§ 35.4125 What else does my group need to do?

Once you've determined whether Federal intergovernmental review requirements apply, you must prepare a TAG application on EPA SF–424, Application for Federal Assistance, or those forms and instructions provided by EPA that include:

(a) A ''budget'';

(b) A scope of work;

(c) Assurances, certifications and other pre-award paperwork as 2 CFR part 200 requires. Your EPA regional office will provide you with the required forms.

■ 32. Revise § 35.4235(g)(3) to read as follows:

§ 35.4235 Are there specific provisions my group's contract(s) must contain?

* * * * *

(g) * * *

(3) Access to records (2 CFR 200.337); and

* * * * *

■ 33. Revise § 35.4245 to read as follows:

§ 35.4245 How does my group resolve a disagreement with EPA regarding our TAG?

The regulations at 2 CFR part 1500 Subpart E will govern disputes except that, before you may obtain judicial review of the dispute, you must have sought reconsideration of the Dispute Decision Official's Appeal decision under 2 CFR 1500.17.

■ 34. Revise § 35.4250(b) to read as follows:

§ 35.4250 Under what circumstances would EPA terminate my group's TAG?

* * * * *

(b) EPA may also terminate your grant with your group's consent in which case you and EPA must agree upon the termination conditions, including the effective date as 2 CFR 200.340 describes.

■ 35. Revise § 35.4260 introductory text to read as follows:

§ 35.4260 What other steps might EPA take if my group fails to comply with the terms and conditions of our award?

EPA may take one or more of the following actions, under 2 CFR 200.339, depending on the circumstances:

* * * * *

Subpart O—Cooperative Agreements and Superfund State Contracts for Superfund Response Actions

■ 36. Revise § 35.6025 to read as follows:

§ 35.6025 Exceptions from this subpart.

On a case-by-case basis, EPA will consider requests for official exceptions from the non-statutory provisions of this subpart. Refer to the requirements regarding exceptions described in 2 CFR 1500.4.

■ 37. Revise § 35.6055(b)(2)(i) to read as follows:

§ 35.6055 State-lead pre-remedial Cooperative Agreements.

* * * * *

(b) * * *

(2) *Quality assurance.* (i) The recipient must comply with the quality assurance requirements described in 2 CFR 1500.12.

* * * * *

■ 38. Revise § 35.6105(a)(2)(vi)(A) to read as follows:

§ 35.6105 State-lead remedial Cooperative Agreements.

* * * * *

(a) * * *

(2) * * *

(vi) *Quality assurance*—(A) *General.* If the project involves environmentally related measurements or data generation, the recipient must comply with the requirements regarding quality assurance described in 2 CFR 1500.12.

* * * * *

■ 39. Revise § 35.6550(a)(1) to read as follows:

§ 35.6550 Procurement system standards.

(a) * * * (1) In addition to the procurement standards described in 2 CFR 200.317 through 200.327 and 2 CFR part 1500, the State shall comply with the requirements in the following: Paragraphs (a)(5), (a)(9), and (b) of this section, § 35.6555(c), in § 35.6565 the first sentence of the introductory text, the first sentence of paragraph (b), paragraph (d), and §§ 35.6570, 35.6575, and 35.6600. Political subdivisions and Tribes must follow all of the requirements included or referenced in this section through § 35.6610.

* * * * *

■ 40. Revise § 35.6565 introductory text to read as follows:

§ 35.6565 Procurement methods.

The recipient must comply with the requirements for payment to consultants described in 2 CFR 1500.10. In addition, the recipient must comply with the following requirements:

* * * * *

■ 41. Revise § 35.6590(a) to read as follows:

§ 35.6590 Bonding and insurance.

(a) *General.* The recipient must meet the requirements regarding bonding

described in 2 CFR 200.326. The recipient must clearly and accurately state in the contract documents the bonds and insurance requirements, including the amounts of security coverage that a bidder or offeror must provide.

* * * * *

■ 42. Revise § 35.6650(a) to read as follows:

§ 35.6650 Progress reports.

(a) *Reporting frequency.* The recipient must submit progress reports as specified in the Cooperative Agreement. Progress reports will be required no more frequently than quarterly, and will be required at least annually. Notwithstanding the requirements of 2 CFR 200.328 and 200.329, the reports shall be due within 60 days after the reporting period.

* * * * *

■ 43. Amend § 35.6670 by revising paragraphs (a) and (b)(2)(i) to read as follows:

§ 35.6670 Financial reports.

(a) *General.* The recipient must comply with the requirements regarding financial reporting described in 2 CFR 200.328.

(b) * * *

(2) * * *

(i) If a Financial Status Report is required annually, the report is due 90 days after the end of the Federal fiscal year or as specified in the Cooperative Agreement. If quarterly or semiannual Financial Status Reports are required, reports are due in accordance with 2 CFR 200.328;

* * * * *

■ 44. Revise § 35.6705(d) to read as follows:

§ 35.6705 Records retention.

* * * * *

(d) *Starting date of retention period.* The recipient must comply with the requirements regarding the starting dates for records retention described in 2 CFR 1500.7.

* * * * *

■ 45. Amend § 35.6710 by revising paragraphs (a) and (c) to read as follows:

§ 35.6710 Records access.

(a) *Recipient requirements.* The recipient must comply with the requirements regarding records access described in 2 CFR 200.337.

* * * * *

(c) *Contractor requirements.* The recipient must require its contractor to comply with the requirements regarding records access described in 2 CFR 200.337.

■ 46. Revise § 35.6755 to read as follows:

§ 35.6755 Monitoring program performance.

The recipient must comply with the requirements regarding program performance monitoring described in 2 CFR 200.329.

■ 47. Revise § 35.6760 to read as follows:

§ 35.6760 Remedies for noncompliance and termination.

The recipient must comply with all terms and conditions in the Cooperative Agreement and is subject to the remedies for noncompliance with the terms of an award and termination described in 2 CFR 200.339 and 200.340.

■ 48. Revise § 35.6780(b) to read as follows:

§ 35.6780 Closeout.

* * * * *

(b) The recipient must comply with the closeout requirements described in 2 CFR 200.344 and 200.345.

* * * * *

■ 49. Revise § 35.6785 to read as follows:

§ 35.6785 Collection of amounts due.

The recipient must comply with the requirements described in 2 CFR 200.346 regarding collection of amounts due.

■ 50. Revise § 35.6790 to read as follows:

§ 35.6790 Specific conditions.

If EPA determines that a recipient is not responsible, EPA may impose specific conditions on the award as described in 2 CFR 200.208 or restrictions on the award as described in 2 CFR 200.339.

■ 51. Revise § 35.6815(a)(2) to read as follows:

§ 35.6815 Administrative requirements.

* * * * *

(a) * * *

(2) *Collection of amounts due.* The State and/or political subdivision must comply with the requirements described in 2 CFR 200.346 regarding collection of amounts due.

* * * * *

Subpart P—Financial Assistance for the National Estuary Program

■ 52. Revise § 35.9015(d) to read as follows:

§ 35.9015 Summary of annual process.

* * * * *

(d) The Regional Administrator may use funds not awarded to an applicant to supplement awards to other recipients who submit a scope of work approved by the management conference for NEP funds.

* * * * *

PART 40—RESEARCH AND DEMONSTRATION GRANTS

■ 53. The authority citation for part 40 continues to read as follows:

Authority: *7 U.S.C. 136 et seq.; 15 U.S.C. 2609 et seq.; 33 U.S.C. 1254 et seq.* and 1443; *42 U.S.C. 241 et seq.,* 300f *et seq.,* 1857 *et seq.,* 1891 *et seq.,* and 6901 *et seq., 2 CFR part 200.*

■ 54. Revise § 40.135–1(b) to read as follows:

§ 40.135–1 Preapplication coordination.

* * * * *

(b) Applications for grants for demonstration projects funded by the Office of Resource Conservation and Recovery will be solicited in accordance with 2 CFR 200.204 and selections will be made on a competitive basis to the extent required by EPA policy.

■ 55. Revise § 40.135–2 introductory text to read as follows:

§ 40.135–2 Application requirements.

All applications for research and demonstration grants shall be submitted to the Environmental Protection Agency, in accordance with 2 CFR 200.207.

* * * * *

■ 56. Amend § 40.155 by revising paragraphs (b) and (c) to read as follows:

§ 40.155 Availability of information.

* * * * *

(b) An assertion of entitlement to confidential treatment of part or all of the information in an application may be made using the procedure described in 2 CFR 200.212. See also §§ 2.203 and 2.204 of this chapter.

(c) All information and data contained in the grant application will be subject to external review unless deviation is approved for good cause pursuant to 2 CFR 1500.4.

■ 57. Revise § 40.160–2 to read as follows:

§ 40.160–2 Financial status report.

A financial status report must be prepared and submitted within 120 days after completion of the budget and project periods in accordance with 2 CFR 200.328 and 2 CFR 200.344.

■ 58. Revise § 40.160–3(b) to read as follows:

§ 40.160–3 Reporting of inventions.

* * * * *

(b) A final invention report is required within 120 days after completion of the project period as provided in 2 CFR 200.344.

* * * * *

■ 59. Revise § 40.160–4 to read as follows:

§ 40.160–4 Equipment report.

As provided in 2 CFR 200.344 within 120 days of the completion or termination of a project, the grantee will submit a listing of all items of *Equipment* as defined at 2 CFR 200.1.

■ 60. Revise § 40.160–5 to read as follows:

§ 40.160–5 Final report.

The grantee shall submit a draft of the final report for review no later than 90 days prior to the end of the approved project period. The report shall document project activities over the entire period of grant support and shall describe the grantee's achievements with respect to stated project purposes and objectives. The report shall set forth in complete detail all technical aspects of the projects, both negative and positive, grantee's findings, conclusions, and results, including, as applicable, an evaluation of the technical effectiveness and economic feasibility of the methods or techniques investigated or demonstrated. The final report shall include EPA comment when required by the grants officer. Within 120 days of the end of the project period, one reproducible copy suitable for printing and such other copies as may be stipulated in the grant agreement shall be transmitted to the grants officer as required by 2 CFR 200.344.

PART 45—TRAINING ASSISTANCE

■ 61. The authority citation for part 45 continues to read as follows:

Authority: Sec. 103 of the Clean Air Act, as amended (*42 U.S.C. 7403*), secs. 104(g), 109, and 111 of the Clean Water Act, as amended (*33 U.S.C. 1254(g), 1259,* and *1261*), secs. 7007 and 8001 of the Solid Waste Disposal Act, as amended (*42 U.S.C. 6977* and *6981*); sec. 1442 of the Safe Drinking Water Act, as amended (*42 U.S.C. 300j–1*). *2 CFR part 200.*

■ 62. Amend § 45.130 by revising paragraph (a) introductory text, to read as follows:

§ 45.130 Evaluation of applications.

(a) Consistent with 2 CFR 200.205, the appropriate EPA program office staff will review training applications in accordance with the following criteria:

* * * * *

■ 63. Revise § 45.140 to read as follows:

§ 45.140 Budget and project period.

The budget and project periods for training awards will be specified in the terms of the awards as provided by 2 CFR 200.211.

■ 64. Revise § 45.150 to read as follows:

§ 45.150 Reports.

(a) Recipients must submit the reports required in 2 CFR 200.328 and 200.329.

(b) A draft of the final project report is required 90 days before the end of the project period. The recipient shall prepare the final projects report in accordance with the project officer's instructions and submit the final project report within 120 days after the end of the project period as provided in 2 CFR 200.344.

PART 46—FELLOWSHIPS

■ 65. The authority citation for part 46 is revised to read as follows:

Authority: Section 103(b)(5) of the Clean Air Act, as amended (42 U.S.C. 7403(b)(5)); sections 104(b)(5) and (g)(3)(B) of the Clean Water Act, as amended (33 U.S.C. 1254(b)(5) and (g)(3)(B)); section 1442 of the Safe Drinking Water Act, as amended (42 U.S.C. 300j–1); section 8001 of the Solid Waste Disposal Act, as amended (42 U.S.C. 6981); section 10 of the Toxic Substances Control Act, as amended (15 U.S.C. 2609); section 20 of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended (7 U.S.C. 136r); sections 104(k)(7) and 311 of the Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. 9604(k)(7) and 42 U.S.C. 9660). 2 CFR part 200 and 2 CFR part 1500.

■ 66. Revise § 46.105(g) to read as follows:

§ 46.105 Authority.

* * * * *

(g) Sections 104(k)(7) and 311 of the Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. 9604(k)(7) and 42 U.S.C. 9660).

PART 47—NATIONAL ENVIRONMENTAL EDUCATION ACT GRANTS

■ 67. The authority citation for part 47 continues to read as follows:

Authority: 20 U.S.C. 5505. 2 CFR part 200.

■ 68. Revise § 47.130(c) to read as follows:

§ 47.130 Performance of grant.

* * * * *

(c) Procurement procedures for all recipients are described in 2 CFR part 200 subpart D—Post Federal Award Requirements (2 CFR 200.317 through 200.327). These procedures include provisions for small purchase procedures.

[FR Doc. 2022–09725 Filed 5–18–22; 8:45 am]

BILLING CODE 6560–50–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2022–0585; Project Identifier MCAI–2022–00603–T; Amendment 39–22053; AD 2022–11–03]

RIN 2120–AA64

Airworthiness Directives; Airbus SAS Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Airbus SAS Model A350–941 and –1041 airplanes. This AD was prompted by an indication that both elevator actuators of the PRIMary flight control computers (PRIMs) were considered faulty due to incorrect instructions with a new PRIM standard. This AD requires revising the existing airplane flight manual (AFM), and revising the operator's existing FAA-approved minimum equipment list (MEL) by incorporating certain master minimum equipment list (MMEL) provisions, to include limitations and procedures to mitigate the risk of elevator failure during flare, as specified in a European Union Aviation Safety Agency (EASA) Emergency AD, which is incorporated by reference. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD becomes effective June 3, 2022.

The Director of the Federal Register approved the incorporation by reference of a certain publications listed in this AD as of June 3, 2022.

The FAA must receive comments on this AD by July 5, 2022.

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- *Federal eRulemaking Portal:* Go to *https://www.regulations.gov*. Follow the instructions for submitting comments.
- *Fax:* 202–493–2251.
- *Mail:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590.

• *Hand Delivery:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For material incorporated by reference (IBR) in this AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email *ADs@easa.europa.eu*; internet *www.easa.europa.eu*. You may find this IBR material on the EASA website at *https://ad.easa.europa.eu*. You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206–231–3195. It is also available in the AD docket at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2022–0585.

Examining the AD Docket

You may examine the AD docket at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2022–0585; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Dan Rodina, Aerospace Engineer, Large Aircraft Section, International Validation Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; phone 206–231–3225; email *Dan.Rodina@faa.gov*.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written data, views, or arguments about this final rule. Send your comments to an address listed under **ADDRESSES**. Include ''Docket No. FAA–2022–0585; Project Identifier MCAI–2022–00603–T'' at the beginning of your comments. The most helpful comments reference a specific portion of the final rule, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this final rule because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to *https://www.regulations.gov,* including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this final rule.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this AD contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this AD, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as ''PROPIN.'' The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this AD. Submissions containing CBI should be sent to Dan Rodina, Aerospace Engineer, Large Aircraft Section, International Validation Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; phone 206–231–3225; email *Dan.Rodina@faa.gov*. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA Emergency AD 2022–0079–E, dated May 5, 2022 (EASA Emergency AD 2022–0079–E) (also referred to as the MCAI), to correct an unsafe condition for certain Airbus SAS Model A350–941 and –1041 airplanes.

This AD was prompted by a report of PRIMs that indicated that both elevator actuators were considered faulty. Subsequent investigations identified incorrect instructions that had been implemented with the introduction of the PRIM P13 standard, which is part of the flight control and guidance system (FCGS) X13 standard installed in airplanes in production through Airbus modification 115496 and in service through Airbus Service Bulletin A350–42–P017. The FAA is issuing this AD to address the faulty FCGS X13 standard, which could lead to loss of control of the elevator surfaces, possibly resulting in loss of control of the airplane. See the MCAI for additional background information.

Related Service Information Under 1 CFR Part 51

EASA Emergency AD 2022–0079–E specifies procedures for revising the Limitations and Normal Procedures sections of the existing AFM, and revising the operator's existing FAA-approved MEL by incorporating MMEL provisions, to include limitations and procedures to mitigate the risk of elevator failure during flare. This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the **ADDRESSES** section.

FAA's Determination

These products have been approved by the aviation authority of another country and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI described above. The FAA is issuing this AD after determining that the unsafe condition described previously is likely to exist or develop on other products of these same type designs.

Requirements of This AD

This AD requires accomplishing the actions specified in EASA Emergency AD 2022–0079–E described previously, except for any differences identified as exceptions in the regulatory text of this AD.

EASA Emergency AD 2022–0079–E requires operators to revise the AFM and ''inform all flight crews, and, thereafter, operate the aeroplane accordingly.'' However, this AD does not specifically require those actions as those actions are already required by FAA regulations. FAA regulations require operators furnish to pilots any changes to the AFM (for example, 14 CFR 121.137), and to ensure the pilots are familiar with the AFM (for example, 14 CFR 91.505). As with any other flightcrew training requirement, training on the updated AFM content is tracked by the operators and recorded in each pilot's training record, which is available for the FAA to review. FAA regulations also require pilots to follow the procedures in the existing AFM including all updates. 14 CFR 91.9 requires that any person operating a civil aircraft must comply with the operating limitations specified in the AFM. Therefore, including a requirement in this AD to operate the airplane according to the revised AFM would be redundant and unnecessary.

Similarly, EASA Emergency AD 2022–0079–E specifies amending the

operator's MEL and, thereafter, ''operating the aeroplane accordingly.'' However, this AD does not include specific operating requirements as they are already required by FAA regulations. FAA regulations (14 CFR 121.628(a)(2)) require operators to provide pilots with access to all of the information contained in the operator's minimum equipment list (MEL). Furthermore, 14 CFR 121.628(a)(5) requires airplanes to be operated under all applicable conditions and limitations contained in the operator's MEL. Therefore, including a requirement in this AD to operate the airplane according to the revised MEL would be redundant and unnecessary.

Explanation of Required Compliance Information

In the FAA's ongoing efforts to improve the efficiency of the AD process, the FAA developed a process to use some civil aviation authority (CAA) ADs as the primary source of information for compliance with requirements for corresponding FAA ADs. The FAA has been coordinating this process with manufacturers and CAAs. As a result, EASA Emergency AD 2022–0079–E is incorporated by reference in this AD. This AD requires compliance with EASA Emergency AD 2022–0079–E in its entirety through that incorporation, except for any differences identified as exceptions in the regulatory text of this AD. Using common terms that are the same as the heading of a particular section in EASA Emergency AD 2022–0079–E does not mean that operators need comply only with that section. For example, where the AD requirement refers to ''all required actions and compliance times,'' compliance with this AD requirement is not limited to the section titled ''Required Action(s) and Compliance Time(s)'' in EASA Emergency AD 2022–0079–E. Service information required by EASA Emergency AD 2022–0079–E for compliance will be available at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2022–0585 after this AD is published.

Interim Action

The FAA considers this AD interim action. If final action is later identified, the FAA might consider further rulemaking then.

FAA's Justification and Determination of the Effective Date

Section 553(b)(3)(B) of the Administrative Procedure Act (APA) (5 U.S.C. 551 *et seq.*) authorizes agencies to dispense with notice and comment procedures for rules when the agency, for ''good cause,'' finds that those procedures are ''impracticable, unnecessary, or contrary to the public interest.'' Under this section, an agency, upon finding good cause, may issue a final rule without providing notice and seeking comment prior to issuance. Further, section 553(d) of the APA authorizes agencies to make rules effective in less than thirty days, upon a finding of good cause.

An unsafe condition exists that requires the immediate adoption of this AD without providing an opportunity for public comments prior to adoption. The FAA has found that the risk to the flying public justifies forgoing notice and comment prior to adoption of this rule because incorrect logic in the PRIMs may cause the PRIM computers to inadvertently lose control over their respective elevator actuators during flare phase, depending on flight conditions, potentially affecting every flight and possibly resulting in loss of control of the airplane in a critical phase of flight. Given the significance of the risk presented by this unsafe condition, it must be immediately addressed. Accordingly, notice and opportunity for prior public comment are impracticable and contrary to the public interest pursuant to 5 U.S.C. 553(b)(3)(B).

In addition, the FAA finds that good cause exists pursuant to 5 U.S.C. 553(d) for making this amendment effective in less than 30 days, for the same reasons the FAA found good cause to forgo notice and comment.

Regulatory Flexibility Act (RFA)

The requirements of the RFA do not apply when an agency finds good cause pursuant to 5 U.S.C. 553 to adopt a rule without prior notice and comment. Because the FAA has determined that it has good cause to adopt this rule without notice and comment, RFA analysis is not required.

Costs of Compliance

The FAA estimates that this AD affects 30 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

ESTIMATED COSTS FOR REQUIRED ACTIONS

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
1 work-hour × $85 per hour = $85	$0	$85	$2,550

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a ''significant regulatory action'' under Executive Order 12866, and

(2) Will not affect intrastate aviation in Alaska.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

■ 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

■ 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2022–11–03 Airbus SAS: Amendment 39–22053; Docket No. FAA–2022–0585; Project Identifier MCAI–2022–00603–T.

(a) Effective Date

This airworthiness directive (AD) is effective June 3, 2022.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Airbus SAS Model A350–941 and –1041 airplanes, certificated in any category, as identified in European Union Aviation Safety Agency (EASA) Emergency AD 2022–0079–E, dated May 5, 2022 (EASA Emergency AD 2022–0079–E).

(d) Subject

Air Transport Association (ATA) of America Code 27, Flight controls.

(e) Unsafe Condition

This AD was prompted by an indication that both elevator actuators of the PRIMary flight control computers (PRIMs) were considered faulty due to incorrect instructions with a new PRIM standard. The FAA is issuing this AD to address the faulty standard, which could lead to loss of control of the elevator surfaces, possibly resulting in loss of control of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Requirements

Except as specified in paragraph (h) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, EASA Emergency AD 2022–0079–E.

(h) Exceptions to EASA Emergency AD 2022–0079–E

(1) Where EASA Emergency AD 2022–0079–E refers to its effective date, this AD requires using the effective date of this AD.

(2) Where paragraph (1) of EASA Emergency AD 2022–0079–E specifies to ''inform all flight crews, and, thereafter, operate the aeroplane accordingly,'' this AD does not require those actions as those actions are already required by existing FAA operating regulations.

(3) Where paragraph (3) of EASA Emergency AD 2022–0079–E specifies to ''implement the instructions of the MER, as defined in [the EASA Emergency] AD,'' for this AD replace that phrase with ''revise the operator's existing FAA-approved minimum equipment list (MEL) to incorporate the instructions of the MER.''

(4) Where paragraph (4) of EASA Emergency AD 2022–0079–E specifies ''operating the aeroplane accordingly,'' this AD does not require that action as that action is already required by existing FAA operating regulations.

(5) The ''Remarks'' section of EASA Emergency AD 2022–0079–E does not apply to this AD.

(i) Additional AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs):* The Manager, Large Aircraft Section, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the Large Aircraft Section, International Validation Branch, send it to the attention of the person identified in paragraph (j) of this AD. Information may be emailed to: *9-AVS-AIR-730-AMOC@faa.gov*. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer:* For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, Large Aircraft Section, International Validation Branch, FAA; or EASA; or Airbus SAS's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

(j) Related Information

For more information about this AD, contact Dan Rodina, Aerospace Engineer, Large Aircraft Section, International Validation Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; phone 206–231–3225; email *Dan.Rodina@faa.gov*.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) European Union Aviation Safety Agency (EASA) Emergency AD 2022–0079–E, dated May 5, 2022.

(ii) [Reserved]

(3) For EASA Emergency AD 2022–0079–E, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email *ADs@easa.europa.eu*; internet *www.easa.europa.eu*. You may find this EASA AD on the EASA website at *https://ad.easa.europa.eu*.

(4) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206–231–3195.

(5) You may view this material that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email *fr.inspection@nara.gov,* or go to *https://www.archives.gov/federal-register/cfr/ibr-locations.html*.

Issued on May 13, 2022.

Gaetano A. Sciortino,

Deputy Director for Strategic Initiatives, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2022–10865 Filed 5–17–22; 4:15 pm]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2022–0099; Project Identifier 2019–CE–019–AD; Amendment 39–22045; AD 2022–10–07]

RIN 2120–AA64

Airworthiness Directives; Viking Air Limited (Type Certificate Previously Held by Bombardier, Inc. and de Havilland, Inc.) Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 89–24–06 R1, which applied to all Boeing of Canada, Ltd. and de Havilland (now Viking Air Limited) Model DHC–6–1, DHC–6–100, DHC–6–200, and DHC–6–300 airplanes. AD 89–24–06 R1 required repetitively inspecting the elevator quadrant for damage and taking corrective action as necessary. Since the FAA issued AD 89–24–06 R1, Transport Canada, the aviation authority for Canada, revised its mandatory continuing airworthiness information (MCAI) to correct this unsafe condition on these products. This AD retains the actions required by AD 89–24–06 R1, extends the compliance time intervals for the repetitive inspections, adds Model DHC–6–400 airplanes to the applicability, and adds a fluorescent penetrant inspection requirement. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective June 23, 2022.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of June 23, 2022.

ADDRESSES: For service information identified in this final rule, contact Viking Air Ltd., 1959 de Havilland Way, Sidney British Columbia, Canada V8L 5V5; phone: (800) 663–8444; email: *continuing.airworthiness@vikingair.com;* website: *https://www.vikingair.com.* You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222–5110. It is also available at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2022–0099.

Examining the AD Docket

You may examine the AD docket at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2022–0099; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the MCAI, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Darren Gassetto, Aviation Safety Engineer, New York ACO Branch, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (516) 228–7323; email: *9-avs-nyaco-cos@faa.gov.*

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 89–24–06 R1, Amendment 39–6670 (Docket No. 89–CE–29–AD; 55 FR 29347, July 19, 1990) (AD 89–24–06 R1). AD 89–24–06 R1 applied to all Boeing of Canada, Ltd. and de Havilland (type certificate currently held by Viking Air Limited) Model DHC–6–1, DHC–6–100, DHC–6–200, and DHC–6–300 airplanes. AD 89–24–06 R1 required repetitively inspecting the elevator quadrant, part number (P/N) C6CFM 1138–27 (Pre Mod 6/1394), P/N C6CFM 1450–27 (Post Mod 6/1394 or production cut-in (PCI) serial number (S/N) 331, Pre Mod 6/1678), or P/N C6CFM 1450–29 (Post Mod 6/1678 or PCI S/N 602), for distortion (warping, buckling, and score marks on the quadrant topside face caused by rubbing against the side of the cable guard) and replacing if distortion is found. AD 89–24–06 R1 also required inspecting the elevator quadrant mounting support bracket, P/N C6CFM 1142–1, for cracks if distortion in the elevator quadrant is found and replacing any cracked P/N C6CFM 1142–1. The FAA issued AD 89–24–06 R1 to prevent failure of the flight control system, which could result in loss of control of the airplane.

The NPRM published in the **Federal Register** on February 11, 2022 (87 FR 7965). The NPRM was prompted by Transport Canada AD CF–1972–06R5, dated June 22, 2018 (referred to after this as ''the MCAI''), issued by Transport Canada, which is the aviation authority for Canada. The MCAI states:

> Damage to the flight control system of DHC–6 aeroplanes was found during inspection. The damage has been attributed to ground gusts. The damage included cracks in the base of the lower control column, cracks and buckles in the elevator/rudder pulley bracket, and distortion of the elevator quadrant. Damage to the elevator quadrant may produce abnormal loads on the quadrant support bracket that damage the bracket.
>
> Damaged flight control components may fail when subjected to service loads, resulting in loss of control of the aeroplane.
>
> This revision of the [Transport Canada] AD clarifies the applicability of the corrective actions and endorses Service Bulletin (SB) 6/511 as a means of accomplishing some of the required inspections. In corrective action Part III, dye penetrant inspection has been replaced by fluorescent penetrant inspection.

You may examine the MCAI in the AD docket at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2022–0099.

In the NPRM, the FAA proposed to retain the actions of AD 89–24–06 R1, extend the compliance time intervals for the repetitive inspections, add Model DHC–6–400 airplanes to the applicability, and add a fluorescent penetrant inspection requirement.

Discussion of Final Airworthiness Directive

Comments

The FAA received a comment from the Airline Pilots Association, International, which supported the NPRM without change.

Conclusion

These products have been approved by the aviation authority of another country and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data, considered the comment received, and determined that air safety requires adopting the AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. This AD is adopted as proposed in the NPRM.

Related Service Information Under 1 CFR Part 51

The FAA reviewed Viking DHC–6 (Twin Otter) Service Bulletin 6–511, Revision A, dated June 22, 1990. This service bulletin specifies procedures for repetitively inspecting the elevator quadrant for distortion (warping, buckling, and score marks), performing a one-time dye penetrant inspection of the elevator quadrant support bracket for cracks, and taking corrective actions. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the **ADDRESSES** section.

Differences Between This AD and the MCAI

The MCAI addresses actions on the control column lower assembly, the elevator pulley bracket system, and the elevator quadrant. This AD only requires actions on the elevator quadrant and elevator quadrant support bracket. The FAA is not requiring the repetitive inspections of the control column lower sub-assembly, lower horizontal torque tube, and top and bottom channels of the pulley bracket assembly, and the modifications that terminate those inspections, because those actions are addressed by AD 69–05–01 R2, Amendment 39–3824 (Docket No. 79–EA–63; 45 FR 45258, July 3, 1980); and AD 69–8–12 R1, Amendment 39–867 (Docket No. 69–EA–133; 34 FR 18226, November 14, 1969).

Costs of Compliance

The FAA estimates that this AD affects 133 airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

ESTIMATED COSTS

Action	Labor cost	Parts cost	Cost per airplane	Cost on U.S. operators
Elevator quadrant and support bracket visual inspection.	0.5 work-hour × $85 per hour = $42.50.	Not Applicable ..	$42.50 per inspection cycle.	$5,652.50 (for the affected 133 airplanes) per inspection cycle.
Fluorescent penetrant inspection of the elevator quadrant support bracket.	1 work-hour × $85 per hour = $85.	Not Applicable ..	$85	$10,795 (for the affected 127 airplanes).

The FAA estimates the following costs to do any repairs or replacements that would be required based on the results of the inspections. The FAA has no way of determining the number of airplanes that might need these repairs/replacements:

ON-CONDITION COSTS

Action	Labor cost	Parts cost	Cost per airplane
Replacement of elevator quadrant	1.5 work-hours × $85 per hour = $127.50	$825	$952.50
Fluorescent penetrant inspection of the elevator quadrant support bracket.	1 work-hour × $85 per hour = $85	Not Applicable	85
Replacement of elevator quadrant support bracket	2 work-hours × $85 per hour = $170	485	655

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA has determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a ''significant regulatory action'' under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

■ 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

■ 2. The FAA amends § 39.13 by:

■ a. Removing Airworthiness Directive 89–24–06 R1, Amendment 39–6670 (Docket No. 89–CE–29–AD; 55 FR 29347, July 19, 1990); and

■ b. Adding the following new airworthiness directive:

2022–10–07 Viking Air Limited (Type Certificate Previously Held by Bombardier, Inc. and de Havilland, Inc.): Amendment 39–22045; Docket No. FAA–2022–0099; Project Identifier 2019–CE–019–AD.

(a) Effective Date

This airworthiness directive (AD) is effective June 23, 2022.

(b) Affected ADs

This AD replaces AD 89–24–06 R1, Amendment 39–6670 (Docket No. 89–CE–29–AD; 55 FR 29347, July 19, 1990) (AD 89–24–06 R1).

(c) Applicability

This AD applies to Viking Air Limited (Type Certificate previously held by Bombardier, Inc. and de Havilland, Inc.) Model DHC–6–1, DHC–6–100, DHC–6–200, DHC–6–300, and DHC–6–400 airplanes, all serial numbers, certificated in any category.

(d) Subject

Joint Aircraft System Component (JASC) Code 2700, Flight Control System.

(e) Unsafe Condition

This AD was prompted by mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as damage to the flight control system. The FAA is issuing this AD to prevent failure of the flight control system. The unsafe condition, if not addressed, could result in loss of control of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Elevator Quadrant and Support Brackets: Inspections, Replacements, and Modifications

(1) Visually inspect the elevator quadrant for indications of distortion (warping, buckling, or score marks) by following paragraphs III.A.2.(a) and III.A.2.(b) of the Accomplishment Instructions in Viking DHC–6 (Twin Otter) Service Bulletin 6–511, Revision A, dated June 22, 1990 (DHC–6 SB 6–511, Revision A) at the following applicable compliance times:

(i) For Model DHC–6–1, DHC–6–100, DHC–6–200, and DHC–6–300 airplanes, before further flight after the effective date of

this AD or within 400 hours time-in-service (TIS) after the last inspection required by AD 89–24–06 R1, whichever occurs later, and thereafter at intervals not to exceed 400 hours TIS; or

(ii) For Model DHC–6–400 airplanes, before further flight after the effective date of this AD and thereafter at intervals not to exceed 400 hours TIS.

Note 1 to paragraph (g)(1): The elevator quadrant may be identified as part number (P/N) C6CFM1138–27 (Pre Mod 6/1394), P/N C6CFM1450–27 (Post Mod 6/1394 or production cut-in (PCI) serial number (S/N) 331, Pre Mod 6/1678), or P/N C6CFM1450–29 (Post Mod 6/1678 or PCI S/N 602), and is referred to as assembly P/N C6CF1137–1, –3, –5, or –7.

(2) If any indication of distortion is found on the elevator quadrant during any inspection required by paragraph (g)(1) of this AD, before further flight, replace the elevator quadrant with a serviceable part and inspect the elevator quadrant support bracket assembly for cracks by following paragraphs III.B.1. through III.B.4.(b) of the Accomplishment Instructions in DHC–6 SB 6–511, Revision A. This AD requires that you do a fluorescent penetrant inspection as the type of required dye penetrant inspection. If a crack is found in the elevator quadrant support bracket, before further flight, replace with a serviceable part by following paragraphs III.B.5 through III.B.12 of the Accomplishment Instructions in DHC–6 SB 6–511, Revision A.

(3) For Model DHC–6–1, DHC–6–100, DHC–6–200, and DHC–6–300 airplanes: Within 400 hours TIS after the effective date of this AD, unless already done within the preceding 12 months before the effective date of this AD, inspect the elevator quadrant support bracket assembly for cracks by following paragraphs III.B.1. through III.B.4.(b) of the Accomplishment Instructions in DHC–6 SB 6–511, Revision A. This AD requires that you do a fluorescent penetrant inspection as the type of required dye penetrant inspection. If a crack is found in the elevator quadrant support bracket, before further flight, replace with a serviceable part by following paragraphs III.B.5 through III.B.12 of the Accomplishment Instructions in DHC–6 SB 6–511, Revision A.

(h) Credit for Previous Actions

(1) For Model DHC–6–1, DHC–6–100, DHC–6–200, and DHC–6–300 airplanes: This paragraph provides credit for the inspection required by paragraph (g)(1) of this AD if you performed the inspection before the effective date of this AD using paragraph (a)(1) of AD 89–24–06 R1.

(2) For Model DHC–6–1, DHC–6–100, DHC–6–200, and DHC–6–300 airplanes: This paragraph provides credit for the fluorescent penetrant inspection and subsequent replacement of the elevator quadrant support bracket due to a crack found from the fluorescent penetrant inspection required by paragraph (g)(2) of this AD if performed before the effective date of this AD using paragraphs (a)(3) and (4) of AD 89–24–06 R1.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (j)(1) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

(1) For more information about this AD, contact Darren Gassetto, Aviation Safety Engineer, New York ACO Branch, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (516) 228–7323; email: *9-avs-nyaco-cos@faa.gov.*

(2) Refer to Transport Canada AD CF–1972–06R5, dated June 22, 2018, for more information. You may examine the Transport Canada AD at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2022–0099.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Viking DHC–6 (Twin Otter) Service Bulletin 6–511, Revision A, dated June 22, 1990.

(ii) [Reserved]

(3) For service information identified in this AD, contact Viking Air Ltd., 1959 de Havilland Way, Sidney British Columbia, Canada V8L 5V5; phone: (800) 663–8444; email: *continuing.airworthiness@vikingair.com;* website: *https://www.vikingair.com.*

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222–5110.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: *fr.inspection@nara.gov,* or go to: *https://www.archives.gov/federal-register/cfr/ibr-locations.html.*

Issued on May 5, 2022.

Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2022–10758 Filed 5–18–22; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2021–0217; Project Identifier MCAI–2020–01486–A; Amendment 39–22041; AD 2022–10–03]

RIN 2120–AA64

Airworthiness Directives; Viking Air Limited (Type Certificate Previously Held by Bombardier, Inc. and de Havilland, Inc.) Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Viking Air Limited (type certificate previously held by Bombardier, Inc. and de Havilland, Inc.) Model DHC–6–1, DHC–6–100, DHC–6–200, DHC–6–300, and DHC–6–400 airplanes. This AD was prompted by mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI identifies the unsafe condition as loose quadrants on the rudder pedal torque tube and signs of loose rivets or rivet joint wear due to inadequate manufacturing tolerances. This AD requires inspecting the rudder pedal torque tube quadrant for looseness and taking corrective action as necessary. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective June 23, 2022.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of June 23, 2022.

ADDRESSES: For service information identified in this final rule, contact Viking Air Ltd., 1959 de Havilland Way, Sidney British Columbia, Canada V8L 5V5; phone: (800) 663–8444; email: *continuing.airworthiness@vikingair.com;* website: *https://www.vikingair.com.* You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222–5110. It is also available at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2021–0217.

Examining the AD Docket

You may examine the AD docket at *https://www.regulations.gov* by

searching for and locating Docket No. FAA–2021–0217; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the MCAI, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Deep Gaurav, Aviation Safety Engineer, New York ACO Branch, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (516) 228–7300; email: *deep.gaurav@faa.gov.*

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain serial-numbered Viking Air Limited Model DHC–6–1, DHC–6–100, DHC–6–200, DHC–6–300, and DHC–6–400 airplanes. The NPRM published in the **Federal Register** on February 7, 2022 (87 FR 6802). The NPRM was prompted by MCAI originated by Transport Canada, which is the aviation authority for Canada. Transport Canada has issued AD CF–2020–45R1, dated April 16, 2021 (referred to after this as ''the MCAI''), to correct an unsafe condition on Viking Air Limited Model DHC–6 series 1, DHC–6 series 100, DHC–6 series 110, DHC–6 series 200, DHC–6 series 210, DHC–6 series 300, DHC–6 series 310, DHC–6 series 320, and DHC–6 series 400 airplanes, serial numbers 001 through 987. The MCAI states:

> There have been in-service reports of loose quadrants on the rudder pedal torque tube and signs of loose rivets or rivet joint wear, such as dark areas or streaks around the rivet heads and quadrant to torque tube interface. Viking Air Ltd. has determined that inadequate manufacturing tolerances may result in this condition. This defect, if not detected and corrected, could result in the affected parts deteriorating until the rivets fail, leading to loss of control of the rudder and possible loss of control of the aeroplane.
>
> To detect and correct this condition, [Transport Canada] AD CF–2020–45 mandated a one-time detailed inspection of the rudder pedal torque tube quadrant assembly, and rectification, as required, of the affected parts.
>
> Viking Air Ltd. had published Service Bulletin (SB) V6/0067, Revision NC, dated 16 July 2020, providing Accomplishment Instructions for the one-time detailed inspection for looseness of the affected parts. Since [Transport Canada] AD CF–2020–45 was issued, Viking Air Ltd. has introduced a new rudder pedal torque tube assembly in production that is not subject to the unsafe condition of this [Transport Canada] AD. As a result, Viking Air Ltd. has revised the SB V6/0067 at Revision A, dated 26 January 2021 (referred to as ''the SB'' in this [Transport Canada] AD) to update the aeroplane serial number applicability.
>
> This [Transport Canada] AD revision, CF–2020–45R1, is issued to modify the aeroplane serial number applicability in accordance with the SB.

You may examine the MCAI in the AD docket at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2021–0217.

In the NPRM, the FAA proposed to require inspecting the rudder pedal torque tube quadrant for looseness and taking corrective action as necessary. The FAA is issuing this AD to address the unsafe condition on these products.

Discussion of Final Airworthiness Directive

Comments

The FAA received one comment from the Airline Pilots Association, International (ALPA). ALPA supported the NPRM without change.

Conclusion

The FAA reviewed the relevant data, considered the comment received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. This AD is adopted as proposed in the NPRM.

Related Service Information Under 1 CFR Part 51

The FAA reviewed Viking DHC–6 Twin Otter Service Bulletin V6/0067, Revision A, dated January 26, 2021. This service information specifies procedures for inspecting the rudder pedal torque tube quadrant for looseness and performing a detailed visual inspection of the rudder torque tube assembly for signs of loose rivets or rivet joint wear. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the **ADDRESSES** section.

Other Related Service Information

The FAA also reviewed Viking DHC–6 Twin Otter Service Bulletin V6/0067, Revision NC, dated July 16, 2020. This service information specifies procedures for inspecting the rudder pedal torque tube quadrant for looseness and visually inspecting for signs of loose or smoking rivets.

Differences Between This AD and the MCAI

The MCAI applies to Viking Air Limited Model DHC–6 series 110, DHC–6 series 210, DHC–6 series 310, and DHC–6 series 320 airplanes, and this AD would not because these models do not have an FAA type certificate. Transport Canada Models DHC–6 series 1, DHC–6 series 100, DHC–6 series 200, DHC–6 series 300, and DHC–6 series 400 airplanes correspond to FAA Model DHC–6–1, DHC–6–100, DHC–6–200, DHC–6–300, and DHC–6–400 airplanes, respectively.

Costs of Compliance

The FAA estimates that this AD affects 33 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

ESTIMATED COSTS

Action	Labor cost	Parts cost	Cost per airplane	Cost on U.S. operators
Inspection	1 work-hour × $85 per hour = $85	Not Applicable	$85	$2,805

The FAA estimates the following costs to replace the rudder pedal torque tube quadrant assembly based on the results of the inspection. The agency has no way of determining the number of airplanes that might need this replacement:

ON-CONDITION COSTS

Action	Labor cost	Parts cost	Cost per airplane
Rudder pedal torque tube quadrant assembly replacement.	10 work-hours × $85 per hour = $850	$9,256	$10,106

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a ''significant regulatory action'' under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

■ 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

■ 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2022–10–03 Viking Air Limited (Type Certificate Previously Held by Bombardier, Inc. and de Havilland, Inc.): Amendment 39–22041; Docket No. FAA–2021–0217; Project Identifier MCAI–2020–01486–A.

(a) Effective Date

This airworthiness directive (AD) is effective June 23, 2022.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Viking Air Limited (type certificate previously held by Bombardier, Inc. and de Havilland, Inc.) Model DHC–6–1, DHC–6–100, DHC–6–200, DHC–6–300, and DHC–6–400 airplanes, serial numbers 001 through 987, certificated in any category.

(d) Subject

Joint Aircraft System Component (JASC) Code 2700, Flight Control System.

(e) Unsafe Condition

This AD was prompted by mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI identifies the unsafe condition as loose quadrants on the rudder pedal torque tube and signs of loose rivets or rivet joint wear due to inadequate manufacturing tolerances. The FAA is issuing this AD to detect and correct loose rivets or rivet joint wear and signs of loose or smoking rivets. The unsafe condition, if not addressed, could result in the rudder pedal torque tube quadrant assembly deteriorating until the rivets fail, leading to loss of rudder control with consequent loss of airplane control.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Action

Within 3 months after the effective date of this AD, inspect the rudder pedal torque tube quadrant assembly for looseness and, if there is any looseness of the rudder pedal torque tube quadrant assembly, a loose rivet, any rivet joint wear, or a smoking rivet, before further flight, repair or replace the rudder pedal torque tube or quadrant assembly. Do these actions by following the Accomplishment Instructions, steps A.1. through A.9., in Viking DHC–6 Twin Otter Service Bulletin No. V6/0067, Revision A, dated January 26, 2021, except for any requirement to obtain repair instructions from Viking Customer Support, the repair must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; Transport Canada; or Viking Air Limited's Transport Canada Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

(h) Credit for Previous Actions

You may take credit for the actions required by paragraph (g) of this AD if you performed those actions before the effective date of this AD using Viking DHC–6 Twin Otter Service Bulletin V6/0067, Revision NC, dated July 16, 2020.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the address identified in paragraph (j)(1) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

(1) For more information about this AD, contact Deep Gaurav, Aviation Safety Engineer, New York ACO Branch, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (516) 228–7300; email: *deep.gaurav@faa.gov.*

(2) Refer to Transport Canada AD CF–2020–45R1, dated April 16, 2021, for related information. You may examine the Transport Canada AD in the AD docket at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2021–0217.

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (k)(3) and (4) of this AD.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Viking DHC–6 Twin Otter Service Bulletin V6/0067, Revision A, dated January 26, 2021.

(ii) [Reserved]

(3) For service information identified in this AD, contact Viking Air Ltd., 1959 de Havilland Way, Sidney British Columbia, Canada V8L 5V5; phone: (800) 663–8444; email: *continuing.airworthiness@vikingair.com;* website: *https://www.vikingair.com.*

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222–5110.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: *fr.inspection@nara.gov,* or go to: *https://www.archives.gov/federal-register/cfr/ibr-locations.html.*

Issued on April 30, 2022.

Gaetano A. Sciortino,

Deputy Director for Strategic Initiatives, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2022–10760 Filed 5–18–22; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2021–1004; Project Identifier MCAI–2021–00480–E; Amendment 39–22030; AD 2022–09–10]

RIN 2120–AA64

Airworthiness Directives; Rolls-Royce Deutschland Ltd & Co KG (Type Certificate Previously Held by Rolls-Royce plc) Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Rolls-Royce Deutschland Ltd & Co KG (RRD) RB211 Trent 875–17, 877–17, 884–17, 884B–17, 892–17, 892B–17, and 895–17 model turbofan engines. This AD was prompted by findings during engine overhaul of corrosion on the low-pressure compressor (LPC) front case assembly. This AD requires inspection of the LPC front case assembly and, depending on the result of the inspection, accomplishment of the applicable corrective action(s), as specified in a European Union Aviation Safety Agency (EASA) AD, which is incorporated by reference. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective June 23, 2022.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of June 23, 2022.

ADDRESSES: For material incorporated by reference in this AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; phone: +49 221 8999 000; email: *ADs@easa.europa.eu.* You may find this material on the EASA website at *https://ad.easa.europa.eu.* You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222–5110. It is also available at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2021–1004. For RRD service information identified in this AD, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, DE24 8BJ, United Kingdom; phone: +44 (0)1332 242424 fax: +44 (0)1332 249936; website: *https://www.rolls-royce.com/contact-us.aspx.*

Examining the AD Docket

You may examine the AD docket at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2021–1004; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the EASA AD, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Nicholas Paine, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238–7116; email: *nicholas.j.paine@faa.gov.*

SUPPLEMENTARY INFORMATION:

Background

EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2021–0114, dated April 23, 2021 (EASA AD 2021–0114), to address an unsafe condition for certain RRD RB211 Trent 875–17, 877–17, 884–17, 884B–17, 892–17, 892B–17, and 895–17 model turbofan engines.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to RRD RB211 Trent 875–17, 877–17, 884–17, 884B–17, 892–17, 892B–17, and 895–17 model turbofan engines. The NPRM published in the **Federal Register** on November 16, 2021 (86 FR 63319). The NPRM was prompted by findings during engine overhaul of corrosion on the LPC front case assembly caused by excessive movement between the Kevlar wrap and the fan case, which resulted in the anti-corrosion paint fretting away. In the NPRM, the FAA proposed to require the performance of all required actions within the compliance times specified in, and in accordance with EASA AD 2021–0114, except for any differences identified as exceptions in the regulatory text of this AD and except as discussed under ''Differences Between this Proposed AD and the EASA AD.'' The FAA is issuing this AD to address the unsafe condition on these products. See EASA AD 2021–0114 for additional background information.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from three commenters. The commenters were American Airlines (American), The Boeing Company (Boeing), and Rolls-Royce plc (RR). The following presents the comments received on the NPRM and the FAA's response to each comment.

Request To Revise Applicability

American requested that the FAA revise paragraph (c), Applicability, of this AD to replace ''as identified in EASA AD 2021–0114'' with ''RB211 Trent 875–17, 877–17, 884–17, 884B–17, 892–17, 892B–17 and 895–17 engines with Low Pressure (LP) Compressor front (fan) case assemblies having Part Number (P/N) FK33097, P/N FK26850, P/N FK26853, P/N FK26915, P/N FK26692 or P/N FK28577.'' American stated that certain engines identified in the EASA AD applicability section have already performed rework on the LPC front case assembly to provide additional corrosion protection using RR RB211 Trent 800 Series Propulsion Systems Service Bulletin (SB) RB.211–72–G634

(RR SB RB.211–72–G634) or RR RB211 Trent 800 Series Propulsion Systems SB RB.211–72–G856 (RR SB RB.211–72–G856) and the LPC front case assembly subsequently received a new P/N. American explained that, in addition to the new LPC front case assembly introduced by RR SB RB.211–72–G581, the new reworked LPC front case assembly P/Ns are not identified in the affected part list of the EASA AD.

The FAA disagrees with revising paragraph (c), Applicability of this AD. Paragraph (c) lists engines affected by this AD and refers to EASA AD 2021–0114, which identifies the affected P/Ns of the LPC front case assemblies. The Credit paragraph (4) in EASA AD 2021–0114 provides, ''Corrective action(s) on an engine, accomplished in accordance with the instructions of Rolls-Royce SB RB.211–72–G634 or SB RB.211–72–G856, are acceptable to comply with the requirements of paragraph (2) of this [EASA] AD for that engine.'' The FAA notes that this AD requires compliance with EASA AD 2021–0114 in its entirety, including any credit for previous actions. The FAA did not change this AD as a result of this comment.

Request To Revise Exceptions to EASA AD Paragraph

RR requested that the FAA revise paragraph (h)(3) of this AD to ensure consistency with the Credit paragraph in EASA AD 2021–0114 or to provide an alternative means to accomplish the same intent. RR explained that the service information cited in EASA AD 2021–0114 requires inspecting the affected part and contacting the manufacturer for repair instructions if corrosion exceeds the criteria in RR Alert Non-Modification Service Bulletin (NMSB) RB.211–72–G774. RR also explained that the NPRM proposed to require the removal of an affected LPC front case assembly if corrosion exceeds the criteria in RR Alert NMSB RB.211–72–G774. RR noted that this difference is inconsistent with the Credit paragraph of the EASA AD.

In response to this comment the FAA has revised paragraph (h)(3) of this AD to include a repair option for the LPC front case assembly in lieu of removal. This revision allows operators to repair the affected LPC front case assembly using a method approved by the Manager, International Validation Branch, FAA; or EASA; or Rolls-Royce's EASA Design Organization Approval (DOA). The FAA has also updated the Estimated Costs section of this preamble to include the estimated costs for repairing the LPC front case assembly.

Support for the AD

Boeing expressed support for the AD as written.

Conclusion

The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes and an update to the language in paragraph (h)(3), this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Related Service Information Under 1 CFR Part 51

The FAA reviewed EASA AD 2021–0114. EASA AD 2021–0114 specifies instructions for inspecting the LPC front case assembly and, depending on the result of the inspection, corrective action. This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in **ADDRESSES**.

Other Related Service Information

The FAA reviewed Rolls-Royce RB211 Trent 800 Series Propulsion Systems Alert NMSB RB.211–72–AG774, Revision 4, dated October 13, 2020 (the NMSB). The NMSB specifies procedures for inspecting the LPC front case assembly for corrosion and taking corrective action.

Costs of Compliance

The FAA estimates that this AD affects 98 engines installed on airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

ESTIMATED COSTS

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Perform ultrasonic inspection	8 work-hours × $85 per hour = $680	$0	$680	$66,640
Rework the LPC front case assembly	200 work-hours × $85 per hour = $17,000	18,724	35,724	3,500,952

The FAA estimates the following costs to do any necessary replacement or repair that would be required based on the results of the inspection. The agency has no way of determining the number of aircraft that might need this replacement or repair:

ON-CONDITION COSTS

Action	Labor cost	Parts cost	Cost per product
Replace the LPC front case assembly	140 work-hours × $85 per hour = $11,900	$932,000	$943,900
Repair the LPC front case assembly	200 work-hours × $85 per hour = $17,000	18,724	35,724

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or

develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a ''significant regulatory action'' under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

■ 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

■ 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2022–09–10 Rolls-Royce Deutschland Ltd & Co KG (Type Certificate previously held by Rolls-Royce plc): Amendment 39–22030; Docket No. FAA–2021–1004; Project Identifier MCAI–2021–00480–E.

(a) Effective Date

This airworthiness directive (AD) is effective June 23, 2022.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Rolls-Royce Deutschland Ltd & Co KG (RRD) (Type Certificate previously held by Rolls-Royce plc) RB211 Trent 875–17, RB211 Trent 877–17, RB211 Trent 884–17, RB211 Trent 884B–17, RB211 Trent 892–17, RB211 Trent 892B–17, and RB211 Trent 895–17 model turbofan engines, as identified in EASA AD 2021–0114, dated April 23, 2021 (EASA AD 2021–0114).

(d) Subject

Joint Aircraft System Component (JASC) Code 7230, Turbine Engine Compressor Section.

(e) Unsafe Condition

This AD was prompted by findings during engine overhaul of corrosion on the low-pressure compressor (LPC) front case assembly caused by excessive movement between the Kevlar wrap and the fan case, which resulted in the anti-corrosion paint fretting away. The FAA is issuing this AD to address corrosion on the LPC front case assembly. The unsafe condition, if not addressed, could result in reduced integrity of the LPC front case assembly during a fan blade release, resulting in damage to the airplane or reduced control of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

Except as specified in paragraph (h) of this AD: Perform all required actions within the compliance times specified in, and in accordance with EASA AD 2021–0114.

(h) Exceptions to EASA AD 2021–0114

(1) Where EASA AD 2021–0114 requires compliance from its effective date, this AD requires using the effective date of this AD.

(2) Where EASA AD 2021–0114 defines a qualified shop visit as ''any scheduled shop visit where the affected part is exposed and substantial rebuild has not yet started, except shop visits for serviceability only,'' for this AD replace that phrase with ''the induction of an engine into the shop after the effective date of this AD for maintenance involving the separation of pairs of major mating engine flanges, with the exception of the separation of engine flanges solely for the purposes of transportation of the engine without subsequent engine maintenance, which does not constitute an engine shop visit.''

(3) Where paragraph (3) of EASA AD 2021–0114 specifies ''if, during the inspection as required by paragraph (1) of this AD, any corrosion is found exceeding the criteria as specified in the NMSB, before release to service of the engine, contact Rolls-Royce for approved repair instructions and accomplish those instructions accordingly,'' for this AD replace that phrase with ''remove the affected LPC front case assembly from service if corrosion is found that exceeds the criteria specified in Appendix 2 of the NMSB.'' In lieu of removal of the affected LPC front case assembly, operators may repair the affected LPC front case assembly using a method approved by the Manager, International Validation Branch, FAA; or EASA; or Rolls-Royce's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

(4) This AD does not mandate compliance with the ''Remarks'' section of EASA AD 2021–0114.

(i) No Reporting Requirement

Although the service information referenced in EASA AD 2021–0114 specifies to submit certain information to the manufacturer, this AD does not include that requirement.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, ECO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ECO Branch, send it to the attention of the person identified in paragraph (k) of this AD. Information may be emailed to: *ANE-AD-AMOC@faa.gov.*

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(k) Related Information

For more information about this AD, contact Nicholas Paine, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238–7116; email: *nicholas.j.paine@faa.gov.*

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) European Union Aviation Safety Agency (EASA) AD 2021–0114, dated April 23, 2021.

(ii) [Reserved]

(3) For more information about EASA AD 2021–0114, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; phone: +49 221 8999 000; email: *ADs@easa.europa.eu.* You may find this material on the EASA website at *https://ad.easa.europa.eu.*

(4) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222–5110. This material may be found in the AD docket at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2021–1004.

(5) You may view this material that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: *fr.inspection@nara.gov,* or go to *https://www.archives.gov/federal-register/cfr/ibr-locations.html.*

Issued on May 13, 2022.

Gaetano A. Sciortino,

Deputy Director for Strategic Initiatives, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2022–10755 Filed 5–18–22; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2022–0138; Airspace Docket No. 22–ASW–3]

RIN 2120–AA66

Amendment of Class E Airspace; Palestine, TX

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This action amends the Class E airspace at Palestine, TX. This action as the result of an airspace review caused by the decommissioning of the Palestine non-directional beacon (NDB). The geographic coordinates of the airport are also being updated to coincide with the FAA's aeronautical database.

DATES: Effective 0901 UTC, July 14, 2022. The Director of the Federal Register approves this incorporation by reference action under 1 CFR 51, subject to the annual revision of FAA Order JO 7400.11 and publication of conforming amendments.

ADDRESSES: FAA Order JO 7400.11F, Airspace Designations and Reporting Points, and subsequent amendments can be viewed online at *https://www.faa.gov/air_traffic/publications/.* For further information, you can contact the Airspace Policy Group, Federal Aviation Administration, 800 Independence Avenue SW, Washington, DC 20591; telephone: (202) 267–8783.

FOR FURTHER INFORMATION CONTACT: Rebecca Shelby, Federal Aviation Administration, Operations Support Group, Central Service Center, 10101 Hillwood Parkway, Fort Worth, TX 76177; telephone (817) 222–5857.

SUPPLEMENTARY INFORMATION:

Authority for This Rulemaking

The FAA's authority to issue rules regarding aviation safety is found in Title 49 of the United States Code. Subtitle I, Section 106 describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency's authority. This rulemaking is promulgated under the authority described in Subtitle VII, Part A, Subpart I, Section 40103. Under that section, the FAA is charged with prescribing regulations to assign the use of airspace necessary to ensure the safety of aircraft and the efficient use of airspace. This regulation is within the scope of that authority as it amends the Class E airspace extending upward from 700 feet above the surface at Palestine Municipal Airport, Palestine, TX, to support instrument flight rule operations at this airport.

History

The FAA published a notice of proposed rulemaking in the **Federal Register** (87 FR 12900; March 8, 2022) for Docket No. FAA–2022–0138 to amend the Class E airspace at Palestine, TX. Interested parties were invited to participate in this rulemaking effort by submitting written comments on the proposal to the FAA. No comments were received.

Class E airspace designations are published in paragraph 6005 of FAA Order JO 7400.11F, dated August 10, 2021, and effective September 15, 2021, which is incorporated by reference in 14 CFR 71.1. The Class E airspace designations listed in this document will be published subsequently in FAA Order JO 7400.11.

Availability and Summary of Documents for Incorporation by Reference

This document amends FAA Order JO 7400.11F, Airspace Designations and Reporting Points, dated August 10, 2021, and effective September 15, 2021. FAA Order JO 7400.11F is publicly available as listed in the **ADDRESSES** section of this document. FAA Order JO 7400.11F lists Class A, B, C, D, and E airspace areas, air traffic service routes, and reporting points.

The Rule

This amendment to 14 CFR part 71 amends the Class E airspace extending upward from 700 feet above the surface to within 6.6-mile (reduced from 7.1-mile) radius at Palestine Municipal Airport, Palestine, TX, and by removing the Frankston VOR/DME and associated extension from the airspace legal description; and updating the geographic coordinates of the airport to coincide with the FAA's aeronautical database.

This action is necessary due to an airspace review caused by the decommissioning of the Palestine NDB which provided navigation information for the instrument procedures this airport.

FAA Order JO 7400.11, Airspace Designations and Reporting Points, is published yearly and effective on September 15.

Regulatory Notices and Analyses

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current, is non-controversial and unlikely to result in adverse or negative comments. It, therefore: (1) Is not a ''significant regulatory action'' under Executive Order 12866; (2) is not a ''significant rule'' under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that only affects air traffic procedures and air navigation, it is certified that this rule, when promulgated, does not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

Environmental Review

The FAA has determined that this action qualifies for categorical exclusion under the National Environmental Policy Act in accordance with FAA Order 1050.1F, ''Environmental Impacts: Policies and Procedures,'' paragraph 5–6.5.a. This airspace action is not expected to cause any potentially significant environmental impacts, and no extraordinary circumstances exist that warrant preparation of an environmental assessment.

Lists of Subjects in 14 Part CFR 71

Airspace, Incorporation by reference, Navigation (air).

Adoption of the Amendment

In consideration of the foregoing, the Federal Aviation Administration amends 14 CFR part 71 as follows:

PART 71—DESIGNATION OF CLASS A, B, C, D, AND E AIRSPACE AREAS; AIR TRAFFIC SERVICE ROUTES; AND REPORTING POINTS

■ 1. The authority citation for part 71 continues to read as follows:

Authority: 49 U.S.C. 106(f), 106(g); 40103, 40113, 40120; E.O. 10854, 24 FR 9565, 3 CFR, 1959–1963 Comp., p. 389.

§ 71.1 [Amended]

■ 2. The incorporation by reference in 14 CFR 71.1 of FAA Order JO 7400.11F, Airspace Designations and Reporting Points, dated August 10, 2021, and effective September 15, 2021, is amended as follows:

Paragraph 6005 Class E Airspace Areas Extending Upward From 700 Feet or More Above the Surface of the Earth.

* * * * *

ASW TX E5 Palestine, TX [Amended]

Palestine Municipal Airport, IA
(Lat. 31°46′47″ N, long. 95°42′23″ W)

That airspace extending upward from 700 feet above the surface within a 6.6-mile radius of Palestine Municipal Airport.

Issued in Fort Worth, Texas, on May 12, 2022.

Martin A. Skinner,

Manager, Operations Support Group, ATO Central Service Center.

[FR Doc. 2022–10675 Filed 5–18–22; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF HOMELAND SECURITY

U.S. Customs and Border Protection

19 CFR Part 122

[CBP Dec. 22–09]

Technical Amendment to List of User Fee Airports: Removal of One Airport

AGENCY: U.S. Customs and Border Protection; DHS.

ACTION: Final rule; technical amendment.

SUMMARY: This document amends U.S. Customs and Border Protection (CBP) regulations by removing one airport from the list of user fee airports. User fee airports are airports that have been approved by the Commissioner of CBP to receive, for a fee, the customs services of CBP officers for processing aircraft, passengers, and cargo entering the United States, but do not qualify for designation as international or landing rights airports. Specifically, this technical amendment reflects the removal of the designation of user fee airport status for the Hillsboro Airport in Hillsboro, Oregon.

DATES: Effective May 19, 2022.

FOR FURTHER INFORMATION CONTACT: Ryan Flanagan, Director, Alternative Funding Program, Office of Field Operations, U.S. Customs and Border Protection at *Ryan.H.Flanagan@cbp.dhs.gov* or 202–550–9566.

SUPPLEMENTARY INFORMATION:

Background

Title 19, part 122 of the Code of Federal Regulations (19 CFR part 122) sets forth regulations relating to the entry and clearance of aircraft engaged in international commerce and the transportation of persons and cargo by aircraft in international commerce.[1] Generally, a civil aircraft arriving from outside the United States must land at an airport designated as an international airport. Alternatively, civil aircraft may request permission to land at a specific airport and, if landing rights are granted, the civil aircraft may land at that landing rights airport.[2]

Section 236 of the Trade and Tariff Act of 1984 (Pub. L. 98–573, 98 Stat. 2948, 2994 (1984)), codified at 19 U.S.C. 58b, created an alternative option for civil aircraft seeking to land at an airport that is neither an international airport nor a landing rights airport. This alternative option allows the Secretary of Treasury to designate an airport, upon request by the airport authority or other sponsoring entity, as a user fee airport.[3] Pursuant to 19 U.S.C. 58b and connected delegated authorities, a requesting airport may be designated as a user fee airport only if CBP determines that the volume or value of business at the airport is insufficient to justify the unreimbursed availability of customs services at the airport and the governor of the state in which the airport is located approves the designation. As the volume or value of business cleared through this type of airport is insufficient to justify the availability of customs services at no cost, customs services provided by CBP at the airport are not funded by appropriations from the general treasury of the United States. Instead, the user fee airport pays for the customs services provided by CBP. The user fee airport must pay the fees charged, which must be in an amount equal to the expenses incurred by CBP in providing customs and related services at the user fee airport, including the salary and expenses of CBP employees to provide such services. *See* 19 U.S.C. 58b; *see also* 19 CFR 24.17(a)–(b).

CBP designates airports as user fee airports in accordance with 19 U.S.C. 58b and 19 CFR 122.15 and on a case-by-case basis. If CBP decides that the conditions for designation as a user fee airport are satisfied, a Memorandum of Agreement (MOA) is executed between CBP and the sponsor of the user fee airport. Pursuant to 19 CFR 122.15(c), the designation of an airport as a user fee airport must be withdrawn if either CBP or the airport authority gives 120 days written notice of termination to the other party, or if any amounts due to CBP are not paid on a timely basis.

The list of designated user fee airports is set forth in 19 CFR 122.15(b). Periodically, CBP updates the list to include newly designated airports that were not previously on the list, to reflect any changes in the names of the designated user fee airports, and to remove airports that are no longer designated as user fee airports.

Recent Change Requiring Update to the List of User Fee Airports

This document updates the list of user fee airports in 19 CFR 122.15(b) by removing the Hillsboro Airport in Hillsboro, Oregon. On November 30, 2020, the General Aviation Operations Supervisor of the Hillsboro Airport requested termination of the user fee status for the Hillsboro Airport, and the General Aviation Operations Supervisor and CBP mutually agreed to terminate the user fee status of Hillsboro Airport effective on July 20, 2021.

Inapplicability of Public Notice and Delayed Effective Date Requirements

Under the Administrative Procedure Act (5 U.S.C. 553(b)), an agency is exempted from the prior public notice and comment procedures if it finds, for good cause, that such procedures are impracticable, unnecessary, or contrary to the public interest. This final rule makes a conforming change by updating the list of user fee airports by removing one airport in light of CBP's withdrawal of its designation as a user fee airport under 19 U.S.C. 58b. Because this conforming rule has no substantive impact, is technical in nature, and does not impose additional burdens on or take away any existing rights or privileges from the public, CBP finds for good cause that the prior public notice and comment procedures are impracticable, unnecessary, and contrary to the public interest. For the same reasons, pursuant to 5 U.S.C. 553(d)(3), a delayed effective date is not required.

[1] For purposes of this technical rule, an ''aircraft'' is defined as any device used or designed for navigation or flight in air and does not include hovercraft. 19 CFR 122.1(a).

[2] A landing rights airport is ''any airport, other than an international airport or user fee airport, at which flights from a foreign area are given permission by Customs to land.'' 19 CFR 122.1(f).

[3] Sections 403(1) and 411 of the Homeland Security Act of 2002 (Pub. L. 107–296, 116 Stat. 2135, 2178–79 (2002)), codified at 6 U.S.C. 203(1) and 211, transferred certain functions, including the authority to designate user fee facilities, from the U.S. Customs Service of the Department of the Treasury to the newly established U.S. Department of Homeland Security. The Secretary of Homeland Security delegated the authority to designate user fee facilities (UFF) to the Commissioner of CBP through Department of Homeland Security Delegation, Sec. II.A., No. 7010.3 (May 11, 2006). The Chief Operating Officer and Senior Official Performing the Duties of the Commissioner subsequently delegated the authority to the Executive Assistant Commissioner (EAC) of the Office of Field Operations, on March 23, 2020, to designate new UFFs. On December 23, 2020, the broader authority to withdraw a facility's designation as a UFF, as well as execute, amend, or terminate Memorandum of Agreements, was also delegated to the EAC of the Office of Field Operations.

Regulatory Flexibility Act and Executive Order 12866

Because no notice of proposed rulemaking is required, the provisions of the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) do not apply. This amendment does not meet the criteria for a ''significant regulatory action'' as specified in Executive Order 12866.

Paperwork Reduction Act

There is no new collection of information required in this document; therefore, the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. 3507) are inapplicable.

Signing Authority

This document is limited to a technical correction of CBP regulations. Accordingly, it is being signed under the authority of 19 CFR 0.1(b). CBP Commissioner Chris Magnus, having reviewed and approved this document, is delegating the authority to electronically sign this document to Robert F. Altneu, who is the Director of the Regulations and Disclosure Law Division for CBP, for purposes of publication in the **Federal Register**.

List of Subjects in 19 CFR Part 122

Air carriers, Aircraft, Airports, Customs duties and inspection, Freight.

Amendments to Regulations

Part 122, of title 19 of the Code of Federal Regulations (19 CFR part 122) is amended as set forth below:

PART 122—AIR COMMERCE REGULATIONS

■ 1. The general authority citation for part 122 continues to read as follows:

Authority: 5 U.S.C. 301; 19 U.S.C. 58b, 66, 1431, 1433, 1436, 1448, 1459, 1590, 1594, 1623, 1624, 1644, 1644a, 2071 note.

* * * * *

§ 122.15 [Amended]

■ 2. In § 122.15, amend the table in paragraph (b) by removing the entry for ''Hillsboro, Oregon''.

Dated: May 13, 2022.

Robert F. Altneu,

Director, Regulations & Disclosure Law Division, Regulations & Rulings, Office of Trade, U.S. Customs and Border Protection.

[FR Doc. 2022–10668 Filed 5–18–22; 8:45 am]

BILLING CODE 9111–14–P

DEPARTMENT OF DEFENSE

Office of the Secretary

32 CFR Part 310

[Docket ID: DoD–2020–OS–0084]

RIN 0790–AK99

Privacy Act of 1974; Implementation

AGENCY: Office of the Secretary of Defense (OSD), Department of Defense (DoD).

ACTION: Final rule.

SUMMARY: The DoD is issuing a final rule to amend its regulations to exempt portions of the DoD–0003, ''Mobilization Deployment Management Information System (MDMIS),'' system of records from certain provisions of the Privacy Act of 1974.

DATES: This rule is effective on June 21, 2022.

FOR FURTHER INFORMATION CONTACT: Ms. Rahwa Keleta, Privacy and Civil Liberties Division, Directorate for Privacy, Civil Liberties and Freedom of Information, Office of the Assistant to the Secretary of Defense for Privacy, Civil Liberties, and Transparency, Department of Defense, 4800 Mark Center Drive, Mailbox #24, Suite 08D09, Alexandria, VA 22350–1700; *OSD.PCLFD@mail.mil*; (703) 571–0070.

SUPPLEMENTARY INFORMATION:

Discussion of Comments and Changes

In the notice of proposed rulemaking (NPRM), the proposed rule was to be published at 32 CFR 310.13(e)(3). DoD is now publishing this rule at 32 CFR 310.13(e)(9). The proposed rule published in the **Federal Register** on December 16, 2020 (85 FR 81438–81439). Comments were accepted for 60 days until February 16, 2021. One comment was received. Please see the summarized comment and the Department's response as follows:

DoD received one substantive comment on the NPRM. The commenter voiced concern regarding the classification process within the DoD. Although this comment does not directly pertain to the Privacy Act and the exemption claimed for this SORN, to promote public understanding in this area, a description of the DoD classification process is provided in this preamble.

Executive Order 13526 prescribes the framework for the Federal government (to include DoD) to classify national security information. Only DoD personnel who are delegated original classification authority in writing are authorized to review the DoD's information and make the initial decision that an item of information could reasonably be expected to cause identifiable or describable damage to the national security if it were disclosed to the public. Several oversight and compliance safeguarding mechanisms exist to ensure the process to classify information is appropriate.

These existing safeguarding mechanisms include the following: Personnel authorized to make original classification determinations are required to receive training in proper classification, including the avoidance of over-classification, and declassification at least once a calendar year. Additionally, information may only be classified if it pertains to specific categories or subjects, including military plans, weapons systems, or operations and intelligence activities. Furthermore, agency heads must (on a periodic basis) complete a comprehensive review of the agency's classification guidance, to include reviewing information that is classified within the agency; provide the results of such review to appropriate officials outside the agency at the National Archives and Records Administration (NARA); and release an unclassified version of the review to the public. Authorized holders of classified information are also encouraged and expected to ''challenge'' classification determinations if they believe the classification status is improper, and any individual or entity can request any Federal agency to review classified information for declassification, regardless of its age or origin, in accordance with the Mandatory Declassification Review (MDR) process. Additional information about the MDR process can be found on the NARA's MDR program page at *https://www.archives.gov/isoo/training/mdr.* In the interest of protecting information critical to the Nation's defense, it is appropriate for the DoD to properly classify and exempt such information from public release under the Privacy Act so as to protect U.S. national security.

Having considered the public comment, the DoD will implement the rulemaking without any changes resulting from the comment. However, DoD will make one corrective edit to 32 CFR 310.13(e)(9)(iii)(A). In the prior NPRM, records in that paragraph were referenced as ''common enterprise records,'' a term that does not appear in the DoD–0003 system of records notice nor necessarily apply to records in the MDMIS. The final rule removes this description and simply references ''records in this system.''

Background

In finalizing this rule, DoD exempts portions of the updated and reissued DoD–0003 MDMIS system of records from certain provisions of the Privacy Act. DoD uses this system of records to automate financial and business transactions, perform cost-management analysis, produce oversight and audit reports, and provide critical data linking to improve performance of mission objectives. This system of records supports DoD in creating predictive analytic models based upon specific data streams to equip decision makers with critical data necessary for execution of fiscal and operational requirements. Some of the records that are part of the DoD–0003 MDMIS system of records may contain classified national security information and disclosure of those records to an individual may cause damage to national security. The Privacy Act, pursuant to 5 U.S.C. 552a(k)(1), authorizes agencies to claim an exemption for systems of records that contain information properly classified pursuant to executive order. For this reason, DoD has exempted portions of the DoD–0003 MDMIS system of records from the access and amendment requirements of the Privacy Act, pursuant to 5 U.S.C. 552a(k)(1), to prevent disclosure of any information properly classified pursuant to executive order, including Executive Order 13526, as implemented by DoD Instruction 5200.01 and DoD Manual 5200.01, Volumes 1 and 3. This rule will deny an individual access under the Privacy Act to only those portions of records for which the claimed exemption applies. In addition, records in the DoD–0003 MDMIS system of records are only exempt from the Privacy Act to the extent the purposes underlying the exemption pertain to the record.

Regulatory Analysis

Executive Order 12866, ''Regulatory Planning and Review'' and Executive Order 13563, ''Improving Regulation and Regulatory Review''

Executive Orders 12866 and 13563 direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distribute impacts, and equity). Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility. It has been determined that this rule is not a significant regulatory action.

Congressional Review Act

This rule is not a ''major rule'' as defined by 5 U.S.C. 804(2).

Public Law 96–354, ''Regulatory Flexibility Act'' (5 U.S.C. Chapter 6)

The Assistant to the Secretary of Defense for Privacy, Civil Liberties, and Transparency certified that this Privacy Act rule does not have significant economic impact on a substantial number of small entities because they are concerned only with the administration of Privacy Act systems of records within the DoD.

Public Law 96–511, ''Paperwork Reduction Act'' (44 U.S.C. Chapter 35)

It has been determined that this rule does not impose additional information collection requirements on the public under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*).

Section 202, Public Law 104–4, ''Unfunded Mandates Reform Act''

It has been determined that this rule does not involve a Federal mandate that may result in the expenditure by State, local and tribal governments, in the aggregate, or by the private sector, of $100 million or more and that it will not significantly or uniquely affect small governments.

Executive Order 13132, ''Federalism''

It has been determined that this rule does not have federalism implications. This rule does not have substantial direct effects on the States, on the relationship between the National Government and the States, or on the distribution of power and responsibilities among the various levels of government.

Executive Order 13175, ''Consultation and Coordination With Indian Tribal Governments''

Executive Order 13175 establishes certain requirements that an agency must meet when it promulgates a proposed rule (and subsequent final rule) that imposes substantial direct compliance costs on one or more Indian tribes, preempts tribal law, or effects the distribution of power and responsibilities between the federal government and Indian tribes. This rule will not have a substantial effect on Indian tribal governments.

List of Subjects in 32 CFR Part 310

Privacy.

Accordingly, 32 CFR part 310 is amended as follows:

PART 310—[AMENDED]

■ 1. The authority citation for 32 CFR part 310 continues to read as follows:

Authority: 5 U.S.C. 552a.

■ 2. Section 310.13 is amended by adding reserved paragraphs (e)(7) and (8) and adding paragraph (e)(9) to read as follows:

§ 310.13 Exemptions for DoD-wide systems.

* * * * *

(e) * * *

(7)–(8) [Reserved]

(9) *System identifier and name.* DoD–0003, ''Mobilization Deployment Management Information System (MDMIS).''

(i) *Exemptions.* This system of records is exempt from subsections 5 U.S.C. 552a(c)(3), (d)(1), (d)(2), (d)(3), and (d)(4) of the Privacy Act.

(ii) *Authority.* 5 U.S.C. 552a(k)(1).

(iii) *Exemption from the particular subsections.* Exemption from the particular subsections is justified for the following reasons:

(A) *Subsection (c)(3) (accounting of disclosures).* Because records in this system may contain information properly classified pursuant to executive order, the disclosure accountings of such records may also contain information properly classified pursuant to executive order, the disclosure of which may cause damage to national security.

(B) *Subsections (d)(1), (2), (3), and (4) (record subject's right to access and amend records).* Access to and amendment of records by the record subject could disclose information properly classified pursuant to executive order. Disclosure of classified records to an individual may cause damage to national security.

(iv) *Exempt records from other systems.* In addition, in the course of carrying out the overall purpose for this system, exempt records from other system of records may in turn become part of the records maintained in this system. To the extent that copies of exempt records from those other systems of records are maintained in this system, the DoD claims the same exemptions for the records from those other systems that are entered into this system, as claimed for the prior system(s) of which they are a part, provided the reason for the exemption remains valid and necessary.

Dated: May 11, 2022.

Aaron T. Siegel,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 2022–10656 Filed 5–18–22; 8:45 am]

BILLING CODE 5001–06–P

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

33 CFR Part 117

[Docket No. USCG–2022–0237]

Drawbridge Operation Regulation; Keweenaw Waterway, Between Houghton and Hancock, MI

AGENCY: Coast Guard, DHS.

ACTION: Notice of temporary deviation from regulations; request for comments.

SUMMARY: The Coast Guard has issued a temporary deviation from the operating schedule that governs the US41 Bridge, mile 16.0, over the Keweenaw Waterway between the towns of Houghton and Hancock, Michigan. The Michigan Department of Transportation (MDOT), who owns and operates the bridge, has requested a deviation that will test a change to the drawbridge operation schedule to determine whether a permanent change to the schedule is needed. The Coast Guard is seeking comments from the public regarding these proposed changes.

DATES: This deviation is effective from 7 a.m. on May 26, 2022 through 7 p.m. on September 6, 2022. Comments and related material must reach the Coast Guard on or before November 1, 2022.

ADDRESSES: You may submit comments identified by docket number USCG–2022–0237 using Federal Decision Making Portal at *https://www.regulations.gov.*

See the ''Public Participation and Request for Comments'' portion of the **SUPPLEMENTARY INFORMATION** section below for instructions on submitting comments.

FOR FURTHER INFORMATION CONTACT: If you have questions on this proposed rule, call or email Mr. Lee D. Soule, Bridge Management Specialist, Ninth Coast Guard District; telephone 216–902–6085, email *Lee.D.Soule@uscg.mil.*

SUPPLEMENTARY INFORMATION:

I. Background, Purpose and Legal Basis

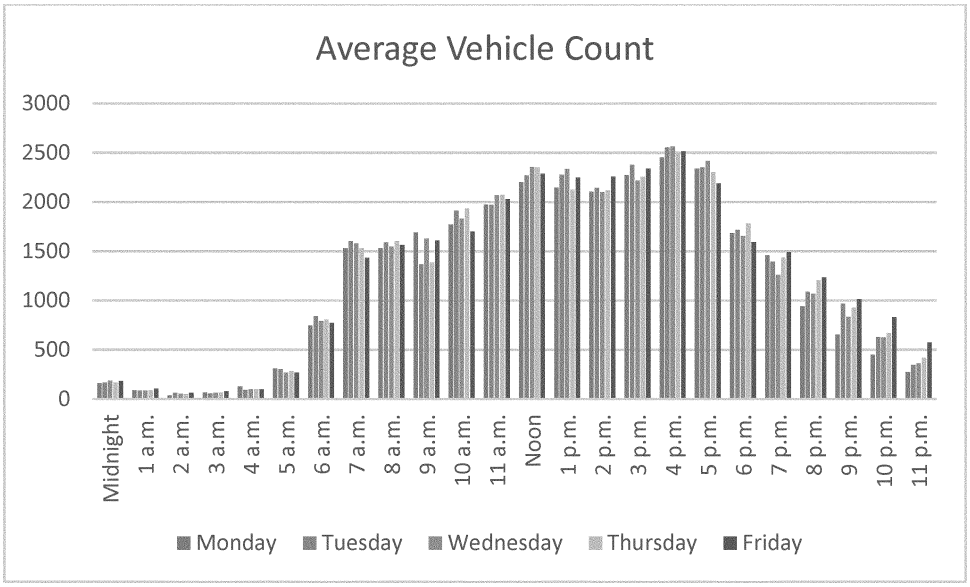
The US41 Bridge, mile 16.0, over the Keweenaw Waterway (the bridge) between the towns of Houghton and Hancock, Michigan, is owned and operated by MDOT and is the only crossing over the waterway. The bridge is a combination highway and railroad double deck lift bridge that provides a horizontal clearance of 7-feet in the down position, 103-feet in the open positon, and 35-feet in the intermediate position above low water datum (LWD) based on International Great Lakes Datum of 1985 (IGLD85).

The Keweenaw Waterway divides the Keweenaw Peninsula and is located in the middle of the south shore of Lake Superior, a Great Lake known for hazardous weather conditions. The federal government improved the Keweenaw Waterway in 1861 to accommodate interstate commerce; the Keweenaw Waterway acts as a harbor of safe refuge for vessels caught in bad weather and is the halfway between Duluth, Minnesota and Sault Ste. Marie, Michigan. Commercial vessels, including some over 700-feet in length, and powered and non-powered recreational vessels utilize the waterway. The passenger vessel RANGER III operates from the east side of the US41 Bridge to Isle Royal and is operated by the National Park Service with a capacity of 128-passengers. A U.S. Coast Guard Station is located at the far west end of the waterway.

MDOT has requested a new operating schedule to relieve commuter and commercial vehicle traffic congestion at the bridge on weekdays; the new schedule will not apply to federal holidays that fall on weekdays. Traffic data impacted by COVID–19 restrictions would not provide the public with an accurate assessment of the traffic conditions at the bridge and have intentionally have not been considered. The following data from the 2017 through 2019 drawtender logs and traffic data from July 9 through July 15, 2019 was provided by MDOT. We have received a request to consider restricting the bridge openings at this location at least twice a year since 2016. The comments and data received during this test deviation will prove or disprove the need for restricted openings.

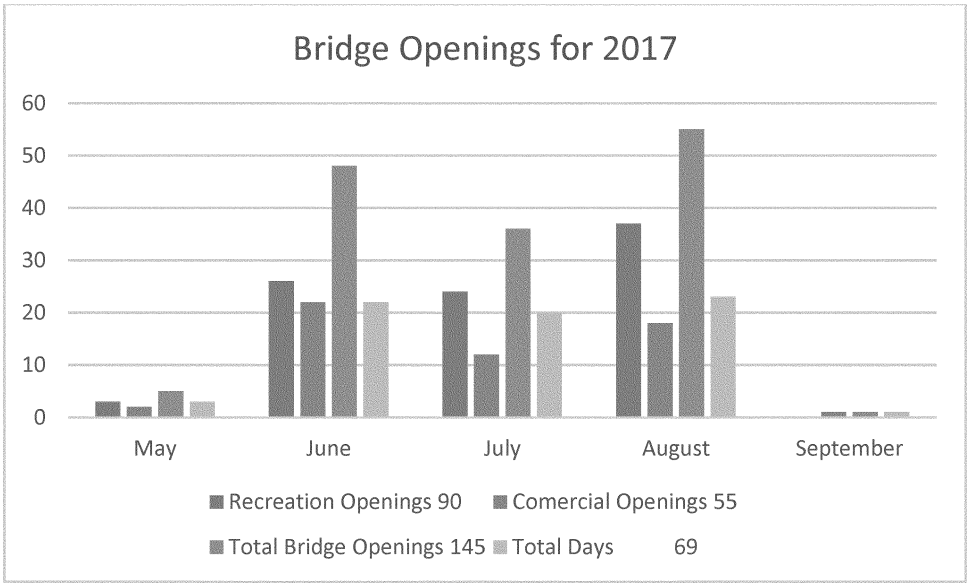
MDOT provided vehicle-crossing data for a five-day workweek and we discovered from 7 a.m. to 7 p.m. the traffic at the bridge steadily increases then decreases without definitive spikes at morning, noon, and evening, as shown in the below graph.

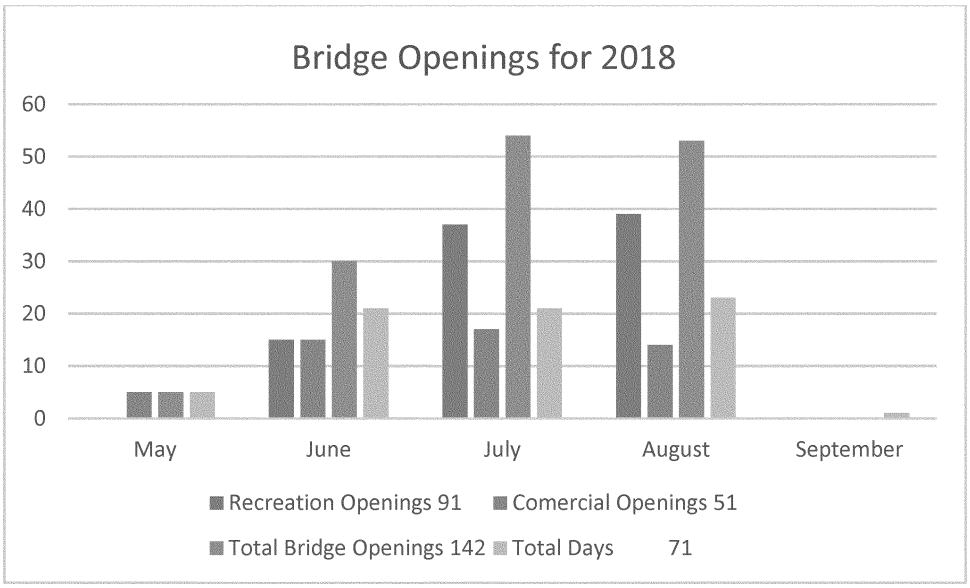
BILLING CODE 9110–04–P

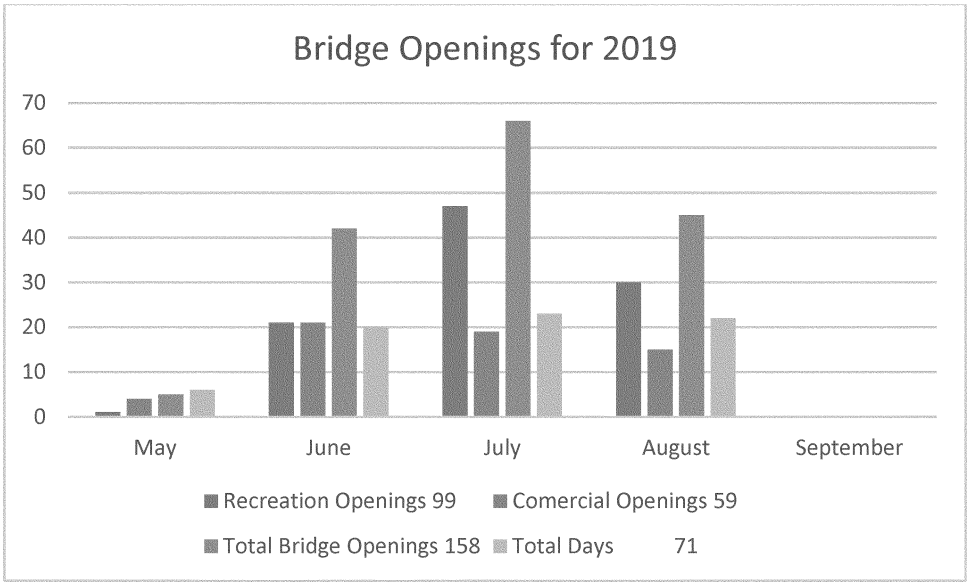


We have placed a color copy of this graph and the three graphs that follow in the docket. See instructions in Section II for viewing items in the docket.

MDOT provided drawtender logs for three years: 2017, 2018, and 2019 to show average opening requests and boating trends.







BILLING CODE 9110–04–C

The temporary deviation is necessary to gather data on a possible permanent solution:

From 7 a.m. on May 26, 2022 through 7 p.m. on September 6, 2022 the US41 Bridge, mile 16.0, over the Kewanee Waterway, shall open on signal: Except that from 7 a.m. to 7 p.m. Monday through Friday, less federal holidays, the draw only need to be opened on the the hour and half-hour for any vessel. Between midnight and 4 a.m. the draw shall be placed in the intermediate position and opened if a 2-hour advance notice is given. The bridge shall be opened on signal to pass any vessel over 300 feet in length or at any time 5 or more vessels gather at the bridge requesting an opening. All other provisions of 33 CFR 117.635 shall remain in effect.

The Coast Guard will also inform the users of the waterways through our Local Broadcast Notices to Mariners of the change in operating schedule for the bridge so that vessel operators can arrange their transits to minimize any impact caused by the temporary deviation.

In accordance with 33 CFR 117.35(e), the drawbridge must return to its regular operating schedule immediately at the end of the effective period of this temporary deviation. This deviation from the operating regulations is authorized under 33 CFR 117.35.

II. Public Participation and Request for Comments

We view public participation as essential to effective rulemaking, and will consider all comments and material received during the comment period. Your comment can help shape the outcome of this rulemaking. If you submit a comment, please include the docket number for this rulemaking, indicate the specific section of this document to which each comment applies, and provide a reason for each suggestion or recommendation.

We encourage you to submit comments through the Federal Decision Making Portal at *https://www.regulations.gov*. To do so, go to *https://www.regulations.gov,* type USCG–2022–0237 in the search box and click ''Search.'' Next, look for this document in the Search Results column, and click on it. Then click on the Comment option. If your material cannot be submitted using *https://www.regulations.gov,* contact the person in the **FOR FURTHER INFORMATION CONTACT** section of this document for alternate instructions.

To view documents mentioned in this rule as being available in the docket, find the docket as described in the previous paragraph, and then select ''Supporting & Related Material'' in the Document Type column. Public comments will also be placed in our online docket and can be viewed by following instructions on the *https://www.regulations.gov* Frequently Asked Questions web page. We review all comments received, but we will only post comments that address the topic of the proposed rule. We may choose not to post off-topic, inappropriate, or duplicate comments that we receive.

We accept anonymous comments. Comments we post to *https://www.regulations.gov* will include any personal information you have provided. For more about privacy and submissions in response to this document, see DHS's eRulemaking System of Records notice (85 FR 14226, March 11, 2020).

M.J. Johnston,

Rear Admiral, U.S. Coast Guard, Commander, Ninth Coast Guard District.

[FR Doc. 2022–10564 Filed 5–18–22; 8:45 am]

BILLING CODE 9110–04–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R05–OAR–2019–0215; FRL–8999–03–R5]

Air Plan Approval; Michigan; Partial Approval and Partial Disapproval for Infrastructure SIP Requirements for the 2015 Ozone NAAQS; Correction

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule; correction.

SUMMARY: This action corrects an omission of timely comment and response in the September 28, 2021, Environmental Protection Agency (EPA) partial approval/partial disapproval of elements of a State Implementation Plan (SIP) submission from Michigan to address the infrastructure requirements of section 110 of the Clean Air Act (CAA) for the 2015 ozone National Ambient Air Quality Standards (NAAQS). Accordingly, this action amends the effective date of the final approval to reflect EPA's current response to the previously omitted comment.

DATES: This final rule is effective on May 19, 2022.

FOR FURTHER INFORMATION CONTACT: Olivia Davidson, Environmental Scientist, Attainment Planning and Maintenance Section, Air Programs Branch (AR18J), Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, (312) 886–0266, *davidson.olivia@epa.gov.*

SUPPLEMENTARY INFORMATION: On July 2, 2021 (86 FR 35247), EPA proposed to approve most elements and disapprove an element of a SIP submission from the Michigan Department of Environment, Great Lakes, and Energy (EGLE) to address the required infrastructure elements of sections 110(a)(1) and (2), as applicable, for the 2015 ozone NAAQS. EPA provided an explanation of the CAA requirements, a detailed analysis of the submission, and EPA's reasons for proposing approval, in the notice of proposed rulemaking (NPRM) and will not be restated here. The public comment period for this proposed rule ended on August 2, 2021. In the final rule published in the **Federal Register** on September 28, 2021 (86 FR 53550), EPA mistakenly omitted comments submitted by Sierra Club in our response to comments. EPA received the comment letter on August 2, 2021 shortly before the end of the comment period. This comment letter submitted by Sierra Club is summarized below along with EPA's responses.

Comment: Sierra Club commented that EPA should examine whether Michigan has met the requirement of CAA sections 110(a)(2)(A) and 110(a)(2)(E)(i), 42 U.S.C. 7410(a)(2)(A) and 7410(a)(2)(E)(i), in light of a 2017 Michigan Court of Claims opinion, *United States Steel Corp.* v. *Dept. of Environmental Quality,* No. 16–000202–MZ, 2017 WL 5974195 (Mich. Ct. Cl. Oct. 4, 2017), that invalidated Michigan Administrative Code (MAC) 336.1430 (''Rule 430''). The commenter noted that Michigan promulgated Rule 430 in an effort to bring the Detroit area into attainment with the 2010 1-hour primary sulfur dioxide (SO_2) NAAQS, by placing SO_2 emission limits on a single facility. The commenter further noted that the Court invalidated Rule 430 because the limits applied to a single facility, thus failing the ''general applicability'' requirement of Michigan's Administrative Procedures Act, MCL 24.201 *et seq.* The implication of this comment is that Michigan lacks legal authority to regulate sources as necessary to implement the 2015 Ozone NAAQS, as required by CAA sections 110(a)(2)(A) and 110(a)(2)(E)(i).

Response: EPA disagrees with the commenter's concern that the Michigan Court of Claims decision in *United States Steel Corp.* v. *Dept. of Environmental Quality,* indicates that Michigan lacks legal authority to regulate sources as required by CAA sections 110(a)(2)(A) and 110(a)(2)(E)(i). As an initial matter, EPA notes that the state court decision at issue pertained to implementation of the 2010 1-hour primary SO_2 NAAQS, not the 2015 Ozone NAAQS. For most purposes, EPA normally evaluates infrastructure SIP submissions for purposes of the specific NAAQS that is at issue. In this instance, however, the implications of the state court decision could potentially affect the state's ability to implement control measures with respect to other NAAQS as well.

In this light, EPA has evaluated whether the Michigan Court of Claims decision in question precludes the state from regulating specific sources as needed for purposes of meeting nonattainment plan requirements to result in attainment and maintenance of the NAAQS. Based on this review, EPA concludes that the court only decided that the state had improperly sought to impose emissions controls on the sources at issue through a rule that did not meet state law requirements for a ''rule of general applicability'' in violation of relevant state administrative procedures act requirements. By naming the specific affected source by name, rather than drafting the requirements in a form that would apply to all similar sources in the state, the court reasoned that the state law could not pass muster as a rule of general applicability.

Instead, the court reasoned that the objective the state sought to achieve ''sounds more in the nature of that which is ordinarily only allowed after a contested case hearing or in the permit process.'' Moreover, the court noted that it was ''not unmindful of the facts that led to the promulgation of Rule 430 or situation that DEQ sought to address.'' Although the court expressly declined to advise how the state could properly impose emission limits on the source at issue via other means, elsewhere in the decision the court noted that the state and other sources ''agreed to revise pertinent DEQ permits.''

EPA interprets these statements by the court to indicate that the state does have authority under Michigan law to impose necessary emission limitations on sources, as required to meet CAA requirements, via other legal mechanisms such as permits. EPA notes that in order to meet CAA SIP requirements, such as nonattainment plan requirements, the state would need to submit the emission limitations and other related permit terms (*e.g.,* monitoring, reporting, and record keeping requirements) to EPA for approval into the federally enforceable SIP for Michigan.

In addition, to the extent that the state prefers to proceed via generally applicable state regulations rather than permits, EPA expects that Michigan will draft future rules to avoid the concerns raised by the court which resulted in invalid SO_2 limits and make necessary efforts to implement the 2015 Ozone NAAQS via other means consistent with state law and meeting CAA requirements for SIP provisions. Although the commenters expressed concern that the decision of the court in *United States Steel Corp.* v. *Dept. of Environmental Quality* indicated that the state lacks requisite authority to implement its SIP consistent with CAA requirements, EPA does not interpret the decision so broadly.

Additionally, EPA also disagrees with the commenter that Michigan's SIP does not include ''enforceable emission limitations and other control measures . . . as may be necessary or appropriate to meet the applicable requirements'' CAA section 110(a)(2)(A) with respect to the 2015 ozone NAAQS more broadly. As stated in the July 2, 2021 proposed rule (86 FR 35247), under Part 55 of the Natural Resources Protection Act, (PA 451) promulgated in 1994, Michigan Compiled Laws (MCL) Sections 324.5503 and 324.5512 authorize the EGLE director to regulate the discharge of air pollutants, to create rules and to establish standards regarding air quality and emissions. Specifically, MCL Section 324.5503 states ''*The department may . . . Promulgate rules to establish standards for ambient air quality and for emissions . . . Issue permits . . . subject to enforceable emission limitations and standards and other conditions reasonably necessary to assure compliance with all applicable requirements of this part, rules promulgated under this part, and the clean air act.*'' and MCL Section 324.5512 states ''*(1) . . . department shall promulgate rules for purposes of doing all of the following: (a) Controlling or prohibiting air pollution. (b) Complying with the clean air act . . .*''

Michigan also imposes emission limits for ozone precursors in MAC Rules 336.1101 through 336.2908. Specifically, MAC Rules 336.1601 through 336.1661 apply to existing sources of volatile organic compounds (VOC), Rules 336.1701 through 336.1710 apply to new sources of VOCs, and Rules 336.1801 through 1834 apply to oxides of nitrogen (NO_X) from stationary sources. Methods of control

and compliance are contained within these rules and incorporate EPA's New Source Performance Review standards and NO_X budget trading program. Further, sources in Michigan that install equipment that will emit ozone precursors are subject to permit-to-install regulations under MAC Rules 336.1201 through 336.1209 and include consideration of VOCs and NO_X. Prevention of Significant Deterioration (PSD) program regulations (MAC Rules 336.2801 through Rule 336.2823) require any new major or modified source to undergo PSD review.[1] EPA believes the emission limits for ozone and its precursors contained in these rules, in conjunction with the authorization to promulgate rules to assure compliance with the CAA in MCL Sections 324.5503 and 324.5512, satisfy the requirements of CAA section 110(a)(2)(A) with respect to infrastructure SIP requirements for purposes of the 2015 ozone NAAQS.

Lastly, EPA reiterates that Michigan has provided necessary assurances that it has ''adequate . . . authority under State . . . law to carry out the implementation plan . . . and is not prohibited by any Provision of Federal or State law, from carrying out such implementation plan.'' As EPA noted in the July 2, 2021, proposed rule (86 FR 35247), EGLE stated in the SIP submission that it has the legal authority to carry out the Michigan SIP under Act 451 and the Executive Reorganization Order 2011–1. In addition, EGLE indicated that MCL 324.5503 provides it with authority to enforce the Michigan SIP. Specifically, MCL 324.5503(f) gives EGLE the power to enforce permits, air quality fee requirements, and the requirements to obtain a permit, while 324.5503(g) gives EGLE the authority to institute proceedings to compel compliance. EGLE also provided a delegation letter in the submission from the Governor to the EGLE director that delegates authority to EGLE to ''. . . make any submittal, request, or application under the federal CAA, including the ability to carry out SIP requirements.'' This letter is included in the docket of this ruling. Therefore, EPA believes that Michigan has met the infrastructure SIP requirements of section 110(a)(2)(A) and 110(a)(2)(E)(i) with respect to the 2015 Ozone NAAQS.

[1] Effective February 16, 2017 (82 FR 5182), EPA updated the modeling appendix at 40 CFR part 51, appendix W. EPA proposed approval of Michigan Part 9 rules on March 24, 2021 (86 FR 15837), incorporating the CFR update. The finalization of the rule update will dictate finalization of this element.

This action amends the regulatory text to correct the effective date of our final approval to reflect our response to these additional comments, in addition to correcting the CFR citation to reflect that EGLE's submission meets the requirements of Section 110(a)(2)(E)(i), which was detailed in the July 2, 2021, proposed approval (86 FR 35247), but mistakenly omitted in the CFR table.

Section 553 of the Administrative Procedure Act, 5 U.S.C. 553(b)(B), provides that, when an agency for good cause finds that notice and public procedure are impracticable, unnecessary or contrary to the public interest, the agency may issue a rule without providing notice and an opportunity for public comment. We have determined that there is good cause for making this rule final without prior proposal and opportunity for comment because we are merely correcting incorrect element approval citations and incorrect effective date citations in the related previous actions to address mistakenly omitted comments.

Statutory and Executive Order Reviews

This action is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011). This action does not impose an information collection burden under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*). Because the agency has made a ''good cause'' finding that this action is not subject to notice-and-comment requirements under the Administrative Procedures Act or any other statute as indicated in the **SUPPLEMENTARY INFORMATION** section above, it is not subject to the regulatory flexibility provisions of the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*), or to sections 202 and 205 of the Unfunded Mandates Reform Act of 1995 (UMRA) (Pub. L. 104–4). This action will not have substantial direct effects on the States, on the relationship between the National Government and the States, or on the distribution of power and responsibilities among the various levels of governments, as specified by E.O. 13132 (64 FR 43255, August 10, 1999). In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by E.O. 13175 (65 FR 67249, November 9, 2000). This action is not subject to E.O. 13045 (62 FR 19885, April 23, 1997), because it is not economically significant. This action is also not subject to E.O. 13211, ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use'' (66 FR 28355, May 22, 2001). This technical correction action does not involve technical standards; thus the requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) do not apply. The action also does not involve special consideration of environmental justice related issues as required by E.O. 12898 (59 FR 7629, February 16, 1994).

This action is subject to the Congressional Review Act (CRA), and EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. Section 808 allows the issuing agency to make a rule effective sooner than otherwise provided by the CRA if the agency makes a good cause finding that notice and public procedure is impracticable, unnecessary or contrary to the public interest. This determination must be supported by a brief statement. 5 U.S.C. 808(2). As stated previously, EPA had made such a good cause finding, including the reasons therefore, and established an effective date of May 19, 2022. This correction to 40 CFR part 52 for Michigan is not a ''major rule'' as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

Dated: May 12, 2022.

Debra Shore,

Regional Administrator, Region 5.

For the reasons stated in the preamble, EPA amends 40 CFR part 52 as follows:

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

■ 1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

■ 2. In § 52.1170, the table in paragraph (e) is amended by revising the entry for ''Section 110(a)(2) infrastructure requirements for the 2015 ozone NAAQS'' to read as follows:

§ 52.1170 Identification of plan.

* * * * *

(e) * * *

EPA-APPROVED MICHIGAN NONREGULATORY AND QUASI-REGULATORY PROVISIONS

Name of nonregulatory SIP provision	Applicable geographic or nonattainment area	State submittal date	EPA approval date	Comments
*	*	*	*	* * *
Infrastructure				
*	*	*	*	* * *
Section 110(a)(2) infrastructure requirements for the 2015 ozone NAAQS.	Statewide	3/8/2019	5/19/2022, [INSERT **Federal Register** CITATION].	Approved CAA elements: 110(a)(2)(A), (B), (C), (D)(i)(II) Prong 3, D(ii), (E)(i), (F), (G), (H), (J), (K), (L), and (M). Disapproved CAA element 110(a)(2)(D)(i)(II) Prong 4. No action on CAA element 110(a)(2)(D)(i)(I) and 110(1)(2)(E)(ii).
*	*	*	*	* * *

* * * * *

[FR Doc. 2022–10671 Filed 5–18–22; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R09–OAR–2022–0106; FRL–9527–01–R9]

Air Plan Approval; Nevada; Clark County Department of Environment and Sustainability

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is taking final action to approve revisions to the Clark County Department of Environment and Sustainability (DES) portion of the Nevada State Implementation Plan (SIP). These revisions concern the title change of the Clark County Department of Air Quality to the Department of Environment and Sustainability.

DATES: These rules will be effective on June 21, 2022.

ADDRESSES: The EPA has established a docket for this action under Docket ID No. EPA–R09–OAR–2022–0106. All documents in the docket are listed on the *https://www.regulations.gov* website. Although listed in the index, some information is not publicly available, *e.g.,* Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the internet and will be publicly available only in hard copy form. Publicly available docket materials are available through *https://www.regulations.gov,* or please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section for additional availability information. If you need assistance in a language other than English or if you are a person with disabilities who needs a reasonable accommodation at no cost to you, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section.

FOR FURTHER INFORMATION CONTACT: Christine Vineyard, EPA Region IX, 75 Hawthorne St., San Francisco, CA 94105. By phone: (415) 947–4125 or by email at *vineyard.christine@epa.gov.*

SUPPLEMENTARY INFORMATION: Throughout this document, ''we,'' ''us'' and ''our'' refer to the EPA.

Table of Contents

I. Proposed Action
II. Public Comments and EPA Responses
III. EPA Action
IV. Incorporation by Reference
V. Statutory and Executive Order Reviews

I. Proposed Action

On February 22, 2022 (87 FR 9475), the EPA proposed to approve the following rules into the Nevada SIP.

Local agency	Rule No.	Rule title	Amended	Submitted
DES	Section 2	Procedures for Adoption and Revision of Regulations and for Inclusion of those Regulations in the State Implementation Plan.	1/21/20	3/16/20
DES	Section 33	Chlorine in Chemical Processes	1/21/20	3/16/20
DES	Section 41	Fugitive Dust	1/21/20	3/16/20
DES	Section 53	Oxygenated Gasoline Program	1/21/20	3/16/20
DES	Section 90	Fugitive Dust from Open Areas and Vacant Lots	1/21/20	3/16/20
DES	Section 93	Fugitive Dust from Paved Roads and Street Sweeping Equipment	1/21/20	3/16/20
DES	Section 94	Permitting and Dust Control for Construction Activities	1/21/20	3/16/20

We proposed to approve these rules because we determined that they comply with the relevant CAA requirements. Our proposed action contains more information on the rules and our evaluation.

II. Public Comments and EPA Responses

The EPA's proposed action provided a 30-day public comment period. During this period, we received no adverse comments. We received one comment that did not object to the proposed action but expressed concerns about regional haze and air quality in Clark County. We do not consider the comment to be relevant to the specifics

of this action and therefore we will not be responding to it.

III. EPA Action

No comments were submitted that change our assessment of the rules as described in our proposed action. Therefore, as authorized in section 110(k)(3) of the Act, the EPA is fully approving these rules into the Nevada SIP. The January 21, 2020 version of Rules 2, 33, 41, 53, 90, 93, and 94 will replace the previously approved version of these rules in the SIP.

IV. Incorporation by Reference

In this rule, the EPA is finalizing regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, the EPA is finalizing the incorporation by reference of the DES rules listed in Section I of this preamble and set forth below in the amendments to 40 CFR part 52. These DES rules concern the title change of the Clark County Department of Air Quality to the Department of Environment and Sustainability. Therefore, these materials have been approved by the EPA for inclusion in the SIP, have been incorporated by reference by the EPA into that plan, are fully federally enforceable under sections 110 and 113 of the CAA as of the effective date of the final rulemaking of the EPA's approval, and will be incorporated by reference in the next update to the SIP compilation.[1] The EPA has made, and will continue to make, these documents available through *www.regulations.gov* and at the EPA Region IX Office (please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section of this preamble for more information).

V. Statutory and Executive Order Reviews

Under the Clean Air Act, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, the EPA's role is to approve state choices, provided that they meet the criteria of the Clean Air Act. Accordingly, this action merely approves state law as meeting federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act; and
- Does not provide the EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where the EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

The Congressional Review Act, 5 U.S.C. 801 *et seq.,* as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing this action and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by July 18, 2022. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Incorporation by reference, Intergovernmental relations, Lead, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur Oxides, Volatile organic compounds.

Dated: May 11, 2022.

Martha Guzman Aceves,

Regional Administrator, Region IX.

Part 52, Chapter I, Title 40 of the Code of Federal Regulations is amended as follows:

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

■ 1. The authority citation for Part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart DD—Nevada

■ 2. In § 52.1470, in paragraph (c). amend Table 3 by

■ a. Adding an entry for ''Section 2'' after the entry for ''Section 2: Subsections 2.1, 2.2, and 2.3'' and;

■ b. Revising the entries for ''Section 33,'' ''Section 41,'' ''Section 53,'' ''Section 90,'' ''Section 93,'' and ''Section 94''''.

The additions and revisions read as follows:

§ 52.1470 Identification of plan.

* * * * *

(c) * * *

[1] 62 FR 27968 (May 22, 1997).

TABLE 3—EPA-APPROVED CLARK COUNTY REGULATIONS

County citation	Title/subject	County effective date	EPA approval date	Additional explanation
*	* *		* *	* *
Section 2	Procedures for Adoption and Revision of Regulations and for Inclusion of those Regulations in the State Implementation Plan.	1/21/20	[INSERT **Federal Register** CITATION], 5/19/22.	Submitted on March 16, 2020 as an attachment to a letter dated March 13, 2020.
*	* *		* *	* *
Section 33	Chlorine in Chemical Processes	1/21/20	[INSERT **Federal Register** CITATION], 5/19/22.	Submitted on March 16, 2020 as an attachment to a letter dated March 13, 2020. See also clarification at 69 FR 54006 (9/7/04).
Section 41	Fugitive Dust	1/21/20	[INSERT **Federal Register** CITATION], 5/19/22.	Submitted on March 16, 2020 as an attachment to a letter dated March 13, 2020.
*	* *		* *	* *
Section 53	Oxygenated Gasoline Program	1/21/20	[INSERT **Federal Register** CITATION], 5/19/22.	Submitted on March 16, 2020 as an attachment to a letter dated March 13, 2020.
*	* *		* *	* *
Section 90	Fugitive Dust from Open Areas and Vacant Lots.	1/21/20	[INSERT **Federal Register** CITATION], 5/19/22.	Submitted on March 16, 2020 as an attachment to a letter dated March 13, 2020.
*	* *		* *	* *
Section 93	Fugitive Dust from Paved Roads & Street Sweeping Equipment.	1/21/20	[INSERT **Federal Register** CITATION], 5/19/22.	Submitted on March 16, 2020 as an attachment to a letter dated March 13, 2020.
Section 94	Permitting & Dust Control for Construction Activities.	1/21/20	[INSERT **Federal Register** CITATION], 5/19/22.	Submitted on March 16, 2020 as an attachment to a letter dated March 13, 2020.
*	* *		* *	* *

* * * * *

[FR Doc. 2022–10550 Filed 5–18–22; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 180

[EPA–HQ–OPP–2016–0013; FRL–9738–01–OCSPP]

Flonicamid; Pesticide Tolerances

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This regulation establishes tolerances for residues of the insecticide flonicamid, including its metabolites and degradates, in or on small fruit vine climbing (except fuzzy kiwifruit), subgroup 13–07F at 3 parts per million (ppm). In addition, this regulation amends the existing tolerance for residues of flonicamid, including its metabolites and degradates, in or on alfalfa, hay, by increasing the current tolerance from 1.0 ppm to 7 ppm. ISK Biosciences Corporation requested tolerances for these commodities under the Federal Food, Drug, and Cosmetic Act (FFDCA).

DATES: This regulation is effective May 19, 2022. Objections and requests for hearings must be received on or before July 18, 2022 and must be filed in accordance with the instructions provided in 40 CFR part 178 (see also Unit I.C. of the **SUPPLEMENTARY INFORMATION**).

ADDRESSES: The docket for this action, identified by docket identification (ID) number EPA–HQ–OPP–2016–0013, is available at *https://www.regulations.gov* or at the Office of Pesticide Programs Regulatory Public Docket (OPP Docket) in the Environmental Protection Agency Docket Center (EPA/DC), West William Jefferson Clinton Bldg., Rm. 3334, 1301 Constitution Ave. NW, Washington, DC 20460. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room and the OPP Docket is (202) 566–1744.

Due to the public health concerns related to COVID–19, the EPA Docket Center (EPA/DC) and Reading Room is open to visitors by appointment only. For the latest status information on EPA/DC services and access, visit *https://www.epa.gov/dockets.*

FOR FURTHER INFORMATION CONTACT: Marietta Echeverria, Acting Director, Registration Division (7505T), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, DC 20460; main telephone number: (202) 566–1030; email address: *RDFRNotices@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this action apply to me?

You may be potentially affected by this action if you are an agricultural producer, food manufacturer, or pesticide manufacturer. The following list of North American Industrial Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers

determine whether this document applies to them. Potentially affected entities may include:

- Crop production (NAICS code 111).
- Animal production (NAICS code 112).
- Food manufacturing (NAICS code 311).
- Pesticide manufacturing (NAICS code 32532).

B. How can I get electronic access to other related information?

You may access a frequently updated electronic version of EPA's tolerance regulations at 40 CFR part 180 through the Office of the Federal Register's e-CFR site at *https://www.ecfr.gov/current/title-40.*

C. How can I file an objection or hearing request?

Under FFDCA section 408(g), 21 U.S.C. 346a(g), any person may file an objection to any aspect of this regulation and may also request a hearing on those objections. You must file your objection or request a hearing on this regulation in accordance with the instructions provided in 40 CFR part 178. To ensure proper receipt by EPA, you must identify docket ID number EPA–HQ–OPP–2016–0013 in the subject line on the first page of your submission. All objections and requests for a hearing must be in writing and must be received by the Hearing Clerk on or before July 18, 2022. Addresses for mail and hand delivery of objections and hearing requests are provided in 40 CFR 178.25(b).

In addition to filing an objection or hearing request with the Hearing Clerk as described in 40 CFR part 178, please submit a copy of the filing (excluding any Confidential Business Information (CBI)) for inclusion in the public docket. Information not marked confidential pursuant to 40 CFR part 2 may be disclosed publicly by EPA without prior notice. Submit the non-CBI copy of your objection or hearing request, identified by docket ID number EPA–HQ–OPP–2016–0013, by one of the following methods:

- *Federal eRulemaking Portal: https://www.regulations.gov.* Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be CBI or other information whose disclosure is restricted by statute.
- *Mail:* OPP Docket, Environmental Protection Agency Docket Center (EPA/DC), (28221T), 1200 Pennsylvania Ave. NW, Washington, DC 20460.
- *Hand Delivery:* To make special arrangements for hand delivery or delivery of boxed information, please follow the instructions at *https://www.epa.gov/dockets/contacts.html.*

Additional instructions on commenting or visiting the docket, along with more information about dockets generally, is available at *https://www.epa.gov/dockets.*

II. Summary of Petitioned-For Tolerance

In the **Federal Register** of June 28, 2021 (86 FR 33926) (FRL–10025–08), EPA issued a document pursuant to FFDCA section 408(d)(3), 21 U.S.C. 346a(d)(3), announcing the filing of a pesticide petition (PP 0F8884) by ISK Biosciences Corporation, 7470 Auburn Road, Suite A, Concord, OH 44077. The petition requests to establish a tolerance in 40 CFR part 180 for residues of the insecticide flonicamid, including its metabolites and degradates, determined by measuring the sum of flonicamid (*N*-(cyanomethyl)-4-(trifluoromethyl)-3-pyridinecarboxamide) and its metabolites, TFNA (4-trifluoromethylnicotinic acid), TFNA–AM (4-trifluoromethylnicotinamide), and TFNG (*N*-(4-trifluoromethylnicotinoyl)glycine), calculated as the stoichiometric equivalent of flonicamid, in or on small fruit vine climbing (except fuzzy kiwifruit), subgroup 13–07F at 3.0 parts per million (ppm). In addition, this regulation amends the existing tolerance for residues of the insecticide flonicamid in or on alfalfa, hay, by increasing the current tolerance from 1.0 ppm to 7.0 ppm. That document referenced a summary of the petition prepared by ISK Biosciences Corporation, the registrant, which is available in docket ID number EPA–HQ–OPP–2016–0013, *https://www.regulations.gov.* No public comments were received in response to the notice of filing.

Based upon review of the data supporting the petition and in accordance with its authority under FFDCA section 408(d)(4)(A)(i), EPA is establishing tolerances that vary from what the petitioners sought. The reasons for these changes are explained in full detail in Unit IV.C.

III. Aggregate Risk Assessment and Determination of Safety

Section 408(b)(2)(A)(i) of the FFDCA allows EPA to establish a tolerance (the legal limit for a pesticide chemical residue in or on a food) only if EPA determines that the tolerance is ''safe.'' Section 408(b)(2)(A)(ii) of the FFDCA defines ''safe'' to mean that ''there is a reasonable certainty that no harm will result from aggregate exposure to the pesticide chemical residue, including all anticipated dietary exposures and all other exposures for which there is reliable information.'' This includes exposure through drinking water and in residential settings but does not include occupational exposure. Section 408(b)(2)(C) of the FFDCA requires EPA to give special consideration to exposure of infants and children to the pesticide chemical residue in establishing a tolerance and to ''ensure that there is a reasonable certainty that no harm will result to infants and children from aggregate exposure to the pesticide chemical residue. . . .''

Consistent with FFDCA section 408(b)(2)(D) and the factors specified therein, EPA has reviewed the available scientific data and other relevant information in support of this action. EPA has sufficient data to assess the hazards of and to make a determination on aggregate exposure for the insecticide flonicamid in or on small fruit vine climbing (except fuzzy kiwifruit), subgroup 13–07F and the increased tolerance on alfalfa, hay.

In an effort to streamline its publications in the **Federal Register**, EPA is not reprinting sections that repeat what has been previously published for tolerance rulemakings of the same pesticide chemical. Where scientific information concerning a particular chemical remains unchanged, the content of those sections would not vary between tolerance rulemakings and republishing the same sections is unnecessary. EPA considers referral back to those sections as sufficient to provide an explanation of the information EPA considered in making its safety determination for the new rulemaking.

EPA has previously published several tolerance rulemakings for flonicamid, in which EPA concluded, based on the available information, that there is a reasonable certainty that no harm would result from aggregate exposure to flonicamid and established tolerances for residues of that chemical. In December 2020, EPA also finalized the ''Flonicamid Interim Registration Decision'' (go to *https://www.regulations.gov/* and search for docket ID number EPA–HQ–OPP–2014–0777). EPA is incorporating previously published sections from those rulemakings and any updates to the toxicological data base for flonicamid provided as part of the Flonicamid Interim Registration Decision in this tolerance rulemaking.

Toxicological profile. For a discussion of the Toxicological Profile for flonicamid used for human risk assessment, see the Flonicamid Interim Registration Decision by going to docket

ID number EPA–HQ–OPP–2014–0777 at *https://www.regulations.gov.*

Toxicological points of departure/Levels of concern. EPA has reevaluated the toxicological database for the Flonicamid Interim Registration Decision. The table of the Toxicological points of departure/Levels of concern for flonicamid in the risk assessment included an endpoint for incidental oral exposures. However, the Agency has made the assumption in the current risk assessment that the new use of flonicamid and the increased tolerance on alfalfa, hay were not likely to result in incidental oral exposures, as young children are not expected in the areas where applications occur. An additional difference in the current risk assessment is that the inhalation point of departure was based on an oral study. Since no inhalation data are available, toxicity by the inhalation route of exposure is considered to be equivalent to the estimated toxicity by the oral route of exposure. For a full summary of the Toxicological points of departure/Levels of concern for flonicamid used for human risk assessment, see ''Flonicamid: Human Health Draft Risk Assessment for Registration Review'' by going to docket ID number EPA–HQ–OPP–2014–0777 at *https://www.regulations.gov.*

Exposure assessment. EPA's dietary exposure assessments have been updated to include the additional exposure from the new use of flonicamid and the increased tolerance on alfalfa, hay. The assessment used the same assumptions as the July 23, 2018 rulemaking final rule concerning tolerance-level residues, default processing factors for all processed commodities, and 100 percent crop treated, see Unit III.C. of the July 23, 2018 rulemaking (83 FR 34775) (FRL–9977–82). For a more detailed description related to these updates, see ''Flonicamid: Establishment of Permanent Tolerances in/on Small Vine-Climbing Fruit, except Fuzzy Kiwifruit (Subgroup 13–07F) and an Increased Tolerance on Alfalfa. Summary of Analytical Chemistry and Residue Data'' by going to docket ID number EPA–HQ–OPP–2016–0013 at *https://www.regulations.gov.*

Drinking water exposure. The new use of flonicamid in or on small fruit vine climbing (except fuzzy kiwifruit), subgroup 13–07F and increased residue levels for alfalfa, hay do not result in an increase in the estimated residue levels in drinking water, so EPA used the same estimated drinking water concentrations (EDWCs) in the chronic dietary assessment as identified in the July 23, 2018, rulemaking and in the Flonicamid Interim Registration Decision.

Non-Occupational exposure. Residential handler and post-application exposures are not expected from the new use of flonicamid and the increased tolerance on alfalfa, hay. However, there are pending uses on roses, flowers, shrubs, and small (non-fruit bearing) trees that would result in residential handler as well as post-application exposures that were recently assessed. All registered flonicamid product labels with residential use sites require that handlers wear specific clothing (*e.g.,* long-sleeved shirt/long pants) and/or use personal protective equipment (PPE). Therefore, the Agency has made the assumption that these products are not for homeowner use and has not conducted a quantitative residential handler assessment. A quantitative residential post-application assessment was also not conducted as incidental oral exposures are not anticipated and there is no dermal exposure endpoint. Therefore, no residential exposures are applicable for the aggregate risk assessment.

Cumulative exposures. Section 408(b)(2)(D)(v) of FFDCA requires that, when considering whether to establish, modify, or revoke a tolerance, the Agency consider ''available information'' concerning the cumulative effects of a particular pesticide's residues and ''other substances that have a common mechanism of toxicity.'' EPA's assessment of cumulative exposures has not changed since the July 23, 2018, rulemaking (83 FR 34775) (FRL–9977–82).

Safety factor for infants and children. The scientific information underpinning EPA's prior safety factor determination remains unchanged from the July 23, 2018, rulemaking (83 FR 34775) (FRL–9977–82). Therefore, EPA continues to conclude that there is reliable data to support the reduction of the Food Quality Protection Act (FQPA) safety factor for flonicamid. See Unit III.D. of the July 23, 2018, rulemaking (83 FR 34775) (FRL–9977–82) for a discussion of the Agency's rationale for that determination.

C. Aggregate Risks and Determination of Safety

EPA determines whether acute and chronic dietary pesticide exposures are safe by comparing dietary exposure estimates to the acute population adjusted dose (aPAD) and the cPAD. Short-, intermediate-, and chronic-term risks are evaluated by comparing the estimated aggregate food, water, and residential exposure to the appropriate points of departure to ensure that an adequate margin of exposure (MOE) exists. For linear cancer risks, EPA calculates the lifetime probability of acquiring cancer given the estimated aggregate exposure.

Acute risk. An acute aggregate dietary risk assessment takes into account acute exposure estimates from dietary consumption of food and drinking water. No adverse effect resulting from a single oral dose was identified and no acute dietary endpoint was selected. Therefore, flonicamid is not expected to pose an acute risk.

Short-term and Intermediate-term risk. Short- and intermediate-term aggregate exposures take into account short- and intermediate-term residential exposures plus chronic exposure to food and water (considered to be a background exposure level). Flonicamid is not registered for any use patterns that would result in short- and intermediate-term residential exposures. The estimated aggregate MOE for adult handlers is 1,100 (LOC=100) and is not of concern. Risk estimates for children are expected to be equivalent to the dietary exposure and risk assessment.

Chronic risk. Chronic dietary (food + water) risk to flonicamid was below the EPA's LOC (<100% cPAD) for the general U.S. population. The chronic dietary (food + drinking water) exposure were estimated at 29% of the cPAD for the general U.S. population and 91% cPAD for children 1 to 2 years old (the most highly exposed population subgroup) and are below EPA's LOC (<100% cPAD).

Aggregate cancer risk for U.S. population. Flonicamid has been determined to have suggestive evidence of carcinogenicity, but not sufficient to assess human carcinogenic potential. The Agency has determined that quantification of risk using a non-linear approach (*i.e.,* using a chronic reference dose) adequately accounts for all chronic toxicity, including carcinogenicity that could result from exposure to flonicamid. Therefore, the chronic reference dose is considered protective for carcinogenic effects. As a result, a separate cancer risk assessment was not conducted, and the chronic dietary exposure is considered protective of any cancer dietary risks.

Based on the risk assessments and information described above, EPA concludes there is a reasonable certainty that no harm will result to the general U.S. population, or to infants and children, from aggregate exposure to flonicamid residues. More detailed information on the subject action to establish tolerances in or on small fruit, vine climbing (except fuzzy kiwifruit), subgroup 13–07F and to increase the

existing tolerance in or on alfalfa, hay can be seen in the documents ''Flonicamid: Petition for the Establishment of Permanent Tolerances in/on Small Vine-Climbing Fruit, except Fuzzy Kiwifruit (Subgroup 13–07F) and a Tolerance Increase on Alfalfa. Summary of Analytical Chemistry and Residue Data and Flonicamid (128016); Chronic Aggregate Dietary (Food and Drinking Water) Exposure and Risk Assessment for the Petition for the Establishment of Permanent Tolerances in/on Small Vine-climbing Fruit, except Fuzzy Kiwifruit (Subgroup 13–07F) and a Tolerance Increase on Alfalfa'' by going to docket ID number EPA–HQ–OPP–2016–0013 at *https://www.regulations.gov.*

IV. Other Considerations

A. Analytical Enforcement Methodology

Analytical methodology has been developed to determine the residues of flonicamid and its three major plant metabolites, TFNA, TFNG, and TFNA–AM in various crops. The residue analytical method for the majority of crops includes an initial extraction with acetonitrile (ACN)/deionized (DI) water, followed by a liquid-liquid partition with ethyl acetate. The residue method for wheat straw is similar, except that a C18 solid phase extraction (SPE) is added prior to the liquid-liquid partition. The final sample solution is quantitated using a liquid chromatograph (LC) equipped with a reverse phase column and a triple quadruple mass spectrometer (MS/MS).

The method may be requested from: Chief, Analytical Chemistry Branch, Environmental Science Center, 701 Mapes Road, Ft. Meade, MD 20755–5350; telephone number: (410) 305–2905; email address: *residuemethods@epa.gov.*

B. International Residue Limits

In making its tolerance decisions, EPA seeks to harmonize U.S. tolerances with international standards whenever possible, consistent with U.S. food safety standards and agricultural practices. EPA considers the international maximum residue limits (MRLs) established by the Codex Alimentarius Commission (Codex), as required by FFDCA section 408(b)(4).

The tolerance expression for plant and livestock commodities are harmonized between the U.S. and Canada, but not Codex. There are no Codex MRLs established on small fruit vine climbing (except fuzzy kiwifruit), subgroup 13–07F or alfalfa. Thus, harmonization is not an issue with Codex. There are no Canada MRLs established on small fruit vine climbing (except fuzzy kiwifruit), subgroup 13–07F. Canada has a default MRL of 0.1 ppm established in/on alfalfa. Therefore, tolerances/MRLs are not harmonized between the U.S. and Canada for alfalfa.

C. Revisions to Petitioned-For Tolerances

The petitioned-for tolerances for small fruit vine climbing (except fuzzy kiwifruit), subgroup 13–07F are different from those being established by EPA. These differences are attributable to the petitioned-for levels not being consistent with Organization for Economic Cooperation and Development (OECD) rounding class practice.

V. Conclusion

A tolerance is therefore established for residues of the insecticide flonicamid, including its metabolites and degradates, in or on small fruit vine climbing (except fuzzy kiwifruit), subgroup 13–07F at 3 ppm. In addition, this tolerance rulemaking amends the existing tolerance for residues of the insecticide flonicamid in or on alfalfa, hay at 7 ppm.

VI. Statutory and Executive Order Reviews

This action establishes tolerances under FFDCA section 408(d) in response to a petition submitted to the Agency. The Office of Management and Budget (OMB) has exempted these types of actions from review under Executive Order 12866, entitled ''Regulatory Planning and Review'' (58 FR 51735, October 4, 1993). Because this action has been exempted from review under Executive Order 12866, this action is not subject to Executive Order 13211, entitled ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use'' (66 FR 28355, May 22, 2001) or Executive Order 13045, entitled ''Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997). This action does not contain any information collections subject to OMB approval under the Paperwork Reduction Act (PRA) (44 U.S.C. 3501 *et seq.*), nor does it require any special considerations under Executive Order 12898, entitled ''Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations'' (59 FR 7629, February 16, 1994).

Since tolerances and exemptions that are established on the basis of a petition under FFDCA section 408(d), such as the tolerance in this final rule, do not require the issuance of a proposed rule, the requirements of the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 *et seq.*), do not apply.

This action directly regulates growers, food processors, food handlers, and food retailers, not states or tribes, nor does this action alter the relationships or distribution of power and responsibilities established by Congress in the preemption provisions of FFDCA section 408(n)(4). As such, the Agency has determined that this action will not have a substantial direct effect on States or Tribal Governments, on the relationship between the National Government and the States or Tribal Governments, or on the distribution of power and responsibilities among the various levels of government or between the Federal Government and Indian tribes. Thus, the Agency has determined that Executive Order 13132, entitled ''Federalism'' (64 FR 43255, August 10, 1999) and Executive Order 13175, entitled ''Consultation and Coordination with Indian Tribal Governments'' (65 FR 67249, November 9, 2000) do not apply to this action. In addition, this action does not impose any enforceable duty or contain any unfunded mandate as described under Title II of the Unfunded Mandates Reform Act (UMRA) (2 U.S.C. 1501 *et seq.*).

This action does not involve any technical standards that would require Agency consideration of voluntary consensus standards pursuant to section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) (15 U.S.C. 272 note).

VII. Congressional Review Act

Pursuant to the Congressional Review Act (5 U.S.C. 801 *et seq.*), EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 180

Environmental protection, Administrative practice and procedure, Agricultural commodities, Pesticides and pests, Reporting and recordkeeping requirements.

Dated: May 16, 2022.

Marietta Echeverria,

Acting Director, Registration Division, Office of Pesticide Programs.

Therefore, for the reasons stated in the preamble, EPA is amending 40 CFR chapter I as follows:

PART 180—TOLERANCES AND EXEMPTIONS FOR PESTICIDE CHEMICAL RESIDUES IN FOOD

■ 1. The authority citation for part 180 continues to read as follows:

Authority: 21 U.S.C. 321(q), 346a and 371.

■ 2. Section 180.613(a)(1) is amended in the table by:
■ a. Adding a table heading;
■ b. Revising the entry for ''Alfalfa, hay''; and
■ c. Adding the commodity ''Small fruit vine climbing (except fuzzy kiwifruit), subgroup 13–07F'' in alphabetical order.

The additions and revision read as follows:

§ 180.613 Flonicamid; tolerances for residues.

(a) * * *
(1) * * *

TABLE 1 TO PARAGRAPH (a)(1)

Commodity	Parts per million
* * * * *	
Alfalfa, hay	7
* * * * *	
Small fruit vine climbing (except fuzzy kiwifruit), subgroup 13–07F	3
* * * * *	

* * * * *

[FR Doc. 2022–10785 Filed 5–18–22; 8:45 am]

BILLING CODE 6560–50–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 73

[MB Docket No. 22–78; RM–11918; DA 22–516; FR ID 87343]

Television Broadcasting Services Wichita, Kansas

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: On February 23, 2022, the Media Bureau, Video Division (Bureau) issued a *Notice of Proposed Rulemaking* (*NPRM*) in response to a petition for rulemaking filed by Gray Television Licensee, LLC (Petitioner), the licensee of KSCW–DT (Station), channel 12, Wichita, Kansas, requesting the substitution of channel 28 for channel 12 at Wichita in the Table of Allotments. For the reasons set forth in the *Report and Order* referenced below, the Bureau amends Federal Communications Commission (FCC or Commission) regulations to substitute channel 28 for channel 12 at Wichita.

DATES: Effective May 19, 2022.

FOR FURTHER INFORMATION CONTACT: Joyce Bernstein, Media Bureau, at (202) 418–1647 or *Joyce.Bernstein@fcc.gov.*

SUPPLEMENTARY INFORMATION: The proposed rule was published at 87 FR 12641 on March 7, 2022. The Petitioner filed comments in support of the petition reaffirming its commitment to apply for channel 28. No other comments were filed.

According to the Petitioner, the channel change will resolve significant over-the-air reception problems in the Station's existing service area. The Petitioner further states that the Commission has recognized the deleterious effects manmade noise has on the reception of digital very high frequency (VHF) signals, and that the propagation characteristics of these channels allow undesired signals and noise to be receivable at relatively farther distances compared to ultra high frequency (UHF) channels and nearby electrical devices can cause interference. Although the proposed channel 28 noise limited contour will fall slightly short of the licensed channel 12 noise limited contour, a terrain-limited analysis using the Commission's *TVStudy* software demonstrates that there is no predicted loss in population served.

This is a synopsis of the Commission's *Report and Order,* MB Docket No. 22–78; RM–11918; DA 22–516, adopted May 11, 2022, and released May 11, 2022. The full text of this document is available for download at *https://www.fcc.gov/edocs.* To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an email to *fcc504@fcc.gov* or call the Consumer & Governmental Affairs Bureau at 202–418–0530 (voice), 202–418–0432 (tty).

This document does not contain information collection requirements subject to the Paperwork Reduction Act of 1995, Public Law 104–13. In addition, therefore, it does not contain any proposed information collection burden ''for small business concerns with fewer than 25 employees,'' pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107–198, *see* 44 U.S.C. 3506(c)(4). Provisions of the Regulatory Flexibility Act of 1980, 5 U.S.C. 601–612, do not apply to this proceeding.

The Commission will send a copy of the *Report and Order* in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act, *see* 5 U.S.C. 801(a)(1)(A).

List of Subjects in 47 CFR Part 73

Television.

Federal Communications Commission.

Thomas Horan,

Chief of Staff, Media Bureau.

Final Rule

For the reasons discussed in the preamble, the Federal Communications Commission amends 47 CFR part 73 as follows:

PART 73—RADIO BROADCAST SERVICES

■ 1. The authority citation for part 73 continues to read as follows:

Authority: 47 U.S.C. 154, 155, 301, 303, 307, 309, 310, 334, 336, 339.

■ 2. In § 73.622(j), amend the Table of Allotments under Kansas by revising the entry for Wichita to read as follows:

§ 73.622 Digital television table of allotments.

* * * * *

(j) * * *

Community	Channel No.
* * * * *	
KANSAS	
* * * * *	
Wichita	10, 15, 26, 28.
* * * * *	

[FR Doc. 2022–10719 Filed 5–18–22; 8:45 am]

BILLING CODE 6712–01–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 73

[MB Docket No. 22–112; RM–11919; DA 22–524; FR ID 87344]

Television Broadcasting Services Weston, West Virginia

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: On March 9, 2022, the Media Bureau, Video Division (Bureau) issued a *Notice of Proposed Rulemaking* (*NPRM*) in response to a petition for rulemaking filed by Gray Television Licensee, LLC (Petitioner), the licensee of WDTV (Station), channel 5, Weston,

West Virginia, requesting the substitution of channel 33 for channel 5 at Weston in the Table of Allotments. For the reasons set forth in the *Report and Order* referenced below, the Bureau amends Federal Communications Commission (FCC or Commission) regulations to substitute channel 33 for channel 5 at Weston.

DATES: Effective May 19, 2022.

FOR FURTHER INFORMATION CONTACT: Joyce Bernstein, Media Bureau, at (202) 418–1647 or *Joyce.Bernstein@fcc.gov.*

SUPPLEMENTARY INFORMATION: The proposed rule was published at 87 FR 16155 on March 22, 2022. The Petitioner filed comments in support of the petition reaffirming its commitment to apply for channel 33. No other comments were filed.

The Commission has recognized the negative effects manmade noise has on the reception of digital very high frequency (VHF) signals, and that the propagation characteristics of these channels allow undesired signals and noise to be receivable at relatively farther distances compared to ultra high frequency (UHF) channels, and nearby electrical devices can cause interference. While 388,223 persons are predicted to lose service using a contour analysis, all but 4,142 persons will continue to receive CBS service from other stations in the region or continue to be well served by five or more television services. Moreover, a terrain-limited analysis using the Commission's *TVStudy* software demonstrates that only 498 persons would no longer receive CBS network programming or receive service from five or more full power television services, a number the Commission considers *de minimis.*

This is a synopsis of the Commission's *Report and Order,* MB Docket No. 22–112; RM–11919; DA 22–524, adopted May 12, 2022, and released May 12, 2022. The full text of this document is available for download at *https://www.fcc.gov/edocs.* To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an email to *fcc504@fcc.gov* or call the Consumer & Governmental Affairs Bureau at 202–418–0530 (voice), 202–418–0432 (tty).

This document does not contain information collection requirements subject to the Paperwork Reduction Act of 1995, Public Law 104–13. In addition, therefore, it does not contain any proposed information collection burden ''for small business concerns with fewer than 25 employees,'' pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107–198, *see* 44 U.S.C. 3506(c)(4). Provisions of the Regulatory Flexibility Act of 1980, 5 U.S.C. 601–612, do not apply to this proceeding.

The Commission will send a copy of the *Report and Order* in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act, *see* 5 U.S.C. 801(a)(1)(A).

List of Subjects in 47 CFR Part 73

Television.

Federal Communications Commission.

Thomas Horan,

Chief of Staff, Media Bureau.

Final Rule

For the reasons discussed in the preamble, the Federal Communications Commission amends 47 CFR part 73 as follows:

PART 73—RADIO BROADCAST SERVICES

■ 1. The authority citation for part 73 continues to read as follows:

Authority: 47 U.S.C. 154, 155, 301, 303, 307, 309, 310, 334, 336, 339.

■ 2. In § 73.622(j), amend the Table of Allotments under West Virginia by revising the entry for Weston to read as follows:

§ 73.622 Digital television table of allotments.

* * * * *

(j) * * *

Community	Channel No.
* * * * *	
West Virginia	
* * * * *	
Weston	33
* * * * *	

[FR Doc. 2022–10723 Filed 5–18–22; 8:45 am]

BILLING CODE 6712–01–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 660

[Docket No. 210505–0101; RTID 0648–XB996]

Fisheries Off West Coast States; Modification of the West Coast Salmon Fisheries; Inseason Actions #3 Through #11

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Inseason modification of 2021 management measures.

SUMMARY: NMFS announces nine inseason actions in the 2021 ocean salmon fisheries. These inseason actions modify the commercial ocean salmon fisheries in the area from the U.S./Canada border to the U.S./Mexico border.

DATES: The effective dates for the inseason actions are set out in this document under the heading Inseason Actions and the actions remain in effect until superseded or modified.

FOR FURTHER INFORMATION CONTACT: Dana Preedeedilok at 562–980–4019, Email: *dana.preedeedilok@noaa.gov.*

SUPPLEMENTARY INFORMATION:

Background

The 2021 annual management measures for ocean salmon fisheries (86 FR 26425, May 14, 2021), announced management measures for the commercial and recreational fisheries in the area from the U.S./Canada border to the U.S./Mexico border, effective from 0001 hours Pacific Daylight Time (PDT), May 16, 2021, until the effective date of the 2022 management measures, as published in the **Federal Register**. NMFS is authorized to implement inseason management actions to modify fishing seasons and quotas as necessary to provide fishing opportunity while meeting management objectives for the affected species (50 CFR 660.409). Inseason actions in the salmon fishery may be taken directly by NMFS (50 CFR 660.409(a)—Fixed inseason management provisions) or upon consultation with the Chairman of the Pacific Fishery Management Council (Council), and the appropriate State Directors (50 CFR 660.409(b)—Flexible inseason management provisions).

Management of the salmon fisheries is divided into two geographic areas: North of Cape Falcon (NOF) (U.S./

Canada border to Cape Falcon, OR), and south of Cape Falcon (SOF) (Cape Falcon, OR, to the U.S./Mexico border). The actions described in this document affect both the NOF and SOF commercial salmon fishery, as set out under the heading Inseason Action below.

Consultations with the Council Chairperson on these inseason actions occurred on April 11, 2022, and April 22, 2022. Representatives from NMFS, Oregon Department of Fish and Wildlife (ODFW), California Department of Fish and Wildlife (CDFW), and Council staff participated in the consultation on April 11, 2022. Representatives from NMFS, Washington Department of Fish and Wildlife (WDFW), ODFW, and Council staff participated in the consultation on April 22, 2022.

These inseason actions were announced on NMFS' telephone hotline and U.S. Coast Guard radio broadcast on the date of the consultations (50 CFR 660.411(a)(2)).

Inseason Actions

Reason and Authorization for Inseason Actions #3–#9

The fisheries affected by the inseason actions described below were authorized in the final rule for 2021 annual management measures for ocean salmon fisheries (86 FR 26425, May 14, 2021). At its April 7–13, 2022, meeting, the Council finalized development of its recommended 2022 ocean salmon management measures. Based on the Salmon Technical Team (STT) report, SOF ocean salmon fisheries will be constrained in 2022 by the abundance forecast for Klamath River fall-run Chinook salmon (KRFC), which was determined by NMFS in 2018 to be overfished under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), and the natural component of the lower Columbia River fall-run Chinook salmon species. The forecast of potential spawner abundance is derived from the ocean abundance forecasts, ocean natural mortality rates, age-specific maturation rates, stray rates, and the proportion of escapement expected to spawn in natural areas. To reduce the impacts on KRFC, NMFS took seven inseason actions concurrent with the April Council meeting to restrict some fisheries that were previously scheduled to open prior to May 16, 2022 (86 FR 26425, May 14, 2021).

The NMFS West Coast Regional Administrator (RA) considered the abundance forecasts for Chinook salmon stocks and the impacts on the ocean salmon fisheries, as modeled by the STT, and determined that the inseason actions, described below, were necessary to meet management and conservations goals set preseason. These inseason actions modify fishing seasons under 50 CFR 660.409(b)(1)(i).

Inseason Action #3

Description of the action: Inseason action #3 modifies the commercial ocean salmon fishery from Cape Falcon, OR, to the Heceta Bank Line, OR (latitude 43°58′00″ N). This fishery, which did not have a closing date in the 2021 management measures, will close at 11:59 p.m. on May 15, 2022.

Effective date: Inseason action #3 took effect on April 11, 2022, and remains in effect until superseded.

Inseason Action #4

Description of the action: Inseason action #4 modifies the commercial salmon troll fishery in the area from the Heceta Bank Line, OR, to Humbug Mountain, OR. This action supersedes inseason action #1 (87 FR 24882, April 27, 2022). Under inseason action #4, this fishery, which opened at 12:01 a.m., May 1, 2022, closes at 11:59 p.m., May 15, 2022.

Effective date: Inseason action #4 took effect on April 11, 2022, and remains in effect until superseded.

Inseason Action #5

Description of the action: Inseason action #5 modifies the commercial salmon troll fishery in the area from Humbug Mountain, OR to the Oregon/California border (Oregon Klamath Management Zone). This fishery, which did not have a closing date in the 2021 management measures, closes at 11:59 p.m. on April 30, 2022.

Effective date: Inseason action #5 took effect on April 11, 2022, and remains in effect until superseded.

Inseason Action #6

Description of the action: Inseason action #6 modified the commercial ocean salmon fishery from the Oregon/California border to Humboldt South Jetty. This fishery, which was previously scheduled to open May 1, 2022, is closed.

Effective date: Inseason action #6 took effect on April 11, 2022, and remains in effect until superseded.

Inseason Action #7

Description of the action: Inseason action #7 modifies the commercial ocean salmon fishery from the area between latitude 40°10′ N and Point Arena, CA (Fort Bragg management area). This fishery, which was previously scheduled to open April 16, 2022, is closed.

Effective date: Inseason action #7 took effect on April 11, 2022, and remains in effect until superseded.

Inseason Action #8

Description of the action: Inseason action #8 modifies the commercial ocean salmon fishery in the area from Point Arena, CA, to Pigeon Point, CA (San Francisco management area). This fishery, which was previously scheduled to open May 1, 2022, is closed.

Effective date: Inseason action #8 took effect on April 11, 2022, and remains in effect until superseded.

Inseason Action #9

Description of the action: Inseason action #9 modifies the commercial ocean salmon fishery in the area from Pigeon Point, CA, to the U.S./Mexico Border (Monterey management area), which was previously scheduled to open May 1, 2022, with no closing date. This fishery is now scheduled to open May 1–5, 2022, and May 10–15, 2022. All fish caught in this area must be landed within 24 hours of any closure of the fishery and must be landed south of Point Arena, CA.

Effective date: Inseason action #9 took effect on April 11, 2022, and remains in effect until superseded.

Reason and Authorization for Inseason Actions #10–#11

The 2021 annual management measures for ocean salmon fisheries (86 FR 26425, May 14, 2021) established a May–June commercial salmon fishery that included NOF subarea quotas that were based on information available at the time the 2021 management measures were adopted. The 2021 management measures allow for inseason action to adjust fisheries scheduled to occur from March 15, 2022, through May 15, 2022, in response to new information on salmon stock abundance forecasts and northern salmon fisheries impacts, to keep fisheries impacts within management objectives and consistent with conservation needs.

Improved salmon stock forecasts in 2022 will provide NOF salmon fisheries with more total allowable catch (TAC) than in 2021. The Council has adopted and transmitted to NMFS its recommended 2022 management measures which take into account this new information. The increased TAC provides for higher quotas and landing limits in the May–June commercial salmon fishery NOF in 2022 than in 2021.

The RA considered the abundance forecasts for Chinook salmon stocks and the impacts on the ocean salmon

fisheries, as modeled by the STT, and determined that the inseason actions, described below, were necessary to meet management and conservations goals set preseason. These inseason actions modify fishing quotas and limited retention regulations authorized under 50 CFR 660.409(b)(1)(i) and (ii).

Inseason Action #10

Description of the action: Inseason action #10 modifies the quota and subarea catch limits for the commercial salmon troll fishery from the U.S./Canada border to Cape Falcon, OR. Salmon caught in the NOF commercial salmon fisheries, May 1–15, 2022, will count against the overall 2022 May–June NOF and subarea quotas. The May–June NOF commercial salmon fishery quota is increased from 15,375 Chinook salmon set in 2021, to 18,000 Chinook salmon in 2022, no more than 6,040 of which may be caught in the area between the U.S/Canada border and the Queets River, and no more than 4,840 of which may be caught in the area between Leadbetter Point and Cape Falcon.

Effective date: Inseason action #10 took effect on April 22, 2022, and remains in effect until superseded.

Inseason Action #11

Description of the action: Inseason action #11 modifies the Chinook salmon landing and possession limit for the commercial ocean salmon troll fishery that opens May 1, 2022, from the U.S/Canada border to Queets River and from Leadbetter Point to Cape Falcon from 75 Chinook salmon per vessel per week (Thursday through Wednesday) to 80 Chinook salmon per vessel per landing week (Thursday through Wednesday).

Effective date: Inseason action #11 took effect on April 22, 2022, and remains in effect until superseded.

All other restrictions and regulations remain in effect as announced for the 2021 ocean salmon fisheries (86 FR 26425, May 14, 2021), as modified by previous inseason action (86 FR 34161, June 29, 2021; 86 FR 37249, July 15, 2021; 86 FR 40182, July 28, 2021; 86 FR 43967, August 11, 2021; 86 FR 48343, August 30, 2021; 86 FR 54407, October 1, 2021; 86 FR 64082, November 17, 2021; 87 FR 24882, April 27, 2022).

The RA determined that these inseason actions were warranted based on the best available information on Pacific salmon abundance forecasts, landings to date, anticipated fishery effort and projected catch, and the other factors and considerations set forth in 50 CFR 660.409. The states manage the fisheries in state waters adjacent to the areas of the U.S. exclusive economic zone (3–200 nautical miles (5.6–370.4 kilometers) off the coasts of the states of Washington, Oregon, and California) consistent with these Federal actions. As provided by the inseason notice procedures at 50 CFR 660.411, actual notice of the described regulatory action was given, prior to the time the action was effective, by telephone hotline numbers 206–526–6667 and 800–662–9825, and by U.S. Coast Guard Notice to Mariners broadcasts on Channel 16 VHF–FM and 2182 kHz.

Classification

NMFS issues these actions pursuant to section 305(d) of the MSA. These actions are authorized by 50 CFR 660.409, which was issued pursuant to section 304(b) of the MSA, and is exempt from review under Executive Order 12866.

Pursuant to 5 U.S.C. 553(b)(3)(B), there is good cause to waive prior notice and an opportunity for public comment on this action, as notice and comment would be impracticable and contrary to the public interest. Prior notice and opportunity for public comment on this action was impracticable because NMFS had insufficient time to provide for prior notice and the opportunity for public comment between the time Chinook salmon abundance, catch, and effort information were developed and fisheries impacts were calculated, and the time the fishery modifications had to be implemented in order to ensure that fisheries are managed based on the best scientific information available and that fishery participants can take advantage of the additional fishing opportunity these changes provide. As previously noted, actual notice of the regulatory actions was provided to fishers through telephone hotline and radio notification. These actions comply with the requirements of the annual management measures for ocean salmon fisheries (86 FR 26425, May 14, 2021), the Fishery Management Plan (FMP), and regulations implementing the FMP under 50 CFR 660.409 and 660.411.

There is good cause under 5 U.S.C. 553(d)(3) to waive the 30-day delay in effective date, as a delay in effectiveness of this action would restrict fishing at levels inconsistent with the goals of the FMP and the current management measures.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: May 12, 2022.

Jennifer M. Wallace,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2022–10597 Filed 5–18–22; 8:45 am]

BILLING CODE 3510–22–P

Proposed Rules

Federal Register
Vol. 87, No. 97
Thursday, May 19, 2022

This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

DEPARTMENT OF ENERGY

10 CFR Part 430

[EERE–2017–BT–STD–0014]

RIN 1904–AD98

Energy Conservation Program: Energy Conservation Standards for Residential Clothes Washers; Reopening of Comment Period

AGENCY: Office of Energy Efficiency and Renewable Energy, Department of Energy.

ACTION: Notification of data availability; reopening of public comment period.

SUMMARY: The U.S. Department of Energy (''DOE'') is reopening the public comment period for the notification of data availability (''NODA'') that published in the **Federal Register** on April 13, 2022, regarding additional testing conducted in furtherance of the development of the translations between the current test procedure and the proposed new test procedure for residential clothes washers.

DATES: The comment period for the NODA that published in the **Federal Register** on April 13, 2022 (87 FR 21816) is reopened. DOE will accept comments, data, and information regarding this NODA no later than May 27, 2022.

ADDRESSES: Interested persons are encouraged to submit comments using the Federal eRulemaking Portal at *www.regulations.gov.* Follow the instructions for submitting comments. Alternatively, interested persons may submit comments, identified by docket number EERE–2017–BT–STD–0014 by any of the following methods:

(1) *Federal eRulemaking Portal: www.regulations.gov.* Follow the instructions for submitting comments.

(2) *Email: ConsumerClothesWasher 2017STD0014@ee.doe.gov.* Include the docket number EERE–2017–BT–STD–0014 or regulatory information number (''RIN'') 1904–AD98 in the subject line of the message.

No telefacsimiles (''faxes'') will be accepted.

Although DOE has routinely accepted public comment submissions through a variety of mechanisms, including postal mail and hand delivery/courier, the Department has found it necessary to make temporary modifications to the comment submission process in light of the ongoing COVID–19 pandemic. DOE is currently suspending receipt of public comments via postal mail and hand delivery/courier. If a commenter finds that this change poses an undue hardship, please contact Appliance Standards Program staff at (202) 586–1445 to discuss the need for alternative arrangements. Once the COVID–19 pandemic health emergency is resolved, DOE anticipates resuming all of its regular options for public comment submission, including postal mail and hand delivery/courier.

Docket: The docket for this activity, which includes **Federal Register** notices, comments, and other supporting documents/materials, is available for review at *www.regulations.gov.* All documents in the docket are listed in the *www.regulations.gov index.* However, some documents listed in the index, such as those containing information that is exempt from public disclosure, may not be publicly available.

The docket web page can be found at *www.regulations.gov/docket/EERE-2017-BT-STD-0014.* The docket web page contains instructions on how to access all documents, including public comments in the docket.

FOR FURTHER INFORMATION CONTACT:

Mr. Bryan Berringer, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Office, EE–5B, 1000 Independence Avenue SW, Washington, DC 20585–0121. Telephone: (202) 586–0371. Email: *ApplianceStandards Questions@ee.doe.gov.*

Ms. Kathryn McIntosh, U.S. Department of Energy, Office of the General Counsel, GC–33, 1000 Independence Avenue SW, Washington, DC 20585–0121. Telephone: (202) 586–2002. Email: *KathrynMcIntosh@hq.doe.gov.*

For further information on how to submit a comment or review other public comments and the docket contact the Appliance and Equipment Standards Program staff at (202) 287–1445 or by email: *ApplianceStandards Questions@ee.doe.gov.*

SUPPLEMENTARY INFORMATION: On September 1, 2021, DOE published a test procedure notice of proposed rulemaking proposing to establish a new test procedure for residential clothes washers (''RCWs'') at 10 CFR part 430, subpart B, appendix J, which would establish new energy efficiency metrics: An ''energy efficiency ratio'' and a ''water efficiency ratio.'' 86 FR 49140.

On September 29, 2021, DOE published a preliminary analysis of energy conservation standards for RCWs, which presented preliminary translations between the energy and water efficiency metrics as measured by the current test procedure and the new energy and water efficiency metrics as measured by the proposed new test procedure. 86 FR 53886.

On April 13, 2022, DOE published a NODA presenting the results of additional testing conducted in furtherance of the development of the translations between the current test procedure and the proposed new test procedure. 87 FR 21816. DOE requested comments, data, and information regarding the data. Comments were originally due on May 13, 2022.

On May 4, 2022, DOE received a comment from the Association of Home Appliance Manufacturers (''AHAM'') requesting that DOE hold a public meeting where stakeholders may raise questions and seek clarity on DOE's data presented in the NODA. In its comment, AHAM summarized its questions regarding the data presented in the NODA. AHAM additionally requested a comment period extension of 30 days from the date of the public meeting.

DOE has reviewed the request, including the specific questions raised in the comment, and has considered the benefit to stakeholders in providing additional data and information to address these questions and additional time to review such information. DOE will provide additional data and information in a separate notification to be made available in the rulemaking docket. Accordingly, DOE has determined that an extension of the comment period is appropriate and is hereby reopening the comment to May 27, 2022. DOE specifically encourages AHAM to submit data and results of any testing performed by AHAM members so that these may be made available to

interested parties in the docket for this rulemaking.

Signing Authority

This document of the Department of Energy was signed on May 13, 2022, by Kelly J. Speakes-Backman, Principal Deputy Assistant Secretary for Energy Efficiency and Renewable Energy, pursuant to delegated authority from the Secretary of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE Federal Register Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of the Department of Energy. This administrative process in no way alters the legal effect of this document upon publication in the **Federal Register**.

Signed in Washington, DC, on May 13, 2022.

Treena V. Garrett,

Federal Register Liaison Officer, U.S. Department of Energy.

[FR Doc. 2022–10713 Filed 5–18–22; 8:45 am]

BILLING CODE 6450–01–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2022–0522; Project Identifier MCAI–2022–00340–T]

RIN 2120–AA64

Airworthiness Directives; Airbus SAS Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for certain Airbus SAS Model A330–200, A330–200 Freighter, A330–300, and A330–900 series airplanes; and all Model A340–200 and A340–300 series airplanes. This proposed AD was prompted by recent tests that demonstrated that when the upper secondary load path (SLP) of the trimmable horizontal stabilizer actuator (THSA) is engaged, the THSA might not stall, with consequently no indication of SLP engagement. This proposed AD would require modifying the THSA installation, implementing the electrical load sensing device (ELSD) wiring provisions, and installing and activating the ELSD, as specified in a European Union Aviation Safety Agency (EASA) AD, which is proposed for incorporation by reference. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by July 5, 2022.

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- *Federal eRulemaking Portal:* Go to *https://www.regulations.gov.* Follow the instructions for submitting comments.
- *Fax:* 202–493–2251.
- *Mail:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- *Hand Delivery:* Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For material that will be incorporated by reference (IBR) in this AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email *ADs@easa.europa.eu;* internet *www.easa.europa.eu.* You may find this material on the EASA website at *https://ad.easa.europa.eu.* You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206–231–3195. It is also available in the AD docket at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2022–0522.

Examining the AD Docket

You may examine the AD docket at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2022–0522; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Vladimir Ulyanov, Aerospace Engineer, Large Aircraft Section, FAA, International Validation Branch, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206–231–3229; email *Vladimir.Ulyanov@faa.gov.*

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under **ADDRESSES**. Include ''Docket No. FAA–2022–0522; Project Identifier MCAI–2022–00340–T'' at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to *https://www.regulations.gov,* including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as ''PROPIN.'' The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Vladimir Ulyanov, Aerospace Engineer, Large Aircraft Section, FAA, International Validation Branch, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206–231–3229; email *Vladimir.Ulyanov@faa.gov.* Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2022–0039, dated March 8, 2022 (EASA AD 2022–0039) (also referred to as the MCAI), to correct an unsafe condition for certain Airbus SAS Model A330–201, A330–202, A330–203, A330–223, A330–223F, A330–243, A330–243F, A330–301, A330–302, A330–303, A330–321, A330–

322, A330–323, A330–341, A330–342, A330–343, and A330–941 airplanes; and all Model A340–211, A340–212, A340–213, A340–311, A340–312, and A340–313 airplanes.

The trimmable horizontal stabilizer actuator (THSA) has a fail-safe design: Each attachment, upper and lower, has two load paths, a normally loaded primary load path (PLP) and a secondary load path (SLP); the SLP is engaged only in case of PLP rupture. When the SLP is engaged, the design purpose was to generate a stall of the THSA by friction and to detect a stall by the position monitoring with an indication provided to the flight crew. This proposed AD was prompted by recent tests that demonstrated that when the upper SLP is engaged, the THSA might not stall, with consequently no indication of SLP engagement. The FAA is proposing this AD to prevent damage on the upper THSA SLP attachment, with consequent mechanical disconnection of the THSA, possibly resulting in loss of control of the airplane. See the MCAI for additional background information.

Related Service Information Under 1 CFR Part 51

EASA AD 2022–0039 specifies procedures for modification to the THSA by installation and activation of the electrical load sensing device (ELSD), and installation of the wiring provisions for the ELSD. The installation and activation of the ELSD include installation of the ELSD on the THSA, modification of the electrical harness, and modification of the circuit breaker in the auxiliary power unit (APU) control box. The installation of the wiring provisions for the ELSD includes modifying the structure at frame 87, installing the brackets at frame 87, installing the electrical dummy connectors, rerouting the wire between frame 56 and frame 69, modifying the circuit breaker box, modifying the electrical harness, and rerouting the wiring. This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the **ADDRESSES** section.

FAA's Determination

These products have been approved by the aviation authority of another country and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with the State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop in other products of these same type designs.

Proposed AD Requirements in This NPRM

This proposed AD would require accomplishing the actions specified in EASA AD 2022–0039 described previously, except for any differences identified as exceptions in the regulatory text of this proposed AD.

Explanation of Required Compliance Information

In the FAA's ongoing efforts to improve the efficiency of the AD process, the FAA developed a process to use some civil aviation authority (CAA) ADs as the primary source of information for compliance with requirements for corresponding FAA ADs. The FAA has been coordinating this process with manufacturers and CAAs. As a result, the FAA proposes to incorporate EASA AD 2022–0039 by reference in the FAA final rule. This proposed AD would, therefore, require compliance with EASA AD 2022–0039 in its entirety through that incorporation, except for any differences identified as exceptions in the regulatory text of this proposed AD. Using common terms that are the same as the heading of a particular section in EASA AD 2022–0039 does not mean that operators need comply only with that section. For example, where the AD requirement refers to ''all required actions and compliance times,'' compliance with this AD requirement is not limited to the section titled ''Required Action(s) and Compliance Time(s)'' in EASA AD 2022–0039. Service information required by EASA AD 2022–0039 for compliance will be available at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2022–0522 after the FAA final rule is published.

Costs of Compliance

The FAA estimates that this proposed AD would affect 120 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

ESTIMATED COSTS FOR REQUIRED ACTIONS

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
57 work-hours × $85 per hour = $4,845	Up to $23,000 ..	$27,845	$3,341,400

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

(1) Is not a ''significant regulatory action'' under Executive Order 12866,

(2) Would not affect intrastate aviation in Alaska, and

(3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

■ 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

■ 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

Airbus SAS: Docket No. FAA–2022–0522; Project Identifier MCAI–2022–00340–T.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by July 5, 2022.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Airbus SAS airplanes specified in paragraphs (c)(1) and (2) of this AD, certificated in any category, as identified in European Union Aviation Safety Agency (EASA) AD 2022–0039, dated March 8, 2022 (EASA AD 2022–0039).

(1) Model A330–201, –202, –203, –223, –223F, –243, –243F, –301, –302, –303, –321, –322, –323, –341, –342, –343, and –941 airplanes.

(2) Model A340–211, –212, –213, –311, –312, and –313 airplanes.

(d) Subject

Air Transport Association (ATA) of America Code 27, Flight Controls.

(e) Unsafe Condition

This AD was prompted by recent tests that demonstrated that when the upper secondary load path (SLP) of the trimmable horizontal stabilizer actuator (THSA) is engaged, the THSA might not stall, with consequently no indication of SLP engagement. The FAA is issuing this AD to prevent damage on the upper THSA SLP attachment, with consequent mechanical disconnection of the THSA, possibly resulting in loss of control of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Requirements

Except as specified in paragraph (h) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, EASA AD 2022–0039.

(h) Exceptions to EASA AD 2022–0039

(1) Where EASA AD 2022–0039 refers to its effective date, this AD requires using the effective date of this AD.

(2) The ''Remarks'' section of EASA AD 2022–0039 does not apply to this AD.

(i) Additional AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs):* The Manager, Large Aircraft Section, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the Large Aircraft Section, International Validation Branch, send it to the attention of the person identified in paragraph (j)(2) of this AD. Information may be emailed to: *9-AVS-AIR-730-AMOC@faa.gov.* Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer:* For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, Large Aircraft Section, International Validation Branch, FAA; or EASA; or Airbus SAS's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

(3) *Required for Compliance (RC):* Except as required by paragraph (i)(2) of this AD, if any service information contains procedures or tests that are identified as RC, those procedures and tests must be done to comply with this AD; any procedures or tests that are not identified as RC are recommended. Those procedures and tests that are not identified as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the procedures and tests identified as RC can be done and the airplane can be put back in an airworthy condition. Any substitutions or changes to procedures or tests identified as RC require approval of an AMOC.

(j) Related Information

(1) For EASA AD 2022–0039, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email *ADs@easa.europa.eu;* internet *www.easa.europa.eu.* You may find this EASA AD on the EASA website at *https://ad.easa.europa.eu.* You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206–231–3195. This material may be found in the AD docket at *https://www.regulations.gov* by searching for and locating Docket No. FAA–2022–0522.

(2) For more information about this AD, contact Vladimir Ulyanov, Aerospace Engineer, Large Aircraft Section, International Validation Branch, FAA, 2200 South 216th Street, Des Moines, WA 98198; telephone and fax 206–231–3229; email *Vladimir.Ulyanov@faa.gov.*

Issued on May 13, 2022.

Gaetano A. Sciortino,

Deputy Director for Strategic Initiatives, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2022–10722 Filed 5–18–22; 8:45 am]

BILLING CODE 4910–13–P

CONSUMER PRODUCT SAFETY COMMISSION

16 CFR Chapter II

[Docket No. CPSC–2022–0015]

Petitions Requesting Rulemaking To Amend the Safety Standard for Play Yards To Require a Minimum Thickness for Play Yard Mattresses, and To Standardize the Size of Play Yards and Play Yard Mattresses; Request for Comments

AGENCY: Consumer Product Safety Commission.

ACTION: Notice of petitions for rulemaking.

SUMMARY: The U.S. Consumer Product Safety Commission (Commission or CPSC) received two petitions regarding play yards and play yard mattresses. The Commission invites written comments concerning these petitions.

DATES: Submit comments by July 18, 2022.

ADDRESSES: Submit comments, identified by Docket No. CPSC–2022–0015, by any of the following methods:

Electronic Submissions: Submit electronic comments to the Federal eRulemaking Portal at: *https://www.regulations.gov.* Follow the instructions for submitting comments. CPSC typically does not accept comments submitted by electronic mail (email), except through *https://www.regulations.gov.* CPSC encourages you to submit electronic comments by using the Federal eRulemaking Portal, as described above.

Mail/hand delivery/courier Written Submissions: Submit comments by mail/hand delivery/courier to: Division of the Secretariat, Consumer Product Safety Commission, 4330 East-West Highway, Bethesda, MD 20814; telephone: (301) 504–7479. Alternatively, as a temporary option during the COVID–19 pandemic, you can email such submissions to: *cpsc-os@cpsc.gov.*

Instructions: All submissions must include the agency name and docket

number for this notice. CPSC may post all comments without change, including any personal identifiers, contact information, or other personal information provided, to: *https://www.regulations.gov.* Do not submit electronically: Confidential business information, trade secret information, or other sensitive or protected information that you do not want to be available to the public. If you wish to submit such information, please submit it according to the instructions for mail/hand delivery/courier written submissions.

Docket: For access to the docket to read background documents or comments received, go to: *https://www.regulations.gov,* and insert the docket number, CPSC–2022–0015, into the ''Search'' box, and follow the prompts.

FOR FURTHER INFORMATION CONTACT: Alberta E. Mills, Division of the Secretariat, Consumer Product Safety Commission, 4330 East-West Highway, Bethesda, MD 20814; telephone: 301–504–7479 (office) and 240–863–8938 (work cell); *cpsc-os@cpsc.gov.*

SUPPLEMENTARY INFORMATION: On November 29, 2021, Carol Pollack-Nelson, Ph.D. of Independent Safety Consulting, LLC, Sarah B. Newens, M.S. of Safety and Systems Solutions, M.S., and Alan H. Schoem, Esq. (collectively ''Petitioners'') submitted two documents to the Commission through the Division of the Secretariat, titled: (1) Petition to Require Minimum Thickness for Play Yard Mattresses (''Mattress Thickness Petition''), and (2) Petition to Standardize the Size of Play Yards and Play Yard Mattresses (''Play Yard Size Petition'') (collectively ''petitions'').[1] The petitions seek a rulemaking to amend the Commission's regulation, Safety Standard for Play Yards, 16 CFR part 1221, to address the hazard of infants becoming entrapped between the edge of a play yard and the play yard mattress and suffocating (''gap entrapment hazard''). CSPC docketed the Mattress Thickness Petition as petition CP 22–1 and docketed the Play Yard Size Petition as CP 22–2.

The Mattress Thickness Petition states that to reduce consumer perception that a play yard floor is too hard, and the notion that soft bedding should be added for the comfort of an infant, the Commission should require a minimum play yard mattress thickness of 1.5 inches with a minimal tolerance allowed. Additionally, Petitioners seek a maximum 0.5-inch gap requirement between a play yard mattress and the mesh side of the play yard wall, and to allow a maximum play yard mattress thickness of 3 inches.

The Play Yard Size Petition seeks to ''mitigate the risk posed by an undersized mattress in a play yard'' by standardizing the size of play yards and play yard mattresses ''to one size for each given perimeter shape,'' meaning ''one size for square play yards, one size for rectangular play yards, one size for oval play yards and one size for round play yards.'' Petitioners assert that this change also would reduce hazardous gaps between play yard mattresses and play yard walls.

By this notice, the Commission seeks comments concerning the two petitions. In particular, the Commission seeks comments on the following:

- The Commission considered the gap-entrapment hazard in granting petition CP 15–2, Petition Requesting Rulemaking on Supplemental Mattresses for Play Yards with Non-Rigid Sides, in establishing a Safety Standard for Crib Mattresses, and in continuing to work on play yard mattress requirements with the ASTM F15.18 Subcommittee on Play Yards and Non-Full-Size Cribs. What effect would these new petitions have on the Commission's work on this issue?
- Are any of the issues raised in the Mattress Thickness Petition supported, mooted, or rendered superfluous by the continuing work on the gap-entrapment hazard in the ASTM F15.18 Subcommittee on Play Yards and Non-Full-Size Cribs?
- The Commission, by statute, will consider any revised ASTM voluntary standard for play yards if ASTM notifies the Commission of a revised standard. 15 U.S.C. 2056a(b)(4). Based on the new petitions, should the Commission commit additional resources to the gap-entrapment issue, beyond staff's current work on mattress fit and thickness with the ASTM F15.18 Subcommittee on Play Yards and Non-Full-Size Cribs? Why or why not?
- The Commission's rules are typically stated in terms of performance requirements, and/or requirements for labeling and instructions. *See, e.g.,* 15 U.S.C. 2056(a). Is the proposal in the Play Yard Size Petition to limit the sizes of play yards and play yard mattresses consistent with this practice? If not, is the departure justified?
- Can the safety objective identified in the Play Yard Size Petition, *i.e.,* assisting consumers to purchase play yard mattresses that properly fit into a play yard, be addressed by a performance requirement different from that proposed in the Play Yard Size Petition? If so, are there reasons to favor or disfavor the requirement proposed in the Play Yard Size Petition? Does the existing requirement for play yard mattresses in the Safety Standard for Play Yards adequately address this hazard?

The petitions are available at: *http://www.regulations.gov,* under Docket No. CPSC–2022–0015, Supporting and Related Materials. Alternatively, interested parties may obtain a copy of the petitions by writing or calling the Division of the Secretariat, Consumer Product Safety Commission, 4330 East-West Highway, Bethesda, MD 20814; telephone: 301–504–7479 or 240–863–8938; *cpsc-os@cpsc.gov.*

Brenda Rouse,

Acting Secretary, Consumer Product Safety Commission.

[FR Doc. 2022–10293 Filed 5–18–22; 8:45 am]

BILLING CODE 6355–01–P

[1] On May 3, 2022, the Commission voted 3–1 to publish this Notice of Petitions for Rulemaking in the **Federal Register**.

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R07–OAR–2022–0419; FRL–9830–01–R7]

Air Plan Approval; Missouri; St. Louis Area Vehicle Inspection and Maintenance Program

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve, through parallel processing, revisions to the Missouri State Implementation Plan (SIP) relating to the St. Louis area's vehicle Inspection and Maintenance (I/M) Program received on November 12, 2019, and March 2, 2022. In the submissions, Missouri requests EPA approval of revisions to a regulation and related plan that implement the St. Louis area's Inspection and Maintenance program called, Gateway Vehicle Inspection Program (GVIP). We propose to approve Missouri's removal of vehicles registered in Franklin County, unless the vehicle is primarily operated in the rest of the area, from the Gateway Vehicle Inspection program. The revisions to this rule include amending the rule exemption section for vehicles subject to the rule, removing unnecessary words, amending definitions specific to the rule, updates due to technology changes, and other minor edits. These revisions do not impact the attainment of any National Ambient Air Quality Standard (NAAQS) nor delay the timely attainment of 2015

Ozone National Ambient Air Quality Standard. Approval of these revisions will ensure consistency between state and federally approved rules.

DATES: Comments must be received on or before June 21, 2022.

ADDRESSES: You may send comments, identified by Docket ID No. EPA–R07–OAR–2022–0419 to *https://www.regulations.gov*. Follow the online instructions for submitting comments.

Instructions: All submissions received must include the Docket ID No. for this rulemaking. Comments received will be posted without change to *https://www.regulations.gov,* including any personal information provided. For detailed instructions on sending comments and additional information on the rulemaking process, see the ''Written Comments'' heading of the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: Jed D. Wolkins, Environmental Protection Agency, Region 7 Office, Air Quality Planning Branch, 11201 Renner Boulevard, Lenexa, Kansas 66219; telephone number: (913) 551–7588; email address: *wolkins.jed@epa.gov*.

SUPPLEMENTARY INFORMATION: Throughout this document ''we,'' ''us,'' and ''our'' refer to the EPA.

Table of Contents

I. Written Comments
II. Parallel Processing
III. History and Current Status of St. Louis Area Air Quality
IV. Background of Missouri's I/M Program
V. What is being addressed in this document?
VI. Have the requirements for approval of a SIP revision been met?
VII. What is the EPA's analysis of Missouri's SIP request?
VIII. What action is the EPA proposing to take?
IX. Environmental Justice Concerns
X. Incorporation by Reference
XI. Statutory and Executive Order Reviews

I. Written Comments

Submit your comments, identified by Docket ID No. EPA–R07–OAR–2022–0419, at *https://www.regulations.gov*. Once submitted, comments cannot be edited or removed from *Regulations.gov*. The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.,* on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit *https://www.epa.gov/dockets/commenting-epa-dockets*.

II. Parallel Processing

Parallel processing refers to a process that utilizes concurrent state and federal proposed rulemaking actions, consistent with the provisions of 40 CFR part 51, appendix V. Generally, the state submits a copy of the proposed regulation or other revisions to EPA before conducting its public hearing and completing its public comment process under state law. EPA reviews this proposed state action and prepares a notice of proposed rulemaking (NPRM) under federal law.[1] If, after the state completes its public comment process and after EPA's public comment process, the state changes its final submittal from the proposed submittal, EPA evaluates those changes and decides whether to publish another NPRM in light of those changes or to proceed to taking final action on its proposed action and describe the state's changes in its final rulemaking action. Any final rulemaking action by EPA will occur only after the final submittal has been adopted by the state and formally submitted to EPA.

Missouri's November 12, 2019 submittal has been adopted by the state and formally provided to EPA. Missouri's public comment process has been completed for its March 2, 2022 submittal, but the implementing state regulation in the submittal has not been formally submitted by the state to EPA. In accordance with the parallel processing provisions in section 2.3.1 of 40 CFR part 51, appendix V, the State has been provided an opportunity to consider EPA comments prior to submission of a final plan for EPA's review and has submitted a schedule for final submittal of the state regulation. Specifically, Missouri's schedule includes publication of the order of rulemaking in the Missouri Register on April 15, 2022. The final state regulation was published in Missouri's Code of State Regulations (CSR) on April 30, 2022 and will become effective 30 days later on May 30, 2022. Missouri anticipates formally submitting the regulation package to EPA shortly after the rule's publication in the CSR. Because the State has satisfied all requirements for parallel processing concerning the March 2, 2022, submittal, EPA proposes to approve the submittal through parallel processing. If the State changes the final submittal from the version that we are proposing to approve today, EPA will evaluate the significance of those changes. If EPA finds any such changes to be significant, then the Agency intends to determine whether to re-propose based on the revised submission or proceed to take final action on the submittal as modified by the State.

III. History and Current Status of St. Louis Area Air Quality

The St. Louis, Missouri-Illinois bi-state area, which has been designated as nonattainment for several prior Ozone NAAQS, has historically included the counties of Franklin, Jefferson, St. Charles, and St. Louis and St. Louis City in Missouri, and the counties of Madison, Monroe and St. Clair in Illinois (hereafter referred to as the St. Louis area unless otherwise noted). For all Ozone NAAQS, except for the 2015 Ozone NAAQS, the St. Louis area has been redesignated to attainment as described in this section.

On May 12, 2003, EPA redesignated the St. Louis area from Serious nonattainment to attainment for the 1979 Ozone NAAQS. (68 FR 25418). On June 15, 2005, EPA revoked the 1979 1-hour Ozone NAAQS for all areas except the 8-hour Ozone nonattainment early action compact (EAC) areas. (70 FR 44470). The St. Louis area did not participate in the EAC and therefore, the 1-hour standard was revoked for all areas in Missouri effective June 15, 2005.

On February 20, 2015, EPA redesignated the St. Louis area from Moderate nonattainment to attainment for the 1997 8-hour Ozone NAAQS. (80 FR 9207). On March 6, 2015, EPA revoked the 1997 8-hour Ozone NAAQS. (80 FR 12264).

On September 20, 2018, EPA redesignated the St. Louis area from Moderate nonattainment to attainment for the 2008 8-hour Ozone NAAQS. (83 FR 47572). The 2008 8-hour Ozone NAAQS has not been revoked.

On April 30, 2018, EPA designated Boles Township of Franklin County, St. Charles County, St. Louis County, and St. Louis City as Marginal

[1] Although not the case in this proposed rulemaking, in some instances, EPA's NPRM is published in the **Federal Register** during the same time frame that the state is holding its public hearing and conducting its public comment process. The state and EPA then provide for concurrent public comment periods on both the state action and federal action.

nonattainment for the 2015 Ozone NAAQS. (83 FR 25776) As part of that same action, EPA designated Jefferson County and the remaining portion of Franklin County as attainment/unclassifiable. On July 10, 2020, the District of Columbia Circuit Court remanded the Jefferson County designation (among other designations) back to the EPA. The Court upheld EPA's designation of Boles Township as nonattainment and the remainder of Franklin County as attainment/unclassifiable. In response to the Court remand, the EPA revised the Jefferson County designation to nonattainment on May 26, 2021. (86 FR 31438) On November 16, 2017, EPA designated all areas of Missouri except the St. Louis area as attainment/unclassifiable for the 2015 8-hour Ozone NAAQS. (82 FR 54232)

On March 29, 1999, EPA redesignated a portion of St. Louis County and St. Louis City from nonattainment to attainment for the 1971 Carbon Monoxide (CO) NAAQS. (64 FR 3855).

On August 3, 2018, EPA redesignated Franklin County, Jefferson County, St. Charles County, St. Louis County, and St. Louis City from nonattainment to attainment for the 1997 Annual Fine Particulate Matter ($PM_{2.5}$) NAAQS. (83 FR 38033).

A portion of Jefferson County is currently designated nonattainment for both the 2008 and 1978 Lead NAAQS. This nonattainment area is currently monitoring compliance with both the 1978 and 2008 Lead NAAQS.[2] The rest of the St. Louis Area is designated attainment/unclassifiable for both the 2008 and 1978 Lead NAAQS.

On January 28, 2022, EPA redesignated a portion of Jefferson County from nonattainment to attainment for the 2010 1-hour SO_2 NAAQS. (87 FR 4508). The rest of the St. Louis Area is designated as either attainment or unclassifiable for the 2010 SO_2 NAAQS.

The St. Louis Area is designated attainment/unclassifiable for all other NAAQS.

IV. Background of Missouri's I/M Program

Under section 182 (b)(4),(c), and (d) of the CAA, vehicle I/M programs are required for areas that are classified as Moderate or above nonattainment for Ozone. As a result, Missouri has previously submitted, and the EPA has previously approved into the SIP an I/M program for the St. Louis Area of Franklin County, Jefferson County, St. Charles County, St. Louis County, and St. Louis City.[3] At the time of the program's inception, the program was based on tailpipe testing. In 2000, the EPA approved Missouri's switch to On Board Diagnostic testing for the same geographic area, consistent with our regulations and section 182 of the CAA.[4]

V. What is being addressed in this document?

The EPA is proposing to approve, through parallel processing, revisions to the Missouri SIP received on November 12, 2019 and March 2, 2022. In the November 12, 2019, submission, Missouri requested EPA approval of revisions to the vehicle I/M Program also known as GVIP, for the St. Louis area. The revisions remove both Franklin and Jefferson Counties from the GVIP; however, the EPA is only proposing to take action on the removal of Franklin County from the GVIP in accordance with a request from Missouri.

At the time of the November 12, 2019 submission, Missouri had not yet revised the implementing GVIP regulations nor provided supplemental emission controls to offset the emission increases resulting from ceasing vehicle emission inspections in the Boles Township portion of the nonattainment area, in accordance with CAA section 110(l). EPA's longstanding position is that the implementing rule revision and supplemental emission controls, for the nonattainment area, are needed for EPA approval. This position is consistent with the CAA, our implementing regulations, and our previous approvals of I/M removal across the nation.

At the time of Missouri's November 12, 2019 submission, Jefferson County was designated as attainment/unclassifiable for the 2015 Ozone NAAQS. As a result of the May 26, 2021 EPA designation for Jefferson County to nonattainment, Missouri requested that EPA act on the removal of Franklin County from the GVIP plan and postpone action on the removal of Jefferson County from the GVIP plan via a letter dated December 6, 2021.[5] Missouri would need to provide further supplemental emission controls for us to be able to propose approving the removal of I/M in Jefferson County as long as the County remains designated nonattainment. Additionally, in response to comment from EPA on the draft rulemaking, Missouri limited the implementing regulation's exemption to Franklin County as opposed to exempting both Franklin and Jefferson Counties.

On March 2, 2022, Missouri submitted a draft SIP revision supplementing the November 12, 2019 submittal, along with a parallel processing request. The March 2, 2022 submittal included both the revised implementing rule, 10 CSR 10–5.381, and supplemental emission controls to offset the increased emissions in the Boles Township portion of Franklin County that is designated as nonattainment for the 2015 Ozone NAAQS. The revision to 10 CSR 10–5.381 adds an exemption for vehicles registered in Franklin County from the program unless the vehicles are primarily operated in the remainder of nonattainment area. The revisions to this rule include amending the rule exemption section for vehicles subject to the rule, removing unnecessary words, amending definitions specific to the rule, and other minor edits. The EPA is proposing to approve the portion of the November 12, 2019 GVIP Plan relating to Franklin County, St. Charles County, St. Louis County, and St. Louis City, by approving the removal of Franklin County from the I/M program, and fully approve the revisions to 10 CSR 10–5.381.

In accordance with Missouri's December 6, 2021, letter, the EPA is not taking action on Missouri's November 12, 2019 request to remove Jefferson County from the Inspection and Maintenance Program for the St. Louis Area. Missouri states in the 2021 letter that it views the requests in the 2019 SIP revision to remove inspection and maintenance requirements in Franklin and Jefferson Counties as severable. The EPA agrees the removal of inspection and maintenance requirements in Franklin and Jefferson Counties are severable. Missouri also states in the letter that the implementing regulation, 10 CSR 10–5.381, continues to require the inspection and maintenance program to operate in Jefferson County. As a result of today's proposed action, the nonregulatory 1999 Implementation Plan for the Missouri Inspection and Maintenance Program, originally approved into the SIP on May 18, 2000, 65 FR 31480, remains approved into the SIP for Jefferson County. The EPA proposes to approve the nonregulatory Inspection and Maintenance Program for the St. Louis Area—2019 Revision, into the SIP, which requires the I/M program to continue to operate in the City of St. Louis and the counties of St. Louis and St. Charles and removes requirements for Franklin County.

[2] See file titled Herculaneum AQS Report in Docket.

[3] 50 FR 32411, August 12, 1985.

[4] 65 FR 62295, May, 18, 2000.

[5] Missouri's December 6, 2021 letter to EPA is included in the docket for this action.

The EPA's analysis of the revisions can be found in the ''What is the EPA's analysis of Missouri's SIP request?'' section and in the technical support document (TSD) included in this docket.

VI. Have the requirements for approval of a SIP revision been met?

Both the 2019 and 2022 State submissions have met the public notice requirements for SIP submissions in accordance with 40 CFR 51.102. The submission also satisfied the completeness criteria of 40 CFR part 51, appendix V. The State provided public notice on the November 12, 2019 SIP revision from July 29, 2019 to August 29, 2019 and on the March 2, 2022 SIP revision from October 15, 2021 to December 9, 2021. The State received ten comments during the 2019 public notice. The State received four comments on the 2021 public notice. The EPA finds Missouri has adequately addressed the comments received in its submissions. Please see the TSD for more discussion on Missouri's responses to comments. In addition, as explained here and in more detail in the TSD which is part of this docket, the revision meets the substantive SIP requirements of the Clean Air Act (CAA), including section 110 and implementing regulations.

VII. What is the EPA's analysis of Missouri's SIP request?

EPA is making the preliminary determination that the Ozone NAAQS is the primary focus for the noninterference demonstration required by section 110(l) of the CAA because the I/M program results primarily in emissions benefits for VOCs, NO_X, and CO. While the GVIP program does produce CO reductions, the St. Louis Area has CO concentration much less than the CO NAAQS. Ozone concentrations are at the Ozone NAAQS. As such, any increases to CO emissions are unlikely to lead to a violation of the CO NAAQS, but any increases to Ozone precursors are extremely likely to cause a violation of the Ozone NAAQS. VOCs and NO_X emissions are precursors for Ozone. NO_X emissions are precursors for particulate matter. NO_2 is a component of NO_X. There are no emissions reductions attributable to the emissions of particulate matter, lead and sulfur dioxide (SO_2) from the I/M program.

In Missouri's March 2, 2022, SIP revision, the State concluded that the removal of the Franklin County from the I/M program would not interfere with attainment or maintenance of the Ozone NAAQS. While MOVES2014 mobile emissions modeling results show no Ozone precursor increase from 2017 to 2020 associated with the removal of Franklin County from the I/M program, MOVES2014 mobile emission modeling results show Ozone emission precursor increases on a same year comparison. The Ozone design value in St. Louis is right at the level of the 2015 Ozone standard. Since Boles Township of Franklin County is part of the St. Louis nonattainment area and emissions from Boles Township have been shown to impact air quality in the rest of the St. Louis Area, Missouri has provided supplemental NO_X emission controls exceeding the amount of the highest same year increase from removal of the I/M program. Since the rest of Franklin County is attainment/unclassifiable for the 2015 Ozone NAAQS and emissions from the rest of the county do not impact the St. Louis Area, Missouri is relying on the 2017 to 2020 emission comparison. The EPA proposes to find that removal of Franklin County from the SIP-approved I/M program would not interfere with attainment or maintenance of the 2015 or any prior Ozone NAAQS.

Franklin County is designated attainment or unclassifiable for all other NAAQS. Missouri's MOVES2014 mobile emission modeling showed no emission increase for particulate matter, NO_2, CO, or lead. Based on this data together with air quality data, EPA is making the preliminary determination that the change will not interfere with the area's ability to maintain the particulate matter, NO_2, CO, or lead NAAQS, or any other applicable requirement. EPA is making the preliminary determination that the change will not interfere with reasonable progress towards natural visibility in Missouri's Class I areas nor any Class I area in another state Missouri impacts. For more details please see the ''Clean Air Act (CAA) Section 110(l) Demonstration'' section of the TSD in the docket of this action.

VIII. What action is the EPA proposing to take?

The EPA is proposing to approve, through parallel processing, revisions to the Missouri SIP received on November 12, 2019 and March 2, 2022. The EPA is proposing to approve portions of the November 12, 2019 GVIP Plan, by approving the removal of Franklin County from the I/M program, and fully approve the revisions to 10 CSR 10–5.381. The EPA is not taking action on the remainder of the November 12, 2019 GVIP Plan, at this time. We are soliciting comments on this proposed action. Final rulemaking will occur after consideration of any comments.

IX. Environmental Justice Concerns

When the EPA reviews a state's desired change to their SIP for a NAAQS, the CAA requires the EPA to ensure that the change will not cause ''backsliding'' of the air quality or delaying attainment of air quality. SIP revisions address environmental justice concerns by ensuring that the public is properly informed about the Plan and regulations to attain and maintain air quality.

The EPA utilized the EJSCREEN tool to evaluate environmental and demographic indicators within Franklin County, Jefferson County, St. Charles County, St. Louis County, and St. Louis City. The tool outputs reports are contained in the docket for this action. Looking specifically at Franklin County, the EPA's EJSCREEN tool demonstrates that demographic indicators are consistent with national averages, however there are vulnerable populations in Franklin County including low-income populations and persons over 64 years of age. In addition, emissions from Boles Township impact populations in the other portions of the nonattainment area. St. Louis City has demographic indicators significantly above national averages for low-income and minority populations. While the other counties' demographic indicators are consistent with or lower than national averages, there are vulnerable populations in these Counties including low-income populations and persons over 64 years of age.

CAA section 110 requires Missouri to provide supplemental emission controls for the increases from Boles Township. As described earlier, EPA proposes to find these supplemental emission controls are sufficient to address the projected emissions increase from ceasing GVIP in Franklin County.

This action addresses EPA's determination that the removal of Franklin County registered vehicles from the GVIP, unless they are predominately operated in the rest of the St. Louis Area. This action proposes to determine the removal of these Franklin County registered vehicles from the GVIP will not have an adverse impact to air quality or interfere with the nonattainment area attaining or maintaining the NAAQS. For these reasons, this proposed action does not result in disproportionately high and adverse human health or environmental effects on minority populations, low-income populations and/or indigenous peoples.

X. Incorporation by Reference

In this document, the EPA is proposing to include regulatory text in an EPA final rule that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, the EPA is proposing to incorporate by reference the Missouri 10 CSR 10–5.381 as described in Sections V and VIII of this preamble and set forth below in the proposed amendments to 40 CFR part 52. The EPA has made, and will continue to make, these materials generally available through *www.regulations.gov* and at the EPA Region 7 Office (please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section of this preamble for more information).

XI. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, the EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of the National Technology Transfer and Advancement Act (NTTA) because this rulemaking does not involve technical standards; and
- This action does not have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations and/or indigenous peoples, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994). The basis for this determination is contained in section IX of this action, ''Environmental Justice Concerns.''

The SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Incorporation by reference, Intergovernmental relations, Lead, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

Dated: May 11, 2022.

Meghan A. McCollister,

Regional Administrator, Region 7.

For the reasons stated in the preamble, the EPA proposes to amend 40 CFR part 52 as set forth below:

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

■ 1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart AA—Missouri

■ 2. In § 52.1320:
■ a. In the table in paragraph (c):
■ i. Revise the entry ''10–5.381''.
■ b. In the table in paragraph (e):
■ i. Revise the entry ''(38)''.
■ ii. Add the entry ''(84)'' in numerical order.

The revisions and addition read as follows:

§ 52.1320 Identification of plan.

* * * * *

(c) * * *

EPA-APPROVED MISSOURI REGULATIONS

Missouri citation	Title	State effective date	EPA approval date	Explanation
Missouri Department of Natural Resources				
*	*	*	*	*
Chapter 5—Air Quality Standards and Air Pollution Control Regulations for the St. Louis Metropolitan Area				
*	*	*	*	*
10–5.381	On-Board Diagnostics Motor Vehicle Emissions Inspection.	5/30/2022	[Date of publication of the final rule in the **Federal Register**], [**Federal Register** citation of the final rule].	
*	*	*	*	*

* * * * * (e) * * *

EPA-APPROVED MISSOURI NONREGULATORY SIP PROVISIONS

Name of nonregulatory SIP provision	Applicable geographic or nonattainment area	State submittal date	EPA approval date	Explanation
*	*	*	*	*
(38) Implementation plan for the Missouri inspection maintenance program.	Jefferson County	11/12/1999	5/18/2000, 65 FR 31480	[MO 096–1096b; FRL–6701–6]. Approved for Jefferson County only.
*	*	*	*	*
(84) Implementation plan for the Missouri inspection maintenance program.	St. Charles County, St. Louis County, and St. Louis City.	11/12/2019, 3/2/2022.	[Date of publication of the final rule in the **Federal Register**], [**Federal Register** citation of the final rule].	[EPA–R07–OAR–2022–0419; FRL–9830–01–R7]. Approved only for St. Charles County, St. Louis County, and St. Louis City and removal of Franklin County. Removal of Jefferson County is not SIP approved.

[FR Doc. 2022–10688 Filed 5–18–22; 8:45 am]

BILLING CODE 6560–50–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 14

[CG Docket No. 10–213, DA 22–463; FR ID 86631]

Interoperable Video Conferencing Service

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: In this document, the Consumer and Governmental Affairs Bureau (CGB or Bureau) of the Federal Communications Commission (FCC or Commission) seeks to refresh the record on proposed rules to enable people with disabilities to access and use interoperable video conferencing services by requesting further comment on the kinds of services encompassed by the term ''interoperable video conferencing service,'' a type of advanced communications service.

DATES: Comments are due on or before June 21, 2022, and reply comments are due on or before July 18, 2022.

ADDRESSES: Comments may be submitted, identified by CG Docket No. 10–213, by either of the following methods:

- *Federal Communications Commission's Website: https://www.fcc.gov/ecfs/filings/standard.* Follow the instructions for submitting comments.
- *Paper Filers:* Parties who choose to file by paper must file an original and one copy of each filing. Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. Currently, the Commission does not accept any hand delivered or messenger delivered filings as a temporary measure taken to help protect the health and safety of individuals, and to mitigate the transmission of COVID–19. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

For detailed instructions on submitting comments and additional information on the rulemaking process, see document DA 22–463 at: *https://www.fcc.gov/document/pn-refresh-record-re-interoperable-video-conferencing.*

FOR FURTHER INFORMATION CONTACT: For further information, contact Darryl Cooper at: 202–418–7131; email: *Darryl.Cooper@fcc.gov.*

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Public Notice, document DA 22–463, released on April 27, 2022, in CG Docket No. 10–

213. The full text of document DA 22–463 is available for public inspection and copying via the Commission's Electronic Comment Filing System (ECFS) and at *https://www.fcc.gov/document/pn-refresh-record-re-interoperable-video-conferencing.*

To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an email to *fcc504@fcc.gov* or call the Consumer and Governmental Affairs Bureau at (202) 418–0530.

This proceeding is a ''permit-but-disclose'' proceeding in accordance with the Commission's *ex parte* rules. Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies) in the docket(s). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter's written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with rule § 1.1206(b) of the Commission's rules. In proceedings governed by rule § 1.49(f) of the Commission's rules or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for this proceeding, and must be filed in their native format (*e.g.,* .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission's *ex parte* rules.

Initial Paperwork Reduction Act of 1995 Analysis

This document does not contain proposed information collection requirements subject to the Paperwork Reduction Act of 1995, Public Law 104–13, beyond those already proposed in this proceeding. In addition, therefore, it does not contain any proposed information collection burden for small business concerns with fewer than 25 employees, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107–198, *see* 44 U.S.C. 3506(c)(4), beyond those already proposed in this proceeding.

Synopsis

1. In document DA 22–463, the Bureau seeks to refresh the record in CG Docket No. 10–213 on proposed rules to enable people with disabilities to access and use an interoperable video conferencing service. The Bureau requests further comment on the kinds of services encompassed by the term ''interoperable video conferencing service,'' a type of advanced communications service (ACS) subject to section 716 of the Communications Act of 1934, as amended (the Act). 47 U.S.C. 617. Other forms of ACS include interconnected voice over internet Protocol service, non-interconnected VoIP, and electronic messaging service. Section 716 of the Act also requires that service providers and equipment manufacturers make advanced communications services and equipment accessible to and usable by people with disabilities, unless the requirements are not achievable.

2. In 2011, the Commission adopted rules implementing the Communications and Video Accessibility Act of 2010 (CVAA) in a *Report and Order and Further Notice of Proposed Rulemaking* published at 76 FR 82240, December 30, 2011 and 76 FR 82354, December 30, 2011. *See also* 47 CFR part 14. The Commission incorporated into its rules the statutory definition of ''interoperable video conferencing service'' as ''a service that provides real-time video communications, including audio, to enable users to share information of the user's choosing.'' Noting that a question was raised as to what Congress meant by including the word ''interoperable'' in the term ''interoperable video conferencing service,'' the Commission found that ''the record is insufficient to determine how exactly to define 'interoperable' '' in this context. The Commission also found that the word ''interoperable'' did not indicate a Congressional intent to require that non-interoperable video conferencing services be made interoperable.

3. In the *2011 Further Notice,* Commission invited further comment on the meaning of the term ''interoperable'' in the context of video conferencing services and equipment. Based on the record at that time, the Commission invited comment on three alternative definitions of an ''interoperable'' service: (1) Able to function inter-platform, inter-network, and inter-provider; (2) having published or otherwise agreed-upon standards that allow for manufacturers or service providers to develop products or services that operate with other equipment or services operating pursuant to the standards; or (3) able to connect users among different video conferencing services, including video relay service (VRS). The Commission also asked whether only one of these alternatives should be adopted, or whether they should all be encompassed in a single definition of ''interoperable,'' such that a video conferencing service would be deemed interoperable as long as any of the three alternative criteria is satisfied.

4. In response to the *2011 Further Notice,* commenters did not reach a consensus on any of the three suggested alternatives. Stating that the definition did not apply to then-current services, some commenters argued that Congress could not have intended that no existing video conferencing services were covered by the statute. Others disagreed, while suggesting that video conferencing services might grow in the direction of interoperability. Some commenters supported a fourth alternative definition of ''interoperable'' that would apply to those video conferencing services capable of being used on different types of hardware and different types of operating systems.

5. In response to the Commission's April 7, 2021 Public Notice, seeking comment on whether the Commission's accessibility rules should be updated, *Consumer and Governmental Affairs, Media, and Wireless Telecommunications Bureaus Seek Update On Commission's Fulfillment of The Twenty-First Century Communications and Video Accessibility Act,* GN Docket No. 21–140, Public Notice, 36 FCC Rcd 7108 (2021), the Commission received several comments that briefly addressed the issue of how to define ''interoperable video conferencing.'' CTIA states that standards groups are best suited to define interoperability standards. The Accessibility Advocacy and Research Organizations (AARO) urge the Commission to resolve the definitional

issue by ''simply clarify[ing] that the statutory definition of 'interoperable video conferencing service,' as a 'service that uses real-time video communications, including audio, to enable users to share information of the user's choosing,' is an exhaustive articulation of what Congress intended to be covered.''

6. In February 2022, the Commission's Disability Advisory Committee highlighted the issue of the accessibility of video conferencing platforms in recommending Commission action to facilitate interconnection of such platforms with telecommunications relay services (TRS). The Committee also recommended that the Commission ensure, at a minimum, that video conferencing platforms include built-in closed captioning functionality that is available to all users,'' and allow users to control the activation and customize the appearance of captions and video.

7. *Request for Additional Comment.* The Bureau invites the public to file additional comments on the questions posed in the *2011 Further Notice* regarding the meaning of the term ''interoperable'' in the context of video conferencing service and equipment. The Bureau invites commenters to submit new or additional relevant information about what types of services are currently available in the video conferencing marketplace, the kinds of interoperability they currently offer, and how such developments may assist in reaching an interpretation of ''interoperable'' that is consistent with the intent of Congress in enacting the CVAA. For example, are there video conferencing services that can be accessed from a wide range of user equipment, software, and device operating systems? How do consumers gain access to video conferencing services today? Are telecommunications services, interconnected and non-interconnected VoIP, and electronic messaging services included in some video conferencing services? Are these ACS components of video conferencing services generally accessible and usable? The Bureau also invites comment on any other developments that the Commission should consider in resolving this issue. While the *2011 Further Notice* proposed three possible definitions for the word ''interoperable,'' commenters may suggest additional alternatives or other types of input on how to interpret that word.

Federal Communications Commission.

Suzanne Singleton,

Chief, Disability Rights Office, Consumer and Governmental Affairs Bureau.

[FR Doc. 2022–10784 Filed 5–18–22; 8:45 am]

BILLING CODE 6712–01–P

Notices

Federal Register
Vol. 87, No. 97
Thursday, May 19, 2022

This section of the FEDERAL REGISTER contains documents other than rules or proposed rules that are applicable to the public. Notices of hearings and investigations, committee meetings, agency decisions and rulings, delegations of authority, filing of petitions and applications and agency statements of organization and functions are examples of documents appearing in this section.

ADMINISTRATIVE CONFERENCE OF THE UNITED STATES

Disclosure of Agency Legal Materials; Comment Request

AGENCY: Administrative Conference of the United States (ACUS).

ACTION: Notice.

SUMMARY: The Office of the Chairman of ACUS is requesting public input on what legal materials agencies must or should make publicly available and how they ought to do so. Responses to this request may inform an ongoing ACUS project, *Disclosure of Agency Legal Materials.* If warranted, the project will recommend statutory reforms to ensure that agencies provide public access to legal materials in the most equitable, effective, and efficient way possible for both the public and agencies.

DATES: Comments must be received no later than 10 a.m. (ET) July 18, 2022.

ADDRESSES: You may submit comments by email to *info@acus.gov* (with ''Disclosure of Agency Legal Materials Comments'' in the subject line of the message); online by clicking ''Submit a comment'' near the bottom of the project web page found at *https://www.acus.gov/research-projects/disclosure-agency-legal-materials*; or by U.S. Mail addressed to Disclosure of Agency Legal Materials Comments, Administrative Conference of the United States, Suite 706 South, 1120 20th Street NW, Washington, DC 20036. ACUS will ordinarily post comments on the project web page as they are received. Commenters should not include information, such as personal information or confidential business information, that they do not wish to appear on the ACUS website. For the full ACUS public comment policy, please visit *https://www.acus.gov/policy/public-comment-policy.*

FOR FURTHER INFORMATION CONTACT: Todd Rubin, Attorney Advisor, Administrative Conference of the United States, 1120 20th Street NW, Suite 706 South, Washington, DC 20036; Telephone (202) 480–2080; email *trubin@acus.gov.*

SUPPLEMENTARY INFORMATION: The Administrative Conference Act, 5 U.S.C. 591–596, established the Administrative Conference of the United States. The Conference studies the efficiency, adequacy, and fairness of the administrative procedures used by Federal agencies and makes recommendations to agencies, the President, Congress, and the Judicial Conference of the United States for procedural improvements (5 U.S.C. 594(1)). For further information about the Conference and its activities, see *www.acus.gov.*

Disclosure of Agency Legal Materials

Agencies generate a wide range of materials that impose legal obligations on members of the public, agency employees, and agency heads; determine the rights or interests of private parties; advise the public of the agencies' interpretation of the statutes and rules they administer; advise the public prospectively of the manner in which agencies plan to exercise discretionary powers; or otherwise explain agency actions that affect members of the public. Federal laws govern when and how agencies make these legal materials publicly available. These include generally applicable statutes such as the Freedom of Information Act (FOIA), the Federal Register Act, the E-Government Act of 2002, the Federal Records Act, as well as agency- and program-specific statutes.

ACUS has undertaken many projects in which it has recommended best practices for the disclosure of records such as guidance documents,[1] adjudication rules,[2] adjudication materials,[3] and litigation materials.[4] Many of these projects focus on a broader set of materials than legal materials, but they do encompass, touch on, or include legal materials. A recurrent question in the discussion surrounding these projects has been whether Congress should amend the main statutes governing disclosure of agency legal materials to consolidate and harmonize overlapping requirements, account for technological developments, and correct statutory ambiguities and drafting errors.

ACUS is now undertaking this project to answer this question. A team of leading scholars will submit a report to ACUS that addresses this question and others that may be identified. If warranted, a committee of ACUS members will develop proposed recommendations to Congress for possible consideration by the ACUS Assembly. Recommended statutory reforms will provide clear standards as to what legal materials agencies must publish and where they must publish them (whether in the **Federal Register**, on their websites, or elsewhere). The objective of any such proposed amendments will be to ensure that agencies provide appropriate public access to legal materials in the most equitable, effective, and efficient way possible for both the public and the agency. Visit *https://www.acus.gov/research-projects* to learn more about how ACUS develops recommendations.

Specific Topics for Public Comment

ACUS welcomes views, information, and data on all aspects of this topic. ACUS also seeks specific feedback on the following questions:

1. What types of agency records should ACUS consider to be ''agency legal materials'' for purposes of this project?

2. What obstacles have you or others faced in gaining access to agency legal materials?

3. Are there certain types of agency legal materials or legal information that agencies are not making publicly available that would be valuable to you or others?

[1] *See, e.g.,* Admin. Conf. of the U.S., Recommendation 2021–7, *Public Availability of Inoperative Agency Guidance Documents,* 87 FR 1718 (Jan. 12, 2022); Admin. Conf. of the U.S., Recommendation 2019–3, *Public Availability of Agency Guidance Documents,* 84 FR 38931 (Aug. 8, 2019).

[2] *See, e.g.,* Admin. Conf. of the U.S., Recommendation 2020–5, *Publication of Policies Governing Agency Adjudicators,* 86 FR 6622 (Jan. 22, 2021); Admin. Conf. of the U.S., Recommendation 2018–5, *Public Availability of Adjudication Rules,* 84 FR 2142 (Feb. 6, 2019).

[3] *See, e.g.,* Admin. Conf. of the U.S., Recommendation 2017–1, *Adjudication Materials on Agency websites,* 82 FR 31039 (July 5, 2017).

[4] *See, e.g.,* Admin. Conf. of the U.S., Recommendation 2020–6, *Agency Litigation web pages,* 86 FR 6624 (Jan. 22, 2021).

4. Agencies provide public access to legal materials in different ways. Agencies make some materials available to the general public on their own initiative without having received a request from a member of the public (*i.e.,* proactive disclosure). Other materials are provided to members of the public on request. What types of legal materials should agencies proactively disclose to the general public? What types of legal materials may or should agencies disclose only in response to a request from a member of the public?

5. For agency legal materials that should be proactively disclosed, where or how should agencies make them publicly available (on agency websites, in the **Federal Register**, or elsewhere)?

6. Are there certain types of agency legal materials, or certain types of information contained in agency legal materials, that agencies should not make publicly available? When there is public interest in these types of materials or information, how should agencies balance the public interest in disclosure with any private or governmental interests in nondisclosure?

7. Some statutes governing the public availability of agency legal materials apply to most or all agencies (*e.g.,* Federal Register Act), whereas others apply to only one or a small number of agencies (*e.g.,* Food and Drug Administration Modernization Act of 1997). When should Congress create disclosure requirements that apply to most or all agencies, and when should Congress create disclosure requirements that apply to only one or a small number of agencies?

8. Are there certain best practices regarding disclosure of legal materials on agency websites that should be required by statute (*e.g.,* indexing of legal materials, search functions to help find legal materials)? If so, should these practices be required for all legal materials or only certain types of legal materials?

9. What inconsistencies, ambiguities, and overlaps exist in the main statutes governing disclosure of agency legal materials (*e.g.,* FOIA, Federal Register Act, E-Government Act of 2002, Federal Records Act) that Congress should remedy?

10. What other statutory reforms might be warranted to ensure adequate public availability of agency legal materials?

Dated: May 13, 2022.

Shawne McGibbon,

General Counsel.

[FR Doc. 2022–10749 Filed 5–18–22; 8:45 am]

BILLING CODE 6110–01–P

DEPARTMENT OF AGRICULTURE

Submission for OMB Review; Comment Request

The Department of Agriculture has submitted the following information collection requirement(s) to OMB for review and clearance under the Paperwork Reduction Act of 1995, Public Law 104–13. Comments are requested regarding whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; the accuracy of the agency's estimate of burden including the validity of the methodology and assumptions used; ways to enhance the quality, utility and clarity of the information to be collected; and ways to minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

Comments regarding this information collection received by June 21, 2022 will be considered. Written comments and recommendations for the proposed information collection should be submitted within 30 days of the publication of this notice on the following website *www.reginfo.gov/public/do/PRAMain.* Find this particular information collection by selecting ''Currently under 30-day Review—Open for Public Comments'' or by using the search function.

An agency may not conduct or sponsor a collection of information unless the collection of information displays a currently valid OMB control number and the agency informs potential persons who are to respond to the collection of information that such persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.

Food Safety and Inspection Service

Title: Importation and Transportation of Meat, Poultry and Egg Products.

OMB Control Number: 0583–0094.

Summary of Collection: The Food Safety and Inspection Service (FSIS) has been delegated the authority to exercise the functions of the Secretary as provided in the Federal Meat Inspection Act (FMIA) (21 U.S.C. 601 *et seq.)* and the Poultry Products Inspection Act (PPIA) (21 U.S.C. 451 *et seq.*), and the Egg Products Inspection Act (EPIA) (21 U.S.C. 1031, *et seq.*) These statutes mandate that FSIS protect the public by ensuring that meat, poultry, and egg products are safe, wholesome, unadulterated, and properly labeled and packaged. Meat and poultry products not marked with the mark of inspection and shipped from one official establishment to another for further processing must be transported under FSIS seal to prevent such unmarked product from' entering commerce. To track product shipped under seal, FSIS requires shipping establishments to complete a form that identifies the type, amount, and weight of the product.

Need and Use of the Information: FSIS will collect information using form 7350–1, Request and Notice of Shipment of Sealed Meat/Poultry. FSIS will collect the name, number, method of shipping, and destination of product, type, and description of product to be shipped, reason for shipping product, and a signature. Foreign countries that wish to export meat, poultry, and egg products to the United States must establish eligibility to do so by putting in place inspection systems that are ''equivalent to'' the U.S. inspection system (9 CFR 327.2 and 381.196) and by annually certifying that they continue to do so. Meat, poultry, and egg products intended for importation into the U.S. must be accompanied by an inspection certificate signed by an official of the foreign government responsible for the inspection and certification of the product.

Description of Respondents: Business or other for-profit.

Number of Respondents: 56.

Frequency of Responses: Recordkeeping; Reporting: On occasion.

Total Burden Hours: 3,679.

Dated: May 16, 2022.

Ruth Brown,

Departmental Information Collection Clearance Officer.

[FR Doc. 2022–10766 Filed 5–18–22; 8:45 am]

BILLING CODE 3410–DM–P

DEPARTMENT OF AGRICULTURE

Submission for OMB Review; Comment Request

May 16, 2022.

The Department of Agriculture will submit the following information collection requirement(s) to OMB for review and clearance under the Paperwork Reduction Act of 1995, Public Law 104–13 on or after the date of publication of this notice. Comments are requested regarding: (1) Whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have

practical utility; (2) the accuracy of the agency's estimate of burden including the validity of the methodology and assumptions used; (3) ways to enhance the quality, utility and clarity of the information to be collected; and (4) ways to minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

Comments regarding these information collections are best assured of having their full effect if received by June 21, 2022. Written comments and recommendations for the proposed information collection should be submitted, identified by docket number 0535–0264, within 30 days of the publication of this notice by any of the following methods:

- *Email: ombofficer@nass.usda.gov.* Include docket number above in the subject line of the message.
- *E-fax:* 855–838–6382.
- *Mail:* Mail any paper, disk, or CD–ROM submissions to: Richard Hopper, NASS Clearance Officer, U.S. Department of Agriculture, Room 5336 South Building, 1400 Independence Avenue SW, Washington, DC 20250–2024.
- *Hand Delivery/Courier:* Hand deliver to: Richard Hopper, NASS Clearance Officer, U.S. Department of Agriculture, Room 5336 South Building, 1400 Independence Avenue SW, Washington, DC 20250–2024.

An agency may not conduct or sponsor a collection of information unless the collection of information displays a currently valid OMB control number and the agency informs potential persons who are to respond to the collection of information that such persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.

National Agricultural Statistics Service (NASS)

Title: California Irrigation Survey—July 2022.

OMB Control Number: 0535–0264.

Summary of Collection: The primary objectives of the National Agricultural Statistics Service (NASS) are to prepare and issue official State and national estimates of crop and livestock production, disposition and prices, economic statistics, and environmental statistics related to agriculture and to conduct the Census of Agriculture and its follow-on surveys. NASS will conduct a survey of operations with field crops, fruits, nuts, berries, vegetables and horticulture commodities.

Selected operators in California will be asked to provide data on irrigation water source, irrigation water management, as well as irrigation method (acres and irrigation source) for crops.

General authority for these data collection activities is granted under U.S.C. Title 7, Section 2204. This survey will be conducted on a full cost recovery basis with the California Department of Water Resources (DWR) providing funding under a cooperative agreement.

Need and Use of the Information: The California Department of Water Resources' (DWR) website (*https://water.ca.gov/*) mentions DWR manages California's water resources, systems, and infrastructure. Part of its responsibilities and duties include (1) Informing and educating the public on water issues, (2) Planning for future water needs, climate change impacts, and flood protection, (3) Constructing and maintaining facilities, (4) Ensuring public safety, and (5) Providing recreational opportunities.

The information collected from this and previous surveys (1991, 2001, 2010, and 2017) will be widely used to meet the responsibilities of DRW, plan for future energy needs, and to help water districts with long-term planning.

Description of Respondents: Agricultural operations in California with field crops, fruits, nuts, berries, vegetables and horticulture commodities.

Number of Respondents: 20,000.

Frequency of Responses: Reporting: One a year.

Total Burden Hours: 8,033.

Levi Harrell,

Departmental Information Collection Clearance Officer.

[FR Doc. 2022–10768 Filed 5–18–22; 8:45 am]

BILLING CODE 3410–20–P

COMMISSION ON CIVIL RIGHTS

Notice of Public Meeting of the Florida Advisory Committee to the U.S. Commission on Civil Rights

AGENCY: U.S. Commission on Civil Rights.

ACTION: Announcement of virtual business meeting.

SUMMARY: Notice is hereby given, pursuant to the provisions of the rules and regulations of the U.S. Commission on Civil Rights (Commission) and the Federal Advisory Committee Act, that the Florida Advisory Committee (Committee) to the U.S. Commission on Civil Rights will hold a virtual business meeting via Webex at 3:00 p.m. ET on Wednesday, June 8, 2022. The purpose of the meeting is to debrief the web briefing on April 29, 2022.

DATES: The meeting will take place on Wednesday, June 8, 2022, from 3:00 p.m.–4:00 p.m. ET.

ADDRESSES:

Link to Join (Audio/Visual): https://tinyurl.com/4s9pfymf.

Telephone (Audio Only): Dial (800) 360–9505 USA Toll Free; Access code: 2760 881 8806.

FOR FURTHER INFORMATION CONTACT: Melissa Wojnaroski, DFO, at *mwojnaroski@usccr.gov* or (202) 618–4158.

SUPPLEMENTARY INFORMATION: Committee meetings are available to the public through the conference link above. Any interested member of the public may listen to the meeting. An open comment period will be provided to allow members of the public to make a statement as time allows. If joining via phone, callers can expect to incur regular charges for calls they initiate over wireless lines, according to their wireless plan. The Commission will not refund any incurred charges. Individuals who are deaf, deafblind, and hard of hearing may also follow the proceedings by first calling the Federal Relay Service at (800) 877–8339 and providing the Service with the conference details found through registering at the web link above. To request additional accommodations, please email *mwojnaroski@usccr.gov* at least seven (7) business days prior to the meeting.

Members of the public are also entitled to submit written comments; the comments must be received in the regional office within 30 days following the meeting. Written comments may be emailed to Liliana Schiller at *lschiller@usccr.gov.* Persons who desire additional information may contact the Regional Programs Coordination Unit at (202) 809–9618.

Records generated from this meeting may be inspected and reproduced at the Regional Programs Coordination Unit, as they become available, both before and after the meeting. Records of the meeting will be available via *www.facadatabase.gov* under the Commission on Civil Rights, Florida Advisory Committee link. Persons interested in the work of this Committee are directed to the Commission's website, *http://www.usccr.gov,* or may contact the Regional Programs

Coordination Unit at the above phone number.

Agenda

I. Welcome & Roll Call
II. Discussion: Panel Debrief
III. Public Comment
IV. Next Steps
V. Adjournment

Dated: Friday, May 13, 2022.

David Mussatt,

Supervisory Chief, Regional Programs Unit.

[FR Doc. 2022–10729 Filed 5–18–22; 8:45 am]

BILLING CODE P

DEPARTMENT OF COMMERCE

Foreign-Trade Zones Board

[B–19–2022]

Foreign-Trade Zone (FTZ) 7—Mayaguez, Puerto Rico, Notification of Proposed Production Activity, AbbVie Ltd., (Pharmaceutical Products), Barceloneta, Puerto Rico

AbbVie Ltd., submitted a notification of proposed production activity to the FTZ Board (the Board) for its facility in Barceloneta, Puerto Rico within Subzone 7I. The notification conforming to the requirements of the Board's regulations (15 CFR 400.22) was received on May 13, 2022.

Pursuant to 15 CFR 400.14(b), FTZ production activity would be limited to the specific foreign-status material and specific finished product described in the submitted notification (summarized below) and subsequently authorized by the Board. The benefits that may stem from conducting production activity under FTZ procedures are explained in the background section of the Board's website—accessible via *www.trade.gov/ftz.* The proposed finished product and material would be added to the production authority that the Board previously approved for the operation, as reflected on the Board's website.

The proposed finished product is venetoclax film coated tablets (duty-free).

The proposed foreign-status material is venetoclax active pharmaceutical ingredient (duty rate 6.5%).

Public comment is invited from interested parties. Submissions shall be addressed to the Board's Executive Secretary and sent to: *ftz@trade.gov.* The closing period for their receipt is June 28, 2022.

A copy of the notification will be available for public inspection in the ''Online FTZ Information System'' section of the Board's website.

For further information, contact Christopher Wedderburn at *Chris.Wedderburn@trade.gov.*

Dated: May 13, 2022.

Elizabeth Whiteman,

Acting Executive Secretary.

[FR Doc. 2022–10746 Filed 5–18–22; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

International Trade Administration

[A–570–141, C–570–142]

Certain Walk-Behind Snow Throwers and Parts Thereof From the People's Republic of China: Antidumping Duty and Countervailing Duty Orders

AGENCY: Enforcement and Compliance, International Trade Administration, Department of Commerce.

SUMMARY: Based on affirmative final determinations by the U.S. Department of Commerce (Commerce) and the U.S. International Trade Commission (ITC), Commerce is issuing antidumping duty (AD) and countervailing duty (CVD) orders on certain walk-behind snow throwers and parts thereof (snow throwers) from the People's Republic of China (China).

DATES: Applicable May 19, 2022.

FOR FURTHER INFORMATION CONTACT: Laurel LaCivita (AD) and Joy Zhang (CVD), AD/CVD Operations, Office III, Enforcement and Compliance, U.S. Department of Commerce, 1401 Constitution Avenue NW, Washington, DC 20230; telephone: (202) 482–5848 or 202–482–1168, respectively.

SUPPLEMENTARY INFORMATION:

Background

In accordance with sections 705(d) and 735(d) of the Tariff Act of 1930, as amended (the Act), on March 29, 2022, Commerce published its affirmative final determination of sales at less than fair value (LTFV) and its affirmative final determination that countervailable subsidies are being provided to producers and exporters of snow throwers from China.[1]

On May 11, 2022, pursuant to sections 705(d) and 735(d) of the Act, the ITC notified Commerce of its final affirmative determinations that an industry in the United States is materially injured by reason of LTFV imports and subsidized imports of snow throwers from China, within the meaning of sections 705(b)(1)(A)(i) and 735(b)(1)(A)(i) of the Act.[2]

Scope of the Orders

The products covered by these orders are snow throwers from China. For a full description of the scope of the orders, *see* the appendix to this notice.

AD Order

As stated above, on May 11, 2022, in accordance with section 735(d) of the Act, the ITC notified Commerce of its final determination that an industry in the United States is materially injured within the meaning of section 735(b)(1)(A)(i) of the Act by reason of imports of snow throwers from China that are sold in the United States at LTFV.[3] Therefore, in accordance with section 735(c)(2) of the Act, we are issuing this AD order. Because the ITC determined that imports of snow throwers from China are materially injuring a U.S. industry, unliquidated entries of such merchandise from China entered, or withdrawn from warehouse, for consumption are subject to the assessment of antidumping duties.

Therefore, in accordance with section 736(a)(1) of the Act, Commerce intends to direct U.S. Customs and Border Protection (CBP) to assess, upon further instruction by Commerce, antidumping duties equal to the amount by which the normal value of the merchandise exceeds the export price (or constructed export price) of the merchandise for all relevant entries of snow throwers from China. Antidumping duties will be assessed on unliquidated entries of snow throwers from China entered, or withdrawn from warehouse, for consumption on or after November 5, 2021, the date of publication of the *AD Preliminary Determination,* but will not include entries occurring after the expiration of the provisional measures period and before publication of the ITC's final injury determination, as further described below.[4]

Continuation of Suspension of Liquidation—AD

Except as noted in the ''Provisional Measures—AD'' section of this notice, in accordance with section 735(c)(1)(B)

[1] *See Certain Walk-Behind Snow Throwers from the People's Republic of China: Final Affirmative Determination of Sales at Less Than Fair Value,* 87 FR 17984 (March 29, 2022); *see also Certain Walk-Behind Snow Throwers from the People's Republic of China: Final Affirmative Countervailing Duty Determination,* 87 FR 17987 (March 29, 2022).

[2] *See* ITC's Letter, ''Notification of ITC Final Determinations,'' dated May 11, 2022 (ITC Notification Letter).

[3] *Id.*

[4] *See Certain Walk-Behind Snow Throwers from the People's Republic of China: Preliminary Affirmative Determination of Sales at Less Than Fair Value, Postponement of the Final Determination and Extension of Provisional Measures,* 86 FR 61135 (November 5, 2021) (*AD Preliminary Determination*).

of the Act, Commerce intends to instruct CBP to continue to suspend liquidation on all relevant entries of snow throwers from China. These instructions suspending liquidation will remain in effect until further notice.

Commerce also intends to instruct CBP to require cash deposits equal to the estimated weighted-average dumping margins indicated in the table below, adjusted by the relevant subsidy offsets. Accordingly, effective on the date of publication in the **Federal Register** of the notice of the ITC's final affirmative injury determination, CBP must require, at the same time as importers would normally deposit estimated customs duties on subject merchandise, a cash deposit equal to the rates listed in the table below.

Estimated Weighted-Average Dumping Margins

The estimated weighted-average dumping margins are as follows:

Exporter	Producer	Estimated weighted-average dumping margin (percent)	Cash deposit rate (adjusted for subsidy offsets) (percent)
Zhejiang Zhouli Industrial Co., Ltd	Zhejiang Zhouli Industrial Co., Ltd	163.27	142.19
Ningbo Scojet Import & Export Trade Co., Ltd	Ninghai Yiyi Garden Tools Co., Ltd	163.27	142.19
Sumec Hardware and Tools Co., Ltd	Zhejiang KC Mechanical & Electrical Co., Ltd	163.27	142.19
Zhejiang Amerisun Technology Co., Ltd	Zhejiang Dobest Power Tools Co., Ltd	169.27	142.19
Zhejiang KC Mechanical & Electrical Co., Ltd	Zhejiang KC Mechanical & Electrical Co., Ltd	169.27	142.19
China-Wide Entity		223.07	201.99

Provisional Measures—AD

Section 733(d) of the Act states that suspension of liquidation pursuant to an affirmative preliminary determination may not remain in effect for more than four months, except where exporters representing a significant proportion of exports of the subject merchandise request that Commerce extend the four-month period to no more than six months. At the request of exporters that account for a significant proportion of snow throwers from China, Commerce extended the four-month period to six months in this AD investigation. Commerce published the *AD Preliminary Determination* on November 5, 2021.[5]

The extended provisional measures period, beginning on the date of publication of the *AD Preliminary Determination,* ended on May 3, 2022. Therefore, in accordance with section 733(d) of the Act and our practice, Commerce will instruct CBP to terminate the suspension of liquidation and to liquidate, without regard to antidumping duties, unliquidated entries of snow throwers from China entered, or withdrawn from warehouse, for consumption after May 3, 2022, the final day on which the provisional measures were in effect, until and through the day preceding the date of publication of the ITC's final affirmative injury determination in the **Federal Register**. Suspension of liquidation and the collection of cash deposits will resume on the date of publication of the ITC's final determination in the **Federal Register**.

CVD Order

As stated above, on May 11, 2022, in accordance with section 705(d) of the Act, the ITC notified Commerce of its final determination that the industry in the United States is materially injured within the meaning of section 705(b)(1)(A)(i) of the Act by reason of subsidized imports of snow throwers from China.[6] Therefore, in accordance with section 705(c)(2) of the Act, Commerce is issuing this CVD order. Because the ITC determined that imports of snow throwers from China are materially injuring a U.S. industry, unliquidated entries of subject merchandise from China entered, or withdrawn from warehouse, for consumption, are subject to the assessment of countervailing duties.

Therefore, in accordance with section 706(a) of the Act, Commerce intends to direct CBP to assess, upon further instruction by Commerce, countervailing duties for all relevant entries of snow throwers from China, which are entered, or withdrawn from warehouse, for consumption on or after September 10, 2021, the date of publication of the *CVD Preliminary Determination,* but will not include entries occurring after the expiration of the provisional measures period and before the publication of the ITC's final injury determination under section 705(b) of the Act, as further described in the ''Provisional Measures—CVD'' section of this notice.[7]

Suspension of Liquidation and Cash Deposits—CVD

In accordance with section 706 of the Act, Commerce intends to instruct CBP to reinstitute the suspension of liquidation of snow throwers from China, effective on the date of publication of the ITC's final affirmative injury determination in the **Federal Register**, and to assess, upon further instruction by Commerce, pursuant to section 706(a)(1) of the Act, countervailing duties for each entry of subject merchandise in an amount based on the net countervailable subsidy rates below. On or after the date of publication of the ITC's final injury determination in the **Federal Register**, CBP must require, at the same time as importers would normally deposit estimated customs duties on this merchandise, a cash deposit equal to the rates listed in the table below. These instructions suspending liquidation will remain in effect until further notice. The all-others rate applies to all producers or exporters not specifically listed below, as appropriate:

Company	Subsidy rate (percent)
Zhejiang Zhouli Industrial Co	203.06
Changzhou Globe Tools Co., Ltd	203.06
Nanjing Chervon Industry Co., Ltd	203.06
Ningbo Daye Garden Machinery Co., Ltd	203.06
Ningbo Joyo Garden Machinery Co., Ltd	203.06
Ningbo Scojet Import & Export Trading	203.06
TIYA International Co., Ltd	203.06
Weima Agricultural Machinery Co., Ltd	203.06
Zhejiang Yat Electrical Appliance Co	203.06
All Others	203.06

Provisional Measures—CVD

Section 703(d) of the Act states that the suspension of liquidation pursuant to an affirmative preliminary determination may not remain in effect

[5] *See AD Preliminary Determination.*

[6] *See* ITC Notification Letter.

[7] *See Certain Walk-Behind Snow Throwers and Parts Thereof from the People's Republic of China: Preliminary Affirmative Countervailing Duty Determination and Alignment of Final Determination with Final Antidumping Determination,* 86 FR 50696 (September 10, 2021) (*CVD Preliminary Determination*).

for more than four months. Commerce published the *CVD Preliminary Determination* on September 10, 2021.[8] As such, the four-month period beginning on the date of the publication of the *CVD Preliminary Determination* ended on January 7, 2022.

Therefore, in accordance with section 703(d) of the Act, we instructed CBP to terminate the suspension of liquidation and to liquidate, without regard to countervailing duties, unliquidated entries of snow throwers from China entered, or withdrawn from warehouse, for consumption, on or after January 7, 2022, the date on which the provisional measures expired, until and through the day preceding the date of publication of the ITC's final injury determination in the **Federal Register**. Suspension of liquidation will resume on the date of publication of the ITC's final determination in the **Federal Register**.

Notification to Interested Parties

This notice constitutes the AD and CVD orders with respect to snow throwers from China pursuant to sections 706(a) and 736(a) of the Act. Interested parties can find a list of orders currently in effect at *https://enforcement.trade.gov/stats/iastats1.html.*

These orders are published in accordance with sections 706(a) and 736(a) of the Act and 19 CFR 351.211(b).

Dated: May 13, 2022.

Lisa W. Wang,

Assistant Secretary for Enforcement and Compliance.

Appendix—Scope of the Orders

The merchandise covered by these orders consists of gas-powered, walk-behind snow throwers (also known as snow blowers), which are snow moving machines that are powered by internal combustion engines and primarily pedestrian-controlled. The scope of these orders covers certain snow throwers (also known as snow blowers), whether self-propelled or non-self-propelled, whether finished or unfinished, whether assembled or unassembled, and whether containing any additional features that provide for functions in addition to snow throwing. Subject merchandise also includes finished and unfinished snow throwers that are further processed in a third country or in the United States, including, but not limited to, assembly or any other processing that would not otherwise remove the merchandise from the scope of these orders if performed in the country of manufacture of the in-scope snow throwers.

Walk-behind snow throwers subject to the scope of these orders are powered by internal combustion engines which are typically spark ignition, single or multiple cylinder, and air-cooled with power take off shafts.

For the purposes of these orders, an unfinished and/or unassembled snow thrower means at a minimum, a subassembly comprised of an engine, auger housing (*i.e.,* intake frame), and an auger (or ''auger paddle'') packaged or imported together. An intake frame is the portion of the snow thrower—typically of aluminum or steel that houses and protects an operator from a rotating auger and is the intake point for the snow. Importation of the subassembly whether or not accompanied by, or attached to, additional components including, but not limited to, handle(s), impeller(s), chute(s), track tread(s), or wheel(s) constitutes an unfinished snow thrower for purposes of these orders. The inclusion in a third country of any components other than the snow thrower sub-assembly does not remove the snow thrower from the scope. A snow thrower is within the scope of these orders regardless of the origin of its engine.

Specifically excluded is merchandise covered by the scope of the antidumping and countervailing duty orders on certain vertical shaft engines between 225cc and 999cc, and parts thereof from the People's Republic of China. *See Certain Vertical Shaft Engines Between 225cc and 999cc, and Parts Thereof, from the People's Republic of China: Amended Final Antidumping Duty Determination and Antidumping Duty Order,* 86 FR 12623 (March 4, 2021); and *Certain Vertical Shaft Engines Between 225cc and 999cc, and Parts Thereof from the People's Republic of China: Countervailing Duty Order and Amended Final Affirmative Countervailing Duty Determination,* 86 FR 12619 (March 4, 2021).

Also specifically excluded is merchandise covered by the scope of the antidumping and countervailing duty orders on certain vertical shaft engines between 99cc and Up to 225cc, and parts thereof from the People's Republic of China. *See Certain Vertical Shaft Engines Between 99cc and Up to 225cc, and Parts Thereof from the People's Republic of China: Antidumping and Countervailing Duty Orders,* 86 FR 023675 (May 4, 2021).

The snow throwers subject to these orders are typically entered under Harmonized Tariff Schedule of the United States (HTSUS) subheading 8430.20.0060. Certain parts of snow throwers subject to these orders may also enter under HTSUS 8431.49.9095. The HTSUS subheadings are provided for convenience and customs purposes only, and the written description of the merchandise under these orders is dispositive.

[FR Doc. 2022–10789 Filed 5–18–22; 8:45 am]

BILLING CODE 3510–DS–P

[8] *Id.*

DEPARTMENT OF COMMERCE

International Trade Administration

[Docket No. 220509–0112]

RIN 0625–XC047

Developing a Framework on Competitiveness of Digital Asset Technologies

AGENCY: International Trade Administration, Department of Commerce.

ACTION: Notice; request for comment.

SUMMARY: Executive Order of March 9, 2022, ''Ensuring Responsible Development of Digital Assets'', outlines U.S. policy objectives with respect to digital assets. The Executive Order directs the Secretary of Commerce, in consultation with the Secretary of State, the Secretary of the Treasury, and the heads of any other relevant agencies, to establish a framework for enhancing U.S. economic competitiveness in, and leveraging of, digital asset technologies. Through this Request for Comment (RFC), the Department of Commerce (Commerce) is requesting input from the public that will inform the development of the framework.

DATES: Written comments must be received on or before 5 p.m. Eastern Time on July 5, 2022.

ADDRESSES: Written comments may be submitted in response to this document by comment through *www.regulations.gov* on Docket ITA–2022–0003 or by email to *DigitalAssets@trade.gov.*

Instructions: Commerce invites comments on the full range of issues presented in this Notice, including issues that are not specifically raised in questions in this Notice. Comments submitted by email should be machine-readable and should not be copy-protected. Commenters should include the name of the person or organization filing the comment, which will facilitate agency follow-up for clarifications as necessary, as well as a page number on each page of their submissions. All comments received are a part of the public record and will be posted on *www.regulations.gov* without change. All personal identifying information (for example, name, address) voluntarily submitted by the commenter may be publicly accessible. Comments should not include any business confidential or other sensitive or protected information.

FOR FURTHER INFORMATION CONTACT: Please direct questions regarding this Notice to Vincent Tran, International Trade Specialist, telephone: 202–482–2967, email: *DigitalAssets@trade.gov,*

indicating ''Notice and Request for Comment'' in the subject line, or, if by mail, addressed to International Trade Administration, U.S. Department of Commerce, 1401 Constitution Avenue NW, Washington, DC 20230. Please direct media inquiries to ITA's Office of Public Affairs, *publicaffairs@trade.gov* or (202) 482–3809.

SUPPLEMENTARY INFORMATION:

I. Background

Executive Order 14067 of March 9, 2022, ''Ensuring Responsible Development of Digital Assets'' (hereafter ''Executive Order'') (87 FR 14143; March 14, 2022), outlines U.S. policy objectives with respect to digital assets,[1] including but not limited to protecting consumers, investors, and businesses; mitigating systemic financial risk; mitigating the illicit finance and national security risks posed by misuse of digital assets; and supporting technological advancements that promote responsible development and use of digital assets. The Executive Order outlines the Federal government's approach to the development of the U.S. digital assets sector. Section 2 of the Executive Order provides six principle policy objectives for digital assets: (a) Protection of consumers, investors, and businesses in the United States; (b) protection of United States and global financial stability and the mitigation of systemic risk; (c) mitigation of illicit finance and national security risks posed by misuse of digital assets; (d) reinforcement of U.S. leadership in the global financial system and in technological and economic competitiveness, including through the responsible development of payment innovations and digital assets; (e) promotion of access to safe and affordable financial services; and (f) support of technological advances that promote responsible development and use of digital assets.

Section 8(a) provides the Administration's policy on fostering international cooperation and United States competitiveness with respect to digital assets and financial innovation. Among other items, Section 8(a) notes that (i) technology-driven financial innovation is frequently cross-border and requires coordination among public authorities, particularly with respect to maintaining high regulatory standards; (ii) the United States government has been active in international fora on issues related to technology-driven financial innovation, including at the Financial Action Task Force (FATF); (iii) the U.S. presidency of the 2020 G7 saw the establishment of the G7 Digital Payment Experts Group to discuss CBDCs, stablecoins, and other digital payment issues; (iv) the United States continues to support the G20 roadmap for addressing challenges and frictions with cross-border funds transfers and payments; and (v) the Biden-Harris Administration will elevate the importance of these topics and expand engagement with critical international partners, including through fora such as the G7, G20, FATF, and Financial Stability Board. United States engagement will focus on respect for core democratic values, protection of consumers, investors, and businesses, preservation of global financial system connectivity and platform interoperability, and maintenance of the safety and soundness of the global financial system and international monetary system.

Section 8(b)(iii) of the Executive Order directs the Secretary of Commerce, in consultation with the Secretary of State, the Secretary of the Treasury, and the heads of any other relevant agencies, to (within 180 days of the date of the Executive Order) establish a framework for enhancing U.S. economic competitiveness in, and leveraging of, digital asset technologies. Through this RFC, Commerce is requesting input from the public that will inform Commerce's work in developing the scope of the framework, in consultation with the Secretary of State, the Secretary of the Treasury, and the heads of other relevant agencies.

II. Objective of this RFC

This RFC offers an opportunity for all interested parties to provide relevant input and recommendations for consideration in Commerce's development of the economic competitiveness framework as directed by Section 8(b)(iii) of the Executive Order.

III. Request for Comments

Commerce welcomes input on any matter that commenters believe is relevant to Commerce's development of the framework for enhancing U.S. economic competitiveness in, and leveraging of, digital asset technologies, pursuant to Section 8(b)(iii) of the Executive Order. Commenters are encouraged to address any or all of the following questions, or to provide any other comments relevant to the development of the framework. When responding to one or more of the questions below, please note in your response the number(s) of the questions you are responding to.

Commerce also seeks public comment on the following questions.

Competitiveness

(1) What are the features of U.S.-based digital asset businesses (*e.g.,* administrators, operators, validators, and other key stakeholder roles in the function of digital assets as well as the exchanges, brokers, and custodians used to trade and store them) that currently underpin their competitiveness in a global market? Will these features support future competitiveness?

(2) What obstacles do U.S. digital asset businesses face when competing globally? How have these obstacles changed over the past five years and are any anticipated to disappear? Are there clearly foreseeable new obstacles that they will face in the future? What steps could the U.S. government take to remove, minimize, or forestall any obstacles?

(3) How does the current U.S. regulatory landscape affect U.S. digital asset businesses' global competitiveness? Are there future regulatory shifts that could support greater global competitiveness of U.S. digital asset businesses? How does the U.S. regulatory landscape for digital assets compare to that in finance or other comparable sectors?

(4) What are the primary challenges to U.S. technological leadership in the digital assets sector?

(5) What impact, if any, does the global nature of the digital assets sector have on U.S. digital asset businesses' ability to attract and retain talent and maintain leadership in development and operation of digital asset technologies within the United States?

(6) What, if any, is the future role of digital assets mining[2] in the U.S. digital

[1] As defined in the Executive Order, ''digital assets'' refers to ''all [central bank digital currencies (CBDCs)], regardless of the technology used, and to other representations of value, financial assets and instruments, or claims that are used to make payments or investments, or to transmit or exchange funds or the equivalent thereof, that are issued or represented in digital form through the use of distributed ledger technology. For example, digital assets include cryptocurrencies, stablecoins, and CBDCs. Regardless of the label used, a digital asset may be, among other things, a security, a commodity, a derivative, or other financial product. Digital assets may be exchanged across digital asset trading platforms, including centralized and decentralized finance platforms, or through peer-to-peer technologies.''

[2] The Organization for Economic Cooperation and Development defines mining as follows: ''For some blockchains, in order to add blocks to the ledger, transfers must go through a mining process. Mining is a way of adding transaction records, via blocks, onto a public ledger. Miners are nodes in the network that ensure the transactions in the block are valid. Specifically, they ensure that senders have not already used the funds they want to send to receivers. Once miners finish the verification, they have to ask the network for consent to add the

Continued

assets sector? Can digital assets be compatible with a low-carbon economy that emphasizes renewable energy? If so, how? In what ways can the U.S. government and U.S. companies drive competitive, *sustainable* (for the environment and energy consumption) development of digital assets?

(7) What impact, if any, will global deployment of central bank digital currencies (CBDC) have on the U.S. digital assets sector? To what extent would the design of a U.S. CBDC (*e.g.,* disintermediated or intermediated, interoperable with other countries' CBDCs and other domestic and international financial services, etc.) impact the sector?

(8) Should digital assets be given specific consideration in trade agreements? If so, to what extent? What types of provisions would be beneficial to the U.S. digital assets sector in the United States? Are there provisions that would be beneficial to U.S. businesses and consumers?

(9) What other factors related to economic competitiveness should Commerce consider in the development of the framework?

(10) Beyond enhanced economic competitiveness, how can the U.S. digital assets sector advance the other objectives outlined in the Executive Order? These other objectives include protection of consumers, investors, and business in the United States; protection of United States and global financial stability and the mitigation of systemic risk; and mitigation of illicit finance and national security risks posed by misuse of digital assets.

(11) By what metrics should we measure the competitiveness of the U.S. digital assets sector in the global market? Are there existing measurements or data against these metrics?

Comparisons to 'Traditional' Financial Services and Financial Inclusion Considerations

(12) What factors and conditions, if any, that have driven and sustained the global leadership of U.S.-based legacy financial institutions will foster the same leadership for U.S. digital asset businesses? If there are no common factors, what factors and conditions will differentiate global competitiveness for U.S. digital asset businesses?

(13) Can digital assets improve international payments (including trade and remittances), and improve on access to trade finance? If so, how? How do digital assets compare to other initiatives in payments such as the Federal Reserve's FedNow?

(14) According to the FDIC's 2019 ''How America Banks'' survey, approximately 94.6 percent (124 million) of U.S. households had at least one bank or credit union account in 2019, while 5.4 percent (7.1 million) of households did not. Can digital assets play a role in increasing these and other underserved Americans' access to safe, affordable, and reliable financial services, and if so, how? What role can the Federal government and the digital assets sector play to ensure that underserved Americans can benefit from the increased commercial availability of digital assets?

Technological Development

(15) To what extent do new standards for digital assets and their underlying technologies need to be maintained or developed, for instance those related to custody, identity, security, privacy, and interoperability? What existing standards are already relevant? How might existing standardization efforts be harmonized to support the responsible development of digital assets?

(16) What new security concerns does increased adoption of digital assets raise? How can the U.S. government collaborate with U.S. digital asset businesses to protect consumers' access to their assets, personal information, and other sensitive data?

(17) To what extent will interoperability between different digital asset networks be important in the future? What risks does a lack of interoperability pose? And what steps, if any, should be taken to encourage interoperability?

Diane Farrell,

Deputy Under Secretary for International Trade.

[FR Doc. 2022–10731 Filed 5–18–22; 8:45 am]

BILLING CODE 3510–DR–P

DEPARTMENT OF COMMERCE

International Trade Administration

[A–351–858, A–791–827]

Certain Lemon Juice From Brazil and the Republic of South Africa: Postponement of Preliminary Determinations in the Less-Than-Fair-Value Investigations

AGENCY: Enforcement and Compliance, International Trade Administration, Department of Commerce.

DATES: Applicable May 19, 2022.

FOR FURTHER INFORMATION CONTACT: Lilit Astvatsatrian and Dakota Potts (Brazil), or Elizabeth Bremer and Zachary Shaykin (the Republic of South Africa (South Africa)), AD/CVD Operations, Office IV, Enforcement and Compliance, International Trade Administration, U.S. Department of Commerce, 1401 Constitution Avenue NW, Washington, DC 20230; telephone: (202) 482–6412, (202) 482–0223, (202) 482–4987, or (202) 482–2638, respectively.

SUPPLEMENTARY INFORMATION:

Background

On January 19, 2022, the U.S. Department of Commerce (Commerce) initiated less-than-fair-value (LTFV) investigations of imports of certain lemon juice (lemon juice) from Brazil and South Africa.[1] Currently, the preliminary determinations are due no later than June 8, 2022.

Postponement of Preliminary Determinations

Section 733(b)(1)(A) of the Tariff Act of 1930, as amended (the Act), requires Commerce to issue the preliminary determination in an LTFV investigation within 140 days after the date on which Commerce initiated the investigation. However, section 733(c)(1)(A)(b)(1) of the Act permits Commerce to postpone the preliminary determination until no later than 190 days after the date on which Commerce initiated the investigation if: (A) The petitioner makes a timely request for a postponement; or (B) Commerce concludes that the parties concerned are cooperating, that the investigation is extraordinarily complicated, and that additional time is necessary to make a preliminary determination. Under 19 CFR 351.205(e), the petitioner must submit a request for postponement 25 days or more before the scheduled date of the preliminary determination and must state the reasons for the request. Commerce will grant the request unless it finds compelling reasons to deny the request.

On May 10, 2022, Ventura Coastal, LLC (the petitioner) submitted a timely request that Commerce postpone the preliminary determinations in these LTFV investigations.[2] The petitioner stated that it requests postponement because Commerce has not yet received complete responses to the supplemental questionnaires it issued to respondents,

new block to the ledger. In order to do so, they have to follow the consensus mechanisms chosen for the platform.'' *OECD Blockchain Primer*

[1] *See Lemon Juice From Brazil and South Africa: Initiation of Less-Than-Fair-Value Investigations,* 87 FR 3768 (January 25, 2022).

[2] *See* Petitioner's Letter, ''Lemon Juice from Brazil and South Africa: Petitioner's Request for Postponement of Preliminary Determination,'' dated May 10, 2022.

and a postponement will ensure that Commerce has sufficient time to review all questionnaire responses and obtain clarification or additional information before determining the magnitude of dumping during the periods of investigation.[3]

For the reasons stated above and because there are no compelling reasons to deny the request, Commerce, in accordance with section 733(c)(1)(A) of the Act and 19 CFR 351.205(e), is postponing the deadline for the preliminary determinations by 50 days (*i.e.,* 190 days after the date on which these investigations were initiated). As a result, Commerce will issue its preliminary determinations no later than July 28, 2022. In accordance with section 735(a)(1) of the Act and 19 CFR 351.210(b)(1), the deadline for the final determinations of these investigations will continue to be 75 days after the date of the preliminary determinations, unless postponed at a later date.

This notice is issued and published pursuant to section 733(c)(2) of the Act and 19 CFR 351.205(f)(1).

Dated: May 13, 2022.

Lisa W. Wang,

Assistant Secretary for Enforcement and Compliance.

[FR Doc. 2022–10788 Filed 5–18–22; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

International Trade Administration

[A–489–501]

Circular Welded Carbon Steel Standard Pipe and Tube Products From Turkey: Correction to the Initiation Notice of the 2020–2021 Antidumping Duty Administrative Review

AGENCY: Enforcement and Compliance, International Trade Administration, Department of Commerce.

DATES: Applicable May 19, 2022.

FOR FURTHER INFORMATION CONTACT: Magd Zalok, AD/CVD Operations, Office IV, Enforcement and Compliance, International Trade Administration, U.S. Department of Commerce, 1401 Constitution Avenue NW, Washington, DC 20230; telephone: (202) 482–4162.

SUPPLEMENTARY INFORMATION:

Background

On July 6, 2021, the U.S. Department of Commerce (Commerce) published in the **Federal Register** notice of its initiation of the 2020–2021 administrative review of the antidumping duty order on circular welded carbon steel standard pipe and tube products from Turkey.[1] The period of review is May 1, 2020, through April 30, 2021. Subsequent to the publication of the initiation of this segment of the proceeding in the **Federal Register**, we identified inadvertent errors in the *Initiation Notice:*

- First, Commerce omitted from the *Initiation Notice* the following company for which a review was requested: Kale Baglanti Teknolojileri San. ve Tic. A.S. (Kale Baglanti).[2]
- Second, we inadvertently initiated the review for Borusan Mannesmann Pipe U.S. Inc. (BMP), the affiliated U.S. reseller of the exporter Borusan Mannesmann Boru Sanayi ve Ticaret A.S. (Borusan Mannesmann) for which we also initiated a review.[3]

Commerce is hereby correcting the *Initiation Notice* to address these errors. This correction to the notice of initiation of administrative review is issued and published in accordance with sections 751(a) and 777(i)(1) of the Tariff Act of 1930, as amended.

Dated: May 12, 2022.

Lisa W. Wang,

Assistant Secretary for Enforcement and Compliance.

[FR Doc. 2022–10732 Filed 5–18–22; 8:45 am]

BILLING CODE 3510–DS–P

[1] *See Initiation of Antidumping and Countervailing Duty Administrative Reviews,* 86 FR 35481 (July 6, 2021) (*Initiation Notice*).

[2] *See* Nucor Tubular Product Inc.'s Letter, ''Circular Welded Carbon Steel Pipes and Tubes from Turkey: Request for Administrative Review,'' dated June 1, 2021, in which Nucor Tubular Product Inc. timely requested an administrative review for Kale Baglanti, among other companies). Because Commerce received a timely review request for this company, we now correct the *Initiation Notice* to initiate a review for this company.

[3] BMP was not an exporter or producer of the subject merchandise during the period of this review. It is Borusan Mannesmann's affiliated U.S. reseller. *See, e.g.,* Borusan Mannesmann's Letter, ''Circular Welded Carbon Steel Pipes and Tubes from Turkey, Case No. A–489–501: Request for Antidumping Duty Administrative review,'' dated June 1, 2021, in which Borusan Mannesmann requested an administrative review for itself and its U.S. affiliated reseller, BMP. As a result, we now correct the *Initiation Notice* to remove BMP's name.

[3] *Id.*

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XB896]

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Ocean Wind II Marine Site Characterization Surveys, New Jersey

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; issuance of an incidental harassment authorization.

SUMMARY: In accordance with the regulations implementing the Marine Mammal Protection Act (MMPA) as amended, notification is hereby given that NMFS has issued an IHA to Ocean Wind II, LLC (Ocean Wind II), an affiliate of Orsted Wind Power North America LLC (Orsted), to incidentally harass, by Level B harassment, marine mammals during marine site characterization surveys off New Jersey in and around the area of Commercial Lease of Submerged Lands for Renewable Energy Development on the Outer Continental Shelf Lease Area (OCS)-A 0532. We note that the **Federal Register** notice of proposed IHA (87 FR 14823; March 16, 2022) refers to the applicant as ''Ocean Wind, LLC.'' This was an error on NMFS' part and the correct name (''Ocean Wind II, LLC'') is used herein.

DATES: The Authorization is effective from May 10, 2022 through May 9, 2023.

FOR FURTHER INFORMATION CONTACT: Jaclyn Daly, Office of Protected Resources, NMFS, (301) 427–8401. An electronic copy of the IHA and supporting documents may be obtained online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-other-energy-activities-renewable.* In case of problems accessing these documents, please call the contact listed above.

SUPPLEMENTARY INFORMATION:

Background

The MMPA prohibits the ''take'' of marine mammals, with certain exceptions. Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce (as delegated to NMFS) to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than

commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed incidental take authorization may be provided to the public for review.

Authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s) and will not have an unmitigable adverse impact on the availability of the species or stock(s) for taking for subsistence uses (where relevant). Further, NMFS must prescribe the permissible methods of taking and other ''means of effecting the least practicable adverse impact'' on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of the species or stocks for taking for certain subsistence uses (referred to in shorthand as ''mitigation''); and requirements pertaining to the mitigation, monitoring and reporting of the takings are set forth. The definitions of all applicable MMPA statutory terms cited above are included in the relevant sections below.

Summary of Request

On October 1, 2021, NMFS received a request from Ocean Wind II for an IHA to take marine mammals incidental to marine site characterization surveys off of New Jersey in the area of Commercial Lease of Submerged Lands for Renewable Energy Development on the Outer Continental Shelf Lease Area OCS–A 0532 (Lease Area) and potential export cable routes (ECRs) to landfall locations in New Jersey. Following NMFS review of the draft application, a revised version was submitted on November 24, 2021 and again on January 24, 2022. The January 2022 revised version was deemed adequate and complete on February 8, 2022. Ocean Wind II's request is for take of 16 species of marine mammals, by Level B harassment only. Neither Ocean Wind II nor NMFS expects serious injury or mortality to result from this activity and, therefore, an IHA is appropriate.

NMFS previously issued an IHA to Ocean Wind, LLC (Ocean Wind) for similar work in the same general geographic area on June 8, 2017 (82 FR 31562; July 7, 2017) with effective dates from June 8, 2017, through June 7, 2018 and on May 10, 2021 (86 FR 26465, May 14, 2021) with effective dates from May 10, 2021 through May 9, 2022. Ocean Wind complied with all the requirements (*e.g.,* mitigation, monitoring, and reporting) of the 2017–2018 IHA. Because Ocean Wind's current IHA is still effective, we have not yet received the associated monitoring report. Please note that Ocean Wind and Ocean Wind II are both affiliates of Orsted Wind Power North America LLC, with operations occurring in the same general area.

This IHA for Ocean Wind II is effective May 10, 2022 through May 9, 2023. There are no changes from the proposed IHA to the final IHA.

Description of Proposed Activity

Overview

As part of its overall marine site characterization survey operations, Ocean Wind II proposes to conduct high-resolution geophysical (HRG) surveys in the Lease Area and along potential ECRs to landfall locations in New Jersey.

The purpose of the marine site characterization surveys are to obtain an assessment of seabed (geophysical, geotechnical, and geohazard), ecological, and archeological conditions within the footprint of a planned offshore wind facility development area. Surveys are also conducted to support engineering design and to map unexploded ordnance. Underwater sound resulting from Ocean Wind II's proposed site characterization survey activities, specifically HRG surveys, has the potential to result in incidental take of marine mammals in the form of Level B behavioral harassment.

Dates and Duration

Site characterization surveys considered under this application are expected to occur between May 10, 2022 and May 9, 2023 with a total of 275 survey days. A survey day is defined here as a 24-hour activity period. The number of anticipated survey days was calculated as the number of days needed to reach the overall level of effort required to meet survey objectives assuming any single vessel covers, on average, 70 line km per 24 hours of operations.

Specific Geographic Region

The proposed survey activities will occur within the Project Area which includes the Lease Area and potential ECRs, as shown in Figure 1. The Lease Area is approximately 343.8 square kilometers (km^2) and is within the New Jersey wind energy area (WEA) of the Bureau of Ocean Energy Management's Mid-Atlantic planning area. Water depths in the Lease Area range from 15 meters (m) to 35 m, and the potential ECRs extend from the shoreline to approximately 40 m depth.

BILLING CODE 3510–22–P

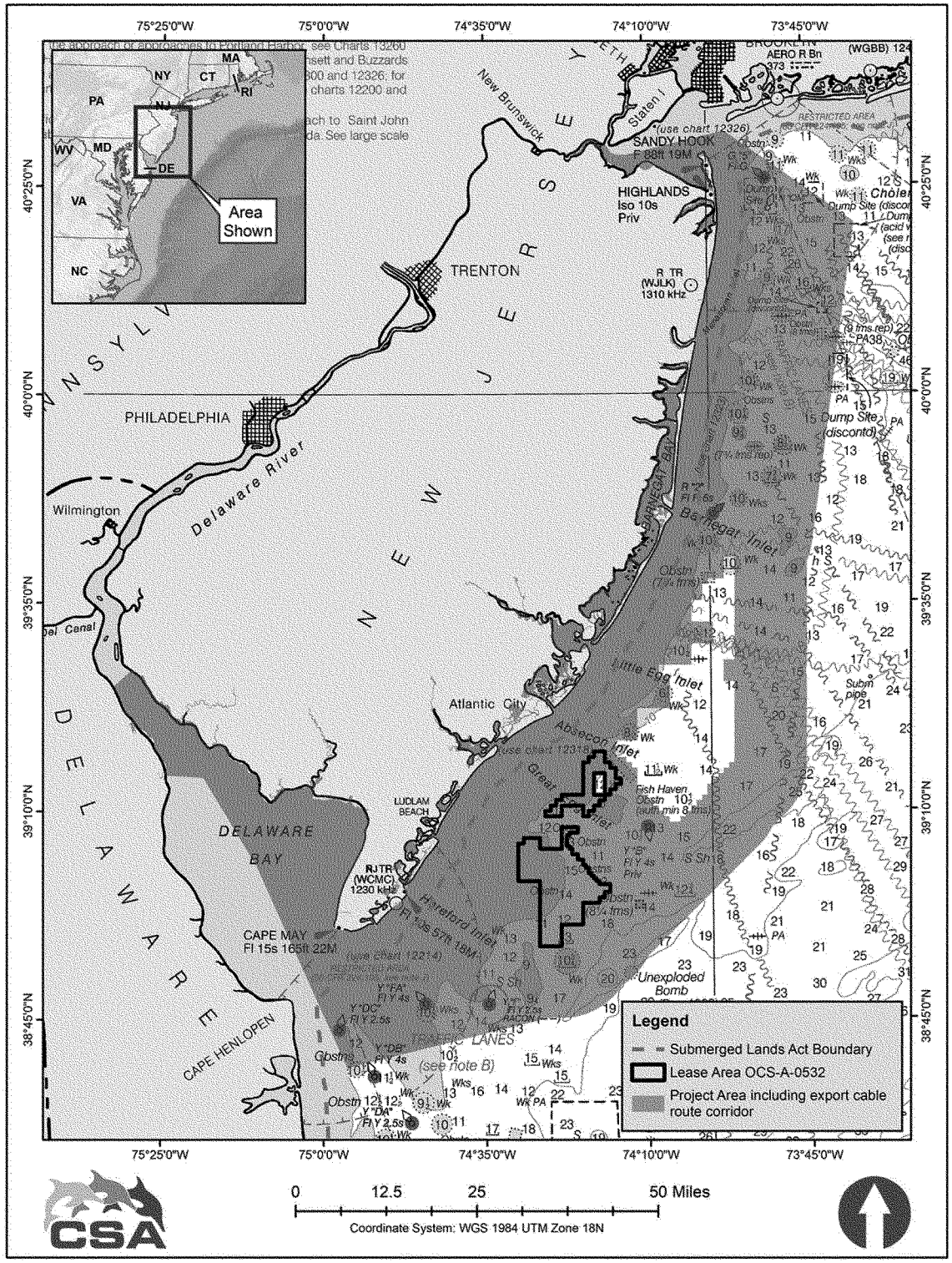


Figure 1—Site Characterization Survey Location, Including the Lease Area and Potential ECRs

BILLING CODE 3510–22–C

Detailed Description of Specific Activity

Ocean Wind II plans to conduct HRG survey operations, including multibeam depth sounding, seafloor imaging, and shallow and medium penetration sub-bottom profiling. The HRG surveys may be conducted using any or all of the following equipment types: Side scan sonar, multibeam echosounder, magnetometers and gradiometers, parametric sub-bottom profiler (SBP), compressed high intensity radar pulse (CHIRP) SBP, boomers, or sparkers.

Ocean Wind II assumes that HRG survey operations would be conducted 24 hours per day, with an assumed daily survey distance of 70 km. Vessels would generally conduct survey effort at a transit speed of approximately 4 knots (kn), which equates to 110 km per 24-hr period. However, based on past survey experience (*i.e.,* knowledge of typical daily downtime due to weather, system malfunctions, etc.) Ocean Wind II assumes 70 km as the average daily distance. On this basis, a total of 275 survey days are expected. In certain shallow-water areas, vessels may conduct survey effort during daylight hours only, with a corresponding assumption that the daily survey distance would be halved (35 km). However, for purposes of analysis all survey days are assumed to cover the maximum 70 km. A maximum of two vessels would operate concurrently in areas where 24-hr operations would be conducted, with an additional third vessel potentially conducting daylight-only survey effort in shallow-water areas.

Acoustic sources planned for use during HRG survey activities proposed by Ocean Wind II include the following:

- Shallow penetration, non-impulsive, non-parametric SBPs (*i.e.,* CHIRP SBPs) are used to map the near-surface stratigraphy (top 0 to 10 m) of sediment below seabed. A CHIRP system emits signals covering a frequency sweep from approximately 2 to 20 kilohertz (kHz) over time. The frequency range can be adjusted to meet project variables. These sources are typically mounted on a pole rather than towed, reducing the likelihood that an animal would be exposed to the signal.
- Medium penetration, impulsive sources (*i.e.,* boomers and sparkers) are used to map deeper subsurface stratigraphy. A boomer is a broadband source operating in the 3.5 Hertz (Hz) to 10 kHz frequency range. Sparkers create omnidirectional acoustic pulses from 50 Hz to 4 kHz. These sources are typically towed behind the vessel.

Operation of the following survey equipment types is not expected to present reasonable risk of marine mammal take, and will not be discussed further beyond the brief summaries provided below.

- Non-impulsive, parametric SBPs are used for providing high data density in sub-bottom profiles that are typically required for cable routes, very shallow water, and archaeological surveys. These sources generate short, very narrow-beam (1° to 3.5°) signals at high frequencies (generally around 85–100 kHz). The narrow beamwidth significantly reduces the potential that a marine mammal could be exposed to the signal, while the high frequency of operation means that the signal is rapidly attenuated in seawater. These sources are typically deployed on a pole rather than towed behind the vessel.
- Acoustic corers are seabed-mounted sources with three distinct sound sources: A high-frequency parametric sonar, a high-frequency CHIRP sonar, and a low-frequency CHIRP sonar. The beamwidth is narrow (3.5° to 8°) and the source is operated roughly 3.5 meter (m) above the seabed with the transducer pointed directly downward.
- Ultra-short baseline (USBL) positioning systems are used to provide high accuracy ranges by measuring the time between the acoustic pulses transmitted by the vessel transceiver and a transponder (or beacon) necessary to produce the acoustic profile. It is a two-component system with a pole-mounted transceiver and one or several transponders mounted on other survey equipment. USBLs are expected to produce extremely small acoustic propagation distances in their typical operating configuration.
- Multibeam echosounders (MBESs) are used to determine water depths and general bottom topography. The proposed MBESs all have operating frequencies >180 kHz and are therefore outside the general hearing range of marine mammals.
- Side scan sonars (SSS) are used for seabed sediment classification purposes and to identify natural and man-made acoustic targets on the seafloor. The proposed SSSs all have operating frequencies >180 kHz and are therefore outside the general hearing range of marine mammals.

Table 1 identifies representative survey equipment with the expected potential to result in exposure of marine mammals and potentially result in take. The make and model of the listed geophysical equipment may vary depending on availability and the final equipment choices will vary depending upon the final survey design, vessel availability, and survey contractor selection.

TABLE 1—SUMMARY OF REPRESENTATIVE HRG EQUIPMENT

Equipment	Operating frequency (kHz)	SL_{rms} (dB re 1 µPa m)	$SL_{0\text{-}pk}$ (dB re 1 µPa m)	Pulse Duration (width) (millisecond)	Repetition rate (Hz)	Beamwidth (degrees)	CF = Crocker and Fratantonio (2016), MAN = manufacturer
Non-parametric shallow penetration SBPs (non-impulsive)							
ET 216 (2000DS or 3200 top unit)	2–16, 2–8	195	-	20	6	24	MAN
ET 424 3200–X	4–24	176	-	3.4	2	71	CF
ET 512i	0.7–12	179	-	9	8	80	CF
GeoPulse 5430A	2–17	196	-	50	10	55	MAN
Teledyne Benthos Chirp III—TTV 170	2–7	197	-	60	15	100	MAN
Pangeo SBI	4.5–12.5	188	-	4.5	45	120	MAN
Medium penetration SBPs (impulsive)							
AA, Dura-spark UHD (400 tips, 500 J) [1]	0.3–1.2	203	211	1.1	4	Omni	CF
AA, Dura-spark UHD Sparker Model 400 × 400 [1]	0.3–1.2	203	211	1.1	4	Omni	CF
GeoMarine, Dual 400 Sparker, Model Geo-Source 800 [1].	0.4–5	203	211	1.1	4	Omni	CF
GeoMarine Sparker, Model Geo-Source 200–400 [1]	0.3–1.2	203	211	1.1	4	Omni	CF
GeoMarine Sparker, Model Geo-Source 200 Lightweight [1].	0.3–1.2	203	211	1.1	4	Omni	CF
AA, triple plate S-Boom (700–1,000 J) [2]	0.1–5	205	211	0.6	4	80	CF

- = not applicable; µPa = micropascal; AA = Applied Acoustics; dB = decibel; ET = EdgeTech; J = joule; Omni = omnidirectional source; re = referenced to; PK = zero-to-peak sound pressure level; SL = source level; SPL = root-mean-square sound pressure level; UHD = ultra-high definition.

[1] The Dura-spark measurements and specifications provided in Crocker and Fratantonio (2016) were used for all sparker systems proposed for the survey. These include variants of the Dura-spark sparker system and various configurations of the GeoMarine Geo-Source sparker system. The data provided in Crocker and Fratantonio (2016) represent the most applicable data for similar sparker systems with comparable operating methods and settings when manufacturer or other reliable measurements are not available.

[2] Crocker and Fratantonio (2016) provide S-Boom measurements using two different power sources (CSP–D700 and CSP–N). The CSP–D700 power source was used in the 700 J measurements but not in the 1,000 J measurements. The CSP–N source was measured for both 700 J and 1,000 J operations but resulted in a lower SL; therefore, the single maximum SL value was used for both operational levels of the S-Boom.

Mitigation, monitoring, and reporting measures are described in detail later in this document (please see Mitigation and Monitoring and Reporting).

Comments and Responses

A notice of NMFS' proposal to issue an IHA to Ocean Wind II was published in the **Federal Register** on March 16, 2022 (87 FR 14823). That proposed notice described, in detail, Ocean Wind II's activities, the marine mammal species that may be affected by the activities, and the anticipated effects on marine mammals. In that notice, we requested public input on the request for authorization described therein, our analyses, the proposed authorization, and any other aspect of the notice of proposed IHA, and requested that interested persons submit relevant information, suggestions, and comments. This proposed notice was available for a 30-day public comment period.

NMFS received 8 comment letters on the proposed IHA; 2 from environmental non-governmental organizations (eNGOs) (Oceana, Inc. and Clean Ocean Action (COA)) and 6 letters from students at the University of New England School of Marine and Environmental Programs. The letters from the students expressed general support for wind farm construction; however, the IHA pertains to site assessment surveys. Hence, construction of the wind farm, and the associated comments, is outside the scope of NMFS' action considered herein. We do not specifically address comments related to impacts on marine mammals or their prey from potential future wind farm construction. Some student letters also suggested changes to the MMPA itself, which is also outside the scope of NMFS' proposed action here. All substantive comments related to the proposed action (*i.e.,* issuance of take associated with Ocean Wind II's site assessment surveys), and NMFS' responses, are provided below, and the letters are available online at: *www.fisheries.noaa.gov/action/incidental-take-authorization-atlantic-shores-offshore-wind-llc-marine-site-0*). Please review the letters for full details regarding the comments and underlying justification.

Comment 1: Oceana made comments objecting to NMFS' renewal process regarding the extension of any one-year IHA with a truncated 15-day public comment period, and suggested an additional 30-day public comment period is necessary for any renewal request.

Response: NMFS' IHA renewal process meets all statutory requirements. In prior responses to comments about IHA renewals (*e.g.,* 84 FR 52464; October 2, 2019 and 85 FR 53342, August 28, 2020), NMFS has explained how the renewal process, as implemented, is consistent with the statutory requirements contained in section 101(a)(5)(D) of the MMPA, and, further, promotes NMFS' goals of improving conservation of marine mammals and increasing efficiency in the MMPA compliance process. Therefore, we intend to continue implementing the renewal process.

The Notice of the proposed IHA published in the **Federal Register** on March 16, 2022 (87 FR 14823) made clear that the agency was seeking comment on the proposed IHA and the potential issuance of a renewal for this survey. Because any renewal is limited to another year of identical or nearly identical activities in the same location or the same activities that were not completed within the 1-year period of the initial IHA, reviewers have the information needed to effectively comment on both the immediate proposed IHA and a possible 1-year renewal, should the IHA holder choose to request one in the coming months.

While there would be additional documents submitted with a renewal request, for a qualifying renewal these would be limited to documentation that NMFS would make available and use to verify that the activities are identical to those in the initial IHA, are nearly identical such that the changes would have either no effect on impacts to marine mammals or decrease those impacts, or are a subset of activities already analyzed and authorized but not completed under the initial IHA. NMFS would also need to confirm, among other things, that the activities would occur in the same location; involve the same species and stocks; provide for continuation of the same mitigation, monitoring, and reporting requirements; and that no new information has been received that would alter the prior analysis. The renewal request would also contain a preliminary monitoring report, in order to verify that effects from the activities do not indicate impacts of a scale or nature not previously analyzed. The additional 15-day public comment period provides the public an opportunity to review these few documents, provide any additional pertinent information and comment on whether they think the criteria for a renewal have been met. Between the initial 30-day comment period on these same activities and the additional 15 days, the total comment period for a renewal is 45 days.

In addition to the IHA renewal process being consistent with all requirements under section 101(a)(5)(D), it is also consistent with Congress' intent for issuance of IHAs to the extent reflected in statements in the legislative history of the MMPA. Through the provision for renewals in the regulations, description of the process and express invitation to comment on specific potential renewals in the Request for Public Comments section of each proposed IHA, the description of the process on NMFS' website, further elaboration on the process through responses to comments such as these, posting of substantive documents on the agency's website, and provision of 30 or 45 days for public review and comment on all proposed initial IHAs and Renewals respectively, NMFS has ensured that the public is ''invited and encouraged to participate fully in the agency's decision-making process'', as Congress intended.

Comment 2: Oceana and COA remarked that NMFS must utilize the best available science. The commenters further suggest that NMFS has not done so, specifically referencing information regarding the North Atlantic right whale (NARW) such as updated population estimates and recent habitat usage patterns in Ocean Wind II's survey area. The commenters specifically asserted that NMFS is not using the best available science with regards to the NARW population estimate and state that NMFS should be using the 336 estimate presented in the recent NARW Report Card (*https://www.narwc.org/report-cards.html*).

Response: While NMFS agrees that the best available science should be used for assessing NARW abundance estimates, we disagree that the NARW Report Card (Pettis et al., 2022) represents the best available estimate for NARW abundance. Rather the revised abundance estimate (368; 95 percent with a confidence interval of 356–378) published by Pace (2021) (and subsequently included in the 2021 draft Stock Assessment Reports (SARs; *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessment-reports*)), which was used in the

proposed IHA, provides the most recent and best available estimate, and introduced improvements to NMFS' NARW abundance model. Specifically, Pace (2021) looked at a different way of characterizing annual estimates of age-specific survival. NMFS considered all relevant information regarding NARW, including the information cited by the commenters. However, NMFS relies on the SAR. Recently (after publication of the notice of proposed IHA), NMFS has updated its species web page to recognize the population estimate for NARWs is now below 350 animals (*https://www.fisheries.noaa.gov/species/north-atlantic-right-whale*). We anticipate that this information will be presented in the draft 2022 SAR. We note that this change in abundance estimate would not change the estimated take of NARWs or authorized take numbers, nor affect our ability to make the required findings under the MMPA for Ocean Wind II's survey activities.

NMFS further notes that the commenters seem to be conflating the phrase ''best available data'' with ''the most recent data.'' The MMPA specifies that the ''best available data'' must be used, which does not always mean the most recent. As is NMFS' prerogative, we referenced the best available NARW abundance estimate of 368 from the draft 2021 SARs as NMFS's determination of the best available data that we relied on in our analysis. The Pace (2021) results strengthened the case for a change in mean survival rates after 2010–2011, but did not significantly change other current estimates (population size, number of new animals, adult female survival) derived from the model. Furthermore, NMFS notes that the SARs are peer reviewed by other scientific review groups prior to being finalized and published and that the North Atlantic Right Whale Report Card (Pettis *et al.,* 2022) does not undertake this process.

The commenters also noted their concern regarding NARW habitat usage, stating that NMFS was not appropriately considering relevant information on this topic. While this survey specifically intersects migratory habitat for NARWs, year-round ''core'' NARW foraging habitat (Oleson *et al.,* 2020) located much further north in the southern area of Martha's Vineyard and Nantucket Islands where both visual and acoustic detections of NARWs indicate a nearly year-round presence (Oleson *et al.,* 2020). NMFS notes that prey for NARWs are mobile and broadly distributed throughout the survey area; therefore, NARW foraging efforts are not likely to be disturbed given the location of these planned activities in relation to the broader area that NARWs migrate through and the northern areas where NARWs primarily forage. There is ample foraging habitat further north of this survey area that will not be ensonified by the acoustic sources used by Ocean Wind II, such as in the Great South Channel and Georges Bank Shelf Break feeding biologically important area (BIA). Furthermore, and as discussed in the proposed Notice, the spatial acoustic footprint of the survey is very small relative to the spatial extent of the available foraging habitat.

Lastly, as we stated in the proposed IHA **Federal Register** notice (87 FR 14823, March 16, 2022) any impacts to marine mammals are expected to be temporary and minor and, given the relative size of the survey area compared to the overall migratory route leading to foraging habitat (which is not affected by the specified activity). Comparatively, the survey area is extremely small (the lease area is 338 km^2) compared to the size of the NARW migratory BIA (269,448 km^2). Because of this, and in context of the minor, low-level nature of the impacts expected to result from the planned survey, such impacts are not expected to result in disruption to biologically important behaviors.

Comment 3: Oceana noted that chronic stressors are an emerging concern for NARW conservation and recovery, and stated that chronic stress may result in energetic effects for NARWs. Oceana suggested that NMFS has not fully considered both the use of the area and the effects of both acute and chronic stressors on the health and fitness of NARWs, as disturbance responses in NARWs could lead to chronic stress or habitat displacement, leading to an overall decline in their health and fitness.

Response: NMFS agrees with Oceana that both acute and chronic stressors are of concern for NARW conservation and recovery. We recognize that acute stress from acoustic exposure is one potential impact of these surveys, and that chronic stress can have fitness, reproductive, etc. impacts at the population-level scale. NMFS has carefully reviewed the best available scientific information in assessing impacts to marine mammals, and recognizes that the surveys have the potential to impact marine mammals through behavioral effects, stress responses, and auditory masking. However, NMFS does not expect that the generally short-term, intermittent, and transitory marine site characterization survey activities planned by Ocean Wind II would create conditions of acute or chronic acoustic exposure leading to long-term physiological stress responses in marine mammals. NMFS has also prescribed a robust suite of mitigation measures, including extended distance shutdowns for NARW, that are expected to further reduce the duration and intensity of acoustic exposure, while limiting the potential severity of any possible behavioral disruption. The potential for chronic stress was evaluated in making the determinations presented in NMFS's negligible impact analyses. Because NARWs generally use this location in a transitory manner, specifically for migration, any potential impacts from these surveys are lessened for other behaviors due to the brief periods where exposure is possible. In context of these expected low-level impacts, which are not expected to meaningfully affect important behavior, we also refer again to the large size of the migratory corridor (BIA of 269,448 km^2) compared with the survey area (5,868 km^2). Thus, the transitory nature of NARWs at this location means it is unlikely for any exposure to cause chronic effects as Ocean Wind II's planned survey area and ensonified zones are much smaller than the overall migratory corridor. Because of this, NMFS does not expect acute or cumulative stress to be a detrimental factor to NARWs from Ocean Wind II described survey activities.

Comment 4: Oceana and COA asserted that NMFS must fully consider the discrete effects of each activity and the cumulative effects of the suite of approved, proposed and potential activities on marine mammals and NARWs in particular and ensure that the cumulative effects are not excessive before issuing or renewing an IHA.

Response: Neither the MMPA nor NMFS' codified implementing regulations call for consideration of other unrelated activities and their impacts on populations. The preamble for NMFS' implementing regulations (54 FR 40338; September 29, 1989) states in response to comments that the impacts from other past and ongoing anthropogenic activities are to be incorporated into the negligible impact analysis via their impacts on the baseline. Consistent with that direction, NMFS has factored into its negligible impact analysis the impacts of other past and ongoing anthropogenic activities via their impacts on the baseline, *e.g.,* as reflected in the density/distribution and status of the species, population size and growth rate, and other relevant stressors. The 1989 final rule for the MMPA implementing regulations also addressed public

comments regarding cumulative effects from future, unrelated activities. There NMFS stated that such effects are not considered in making findings under section 101(a)(5) concerning negligible impact. In this case, this IHA, as well as other IHAs currently in effect or proposed within the specified geographic region, are appropriately considered an unrelated activity relative to the others. The IHAs are unrelated in the sense that they are discrete actions under section 101(a)(5)(D), issued to discrete applicants.

Section 101(a)(5)(D) of the MMPA requires NMFS to make a determination that the take incidental to a ''specified activity'' will have a negligible impact on the affected species or stocks of marine mammals. NMFS' implementing regulations require applicants to include in their request a detailed description of the specified activity or class of activities that can be expected to result in incidental taking of marine mammals. 50 CFR 216.104(a)(1). Thus, the ''specified activity'' for which incidental take coverage is being sought under section 101(a)(5)(D) is generally defined and described by the applicant. Here, Ocean Wind II was the applicant for the IHA, and we are responding to the specified activity as described in that application (and making the necessary findings on that basis).

Through the response to public comments in the 1989 implementing regulations, NMFS also indicated (1) that we would consider cumulative effects that are reasonably foreseeable when preparing a NEPA analysis, and (2) that reasonably foreseeable cumulative effects would also be considered under section 7 of the ESA for ESA-listed species, as appropriate. Accordingly, NMFS has written Environmental Assessments (EA) that addressed cumulative impacts related to substantially similar activities, in similar locations, *e.g.,* the 2017 Ocean Wind, LLC EA for site characterization surveys off New Jersey; the 2018 Deepwater Wind EA for survey activities offshore Delaware, Massachusetts, and Rhode Island; the 2019 Avangrid EA for survey activities offshore North Carolina and Virginia; and the 2019 Orsted EA for survey activities offshore southern New England. Cumulative impacts regarding issuance of IHAs for site characterization survey activities such as those planned by Ocean Wind II have been adequately addressed under NEPA in prior environmental analyses that support NMFS' determination that this action is appropriately categorically excluded from further NEPA analysis. NMFS independently evaluated the use of a categorical exclusion for issuance of Ocean Wind II's IHA, which included consideration of extraordinary circumstances.

Separately, the cumulative effects of substantially similar activities in the same geographic region have been analyzed in the past under section 7 of the ESA when NMFS has engaged in formal intra-agency consultation, such as the 2013 programmatic Biological Opinion for BOEM Lease and Site Assessment Rhode Island, Massachusetts, New York, and New Jersey Wind Energy Areas (*https://repository.library.noaa.gov/view/noaa/29291*). Analyzed activities include those for which NMFS issued Ocean Wind's 2017 and 2021 IHAs (82 FR 31562; July 7, 2017 and 86 FR 26465; May 10, 2021), which are substantially similar to those planned by Ocean Wind II under this current IHA request. This Biological Opinion determined that NMFS' issuance of IHAs for site characterization survey activities associated with leasing, individually *and* cumulatively, are not likely to adversely affect listed marine mammals. NMFS notes, that while issuance of this IHA is covered under a different consultation, this BiOp remains valid and the surveys currently planned by Ocean Wind II from 2022 to 2023 could have fallen under the scope of those analyzed previously..

Comment 5: Oceana states that NMFS must make an assessment of which activities, technologies and strategies are truly necessary to provide Ocean Wind II the necessary information and identify which are not critical, asserting that NMFS should prescribe the appropriate survey techniques. In general, Oceana stated that NMFS must require that all IHA applicants minimize the impacts of underwater noise to the fullest extent feasible, including through the use of best available technology and methods to minimize sound levels from geophysical surveys.

Response: The MMPA requires that an IHA include measures that will effect the least practicable adverse impact on the affected species and stocks and, in practice, NMFS agrees that the IHA should include conditions for the survey activities that will first avoid adverse effects on NARWs in and around the survey site, where practicable, and then minimize the effects that cannot be avoided. NMFS has determined that the IHA meets this requirement to effect the least practicable adverse impact. Oceana does not make any specific recommendations of measures to add to the IHA. As part of the analysis for all marine site characterization survey IHAs, NMFS evaluated the effects expected as a result of the specified activity, made the necessary findings, and prescribed mitigation requirements sufficient to achieve the least practicable adverse impact on the affected species and stocks of marine mammals. It is not within NMFS' purview to make judgments regarding what may be appropriate techniques or technologies for an operator's survey objectives.

Comment 6: Oceana suggests that PSOs complement their survey efforts using additional technologies, such as infrared detection devices when in low-light conditions.

Response: NMFS agrees with Oceana regarding this suggestion and a requirement to utilize a thermal (infrared) device during low-light conditions was included in the proposed **Federal Register** Notice. That requirement is included as a requirement of the issued IHA.

Comment 7: Oceana and COA recommended that NMFS restrict all vessels of all sizes associated with the proposed survey activities to speeds less than 10 knots (kn) at all times due to the risk of vessel strikes to NARWs and other large whales.

Response: While NMFS acknowledges that vessel strikes can result in injury or mortality, we have analyzed the potential for ship strike resulting from Ocean Wind II' activity and have determined that based on the nature of the activity and the required mitigation measures specific to vessel strike avoidance included in the IHA, potential for vessel strike is so low as to be discountable. These mitigation measures, most of which were included in the proposed IHA and all of which are required in the final IHA, include: A requirement that all vessel operators comply with 10 kn (18.5 km/hour) or less speed restrictions in any SMA, DMA or Slow Zone while underway, and check daily for information regarding the establishment of mandatory or voluntary vessel strike avoidance areas (SMAs, DMAs, Slow Zones) and information regarding NARW sighting locations; a requirement that all vessels greater than or equal to 19.8 m in overall length operating from November 1 through April 30 operate at speeds of 10 kn (18.5 km/hour) or less; a requirement that all vessel operators reduce vessel speed to 10 kn (18.5 km/hour) or less when any large whale, any mother/calf pairs, pods, or large assemblages of non-delphinid cetaceans are observed near the vessel; a requirement that all survey vessels maintain a separation distance of 500 m or greater from any ESA-listed whales or other unidentified large marine

mammals visible at the surface while underway; a requirement that, if underway, vessels must steer a course away from any sighted ESA-listed whale at 10 kn or less until the 500 m minimum separation distance has been established; a requirement that, if an ESA-listed whale is sighted in a vessel's path, or within 500 m of an underway vessel, the underway vessel must reduce speed and shift the engine to neutral; a requirement that all vessels underway must maintain a minimum separation distance of 100 m from all non-ESA-listed baleen whales; and a requirement that all vessels underway must, to the maximum extent practicable, attempt to maintain a minimum separation distance of 50 m from all other marine mammals, with an understanding that at times this may not be possible (*e.g.,* for animals that approach the vessel). We have determined that the ship strike avoidance measures in the IHA are sufficient to ensure the least practicable adverse impact on species or stocks and their habitat. Furthermore, no documented vessel strikes have occurred for any marine site characterization surveys which were issued IHAs from NMFS during the survey activities themselves or while transiting to and from survey sites.

Comment 8: Oceana suggests that NMFS require vessels maintain a separation distance of at least 500 m from NARWs at all times.

Response: NMFS agrees with Oceana regarding this suggestion and a requirement to maintain a separation distance of at least 500 m from NARWs at all times was included in the proposed **Federal Register** Notice and was included as a requirement in the issued IHA.

Comment 9: Oceana recommended that the IHA should require all vessels supporting site characterization to be equipped with and using Class A Automatic Identification System (AIS) devices at all times while on the water. Oceana suggested this requirement should apply to all vessels, regardless of size, associated with the survey.

Response: NMFS is generally supportive of the idea that vessels involved with survey activities be equipped with and using Class A Automatic Identification System (devices) at all times while on the water. Indeed, there is a precedent for NMFS requiring such a stipulation for geophysical surveys in the Atlantic Ocean (38 FR 63268, December 7, 2018); however, these activities carried the potential for much more significant impacts than the marine site characterization surveys to be carried out by Ocean Wind II, with the potential for both Level A and Level B harassment take. Given the small isopleths and small numbers of take authorized by this IHA, NMFS does not agree that the benefits of requiring AIS on all vessels associated with the survey activities outweighs and warrants the cost and practicability issues associated with this requirement.

Comment 10: Oceana asserts that the IHA must include requirements to hold all vessels associated with site characterization surveys accountable to the IHA requirements, including vessels owned by the developer, contractors, employees, and others regardless of ownership, operator, and contract. They state that exceptions and exemptions will create enforcement uncertainty and incentives to evade regulations through reclassification and redesignation. They recommend that NMFS simplify this by requiring all vessels to abide by the same requirements, regardless of size, ownership, function, contract or other specifics.

Response: NMFS agrees with Oceana and required these measures in the proposed IHA and final IHA. The IHA requires that a copy of the IHA must be in the possession of Ocean Wind II, the vessel operators, the lead PSO, and any other relevant designees of Ocean Wind II operating under the authority of this IHA. The IHA also states that Ocean Wind II must ensure that the vessel operator and other relevant vessel personnel, including the Protected Species Observer (PSO) team, are briefed on all responsibilities, communication procedures, marine mammal monitoring protocols, operational procedures, and IHA requirements prior to the start of survey activity, and when relevant new personnel join the survey operations.

Comment 11: Oceana stated that the IHA must include a requirement for all phases of the Ocean Wind II site characterization to subscribe to the highest level of transparency, including frequent reporting to federal agencies, requirements to report all visual and acoustic detections of NARWs and any dead, injured, or entangled marine mammals to NMFS or the Coast Guard as soon as possible and no later than the end of the PSO shift. Oceana states that to foster stakeholder relationships and allow public engagement and oversight of the permitting, the IHA should require all reports and data to be accessible on a publicly available website.

Response: NMFS agrees with the need for reporting and indeed, the MMPA calls for IHAs to incorporate reporting requirements. As included in the proposed IHA, the final IHA includes requirements for reporting that supports Oceana's recommendations. Ocean Wind II is required to submit a monitoring report to NMFS within 90 days after completion of survey activities that fully documents the methods and monitoring protocols, summarizes the data recorded during monitoring, and describes, assesses and compares the effectiveness of monitoring and mitigation measures. PSO datasheets or raw sightings data must also be provided with the draft and final monitoring report. Further the draft IHA and final IHA stipulate that if a NARW is observed at any time by any survey vessels, during surveys or during vessel transit, Ocean Wind II must immediately report sighting information to the NMFS NARW Sighting Advisory System and to the U.S. Coast Guard, and that any discoveries of injured or dead marine mammals be reported by Ocean Wind II to the Office of Protected Resources, NMFS, and to the New England/Mid-Atlantic Regional Stranding Coordinator as soon as feasible. All reports and associated data submitted to NMFS are included on the website for public inspection.

Comment 12: Oceana recommended increasing the Exclusion Zone to 1,000 m for NARWs.

Response: NMFS notes that the 500 m Exclusion Zone for NARWs exceeds the modeled distance to the largest 160 dB Level B harassment isopleth distance (141 m during sparker use) by a substantial margin. Oceana does not provide a compelling rationale for why the Exclusion Zone should be even larger. Given that these surveys are relatively low impact and that, regardless, NMFS has prescribed a NARW Exclusion Zone that is significantly larger (500 m) than the conservatively estimated largest harassment zone (141 m), NMFS has determined that the Exclusion Zone is appropriate. Further, Level A harassment is not expected to result even in the absence of mitigation, given the characteristics of the sources planned for use. As described in the Mitigation section, NMFS has determined that the prescribed mitigation requirements are sufficient to effect the least practicable adverse impact on all affected species or stocks.

Comment 13: Oceana recommended that NMFS should require PAM at all times to maximize the probability of detection for NARWs.

Response: Oceana does not explain why they expect that PAM would be effective in detecting vocalizing mysticetes, nor does NMFS agree that this measure is warranted, as it is not expected to be effective for use in

detecting the species of concern. It is generally accepted that, even in the absence of additional acoustic sources, using a towed passive acoustic sensor to detect baleen whales (including NARWs) is not typically effective because the noise from the vessel, the flow noise, and the cable noise are in the same frequency band and will mask the vast majority of baleen whale calls. Vessels produce low-frequency noise, primarily through propeller cavitation, with main energy in the 5–300 Hertz (Hz) frequency range. Source levels range from about 140 to 195 decibel (dB) re 1 µPa (micropascal) at 1 m (NRC, 2003; Hildebrand, 2009), depending on factors such as ship type, load, and speed, and ship hull and propeller design. Studies of vessel noise show that it appears to increase background noise levels in the 71–224 Hz range by 10–13 dB (Hatch *et al.,* 2012; McKenna *et al.,* 2012; Rolland *et al.,* 2012). PAM systems employ hydrophones towed in streamer cables approximately 500 m behind a vessel. Noise from water flow around the cables and from strumming of the cables themselves is also low-frequency and typically masks signals in the same range. Experienced PAM operators participating in a recent workshop (Thode *et al.,* 2017) emphasized that a PAM operation could easily report no acoustic encounters, depending on species present, simply because background noise levels rendered any acoustic detection impossible. The same workshop report stated that a typical eight-element array towed 500 m behind a vessel could be expected to detect delphinids, sperm whales, and beaked whales at the required range, but not baleen whales, due to expected background noise levels (including seismic noise, vessel noise, and flow noise).

There are several additional reasons why we do not agree that use of PAM is warranted for 24-hour HRG surveys. While NMFS agrees that PAM can be an important tool for augmenting detection capabilities in certain circumstances, its utility in further reducing impact during HRG survey activities is limited. First, for this activity, the area expected to be ensonified above the Level B harassment threshold is relatively small (a maximum of 141 m); this reflects the fact that, to start with, the source level is comparatively low and the intensity of any resulting impacts would be lower level and, further, it means that inasmuch as PAM will only detect a portion of any animals exposed within a zone, the overall probability of PAM detecting an animal in the harassment zone is low. Together these factors support the limited value of PAM for use in reducing take with smaller zones. PAM is only capable of detecting animals that are actively vocalizing, while many marine mammal species vocalize infrequently or during certain activities, which means that only a subset of the animals within the range of the PAM would be detected (and potentially have reduced impacts). Additionally, localization and range detection can be challenging under certain scenarios. For example, odontocetes are fast moving and often travel in large or dispersed groups which makes localization difficult.

Given that the effects to marine mammals from the types of surveys authorized in this IHA are expected to be limited to low level behavioral harassment even in the absence of mitigation, the limited additional benefit anticipated by adding this detection method (especially for NARWs and other low frequency cetaceans, species for which PAM has limited efficacy), and the cost and impracticability of implementing a full-time PAM program, we have determined the current requirements for visual monitoring are sufficient to ensure the least practicable adverse impact on the affected species or stocks and their habitat. NMFS has previously provided discussions on why PAM is not a required monitoring measure during HRG survey IHAs in past **Federal Register** notices (see 86 FR 21289, April 22, 2021 and 87 FR 13975, March 11, 2022 for examples).

Comment 14: Oceana recommends a shutdown requirement if a NARW or other ESA-listed species is detected in the clearance zone as well as a publically available explanation of any exemptions as to why the applicant would not be able to shut down in these situations.

Response: There are several shutdown requirements described in the **Federal Register** notice of the proposed IHA (87 FR 4200, January 27, 2022), and which are included in the final IHA, including the stipulation that geophysical survey equipment must be immediately shut down if any marine mammal is observed within or entering the relevant Exclusion Zone while geophysical survey equipment is operational. There is no exemption for the shutdown requirement. In regards to reporting, Ocean Wind II must notify NMFS if a NARW is observed at any time by any survey vessels during surveys or during vessel transit. Additionally, Ocean Wind II is required to report the relevant survey activity information, such as such as the type of survey equipment in operation, acoustic source power output while in operation, and any other notes of significance (*i.e.,* pre-clearance survey, ramp-up, shutdown, end of operations, etc.) as well as the estimated distance to an animal and its heading relative to the survey vessel at the initial sighting and survey activity information. We note that if a NARW is detected within the Exclusion Zone before a shutdown is implemented, the NARW and its distance from the sound source, including if it is within the Level B harassment zone, would be reported in Ocean Wind II's final monitoring report and made publicly available on NMFS' website. Ocean Wind II is required to immediately notify NMFS of any sightings of NARWs and report upon survey activity information. NMFS believes that these requirements address the commenter's concerns.

Comment 15: Oceana recommended that when HRG surveys are allowed to resume after a shutdown event, the surveys should be required to use a ramp-up procedure to encourage any nearby marine life to leave the area.

Response: NMFS agrees with this recommendation and included in the **Federal Register** notice of the proposed IHA (March 16, 2022, 87 FR 14823) and this final IHA a stipulation that when technically feasible, survey equipment must be ramped up at the start or restart of survey activities. Ramp-up must begin with the power of the smallest acoustic equipment at its lowest practical power output appropriate for the survey. When technically feasible the power must then be gradually turned up and other acoustic sources added in a way such that the source level would increase gradually. NMFS notes that ramp-up would not be required for short periods where acoustic sources were shut down (*i.e.,* less than 30 minutes) if PSOs have maintained constant visual observation and no detections of marine mammals occurred within the applicable Exclusion Zones.

Comment 16: COA asserted that Level A harassment may occur, and that this was not accounted for in the proposed Notice.

Response: NMFS acknowledges the concerns brought up by the commenters regarding the potential for Level A harassment of marine mammals. However, no Level A harassment is expected to result, even in the absence of mitigation, given the characteristics of the sources planned for use. This is additionally supported by the required mitigation and very small estimated Level A harassment zones. Furthermore, the commenters do not provide any persuasive support for the apparent

contention that Level A harassment is a potential outcome of these activities.

NMFS acknowledges that sufficient disruption of behavioral patterns could theoretically, likely in connection with other stressors, result in a reduction in fitness and ultimately injury or mortality. However, such an outcome could likely result only from repeated disruption of important behaviors at critical junctures, or sustained displacement from important habitat with no associated compensatory ability. NMFS has thoroughly analyzed the potential effects of noise exposure resulting from the specified activity and, as discussed in the notice of proposed IHA (see Potential Effects of Specified Activities on Marine Mammals and Their Habitat) and in this notice (see Negligible Impact Analysis and Determination), no such effects are reasonably anticipated to occur as a result of this activity. Therefore, no such outcome is expected as a result of these surveys. NMFS considers this category of survey operations to be near *de minimis,* with the potential for Level A harassment for any species to be discountable. Please refer also to NMFS' responses to comments 3, 4, and 8.

Comment 17: COA is concerned that habitat displacement could significantly increase the risk of ship-strike to NARWs from outside the survey area.

Response: NMFS does not anticipate that NARWs would be displaced from the area where Ocean Wind II's marine site characterization surveys would occur, and COA does not provide evidence that this effect should be a reasonably anticipated outcome of the specified activity. Similarly, NMFS is not aware of any scientific information suggesting that the survey activity would drive marine mammals into shipping lanes, and disagrees that this would be a reasonably anticipated effect of the specified activities. The take by Level B harassment authorized by NMFS is precautionary but considered unlikely, as NMFS' take estimation process does not account for the use of extremely precautionary mitigation measures, *e.g.,* the requirement for Ocean Wind II to implement a Shutdown Zone that is more than 3 times as large as the estimated harassment zone. These requirements are expected to largely eliminate the actual occurrence of Level B harassment events and, to the extent that harassment does occur, would minimize the duration and severity of any such events. Therefore, even if a NARW was in the area of the cable corridor surveys, a displacement impact is not anticipated.

Although the primary stressor to marine mammals from the specified activities is acoustic exposure to the sound source, NMFS takes seriously the risk of vessel strike and has prescribed measures sufficient to avoid the potential for ship strike to the extent practicable. NMFS has required these measures despite a very low likelihood of vessel strike; vessels associated with the survey activity will add a discountable amount of vessel traffic to the specific geographic region and, furthermore, vessels towing survey gear travel at very slow speeds (*i.e.,* roughly 4–5 kn).

Comment 18: COA is concerned regarding the number of species that could be impacted by the activities, as well as a lack of baseline data being available for harbor seals in the area. In addition, COA has stated that NMFS did not adequately address the potential for cumulative impacts to bottlenose dolphins from Level B harassment over several years of project activities.

Response: We appreciate the concern expressed by COA. NMFS utilizes the best available science when analyzing which species may be impacted by an applicant's proposed activities. Based on information found in the scientific literature, as well as based on density models developed by Duke University, all marine mammal species included in the proposed **Federal Register** Notice have some likelihood of occurring in Ocean Wind II's survey areas. Furthermore, the MMPA requires us to evaluate the effects of the specified activities in consideration of the best scientific evidence available and, if the necessary findings are made, to issue the requested take authorization. The MMPA does not allow us to delay decision making in hopes that additional information may become available in the future.

NMFS notes that it has previously addressed discussions on cumulative impact analyses in previous comments and references COA back to these specific responses in this Notice. The amount of take authorized in the IHA meets the MMPA's small numbers requirement for dolphins (see Small Numbers section).

Regarding the lack of baseline information cited by COA, with specific concern pointed out for harbor seals, NMFS points towards two sources of information for marine mammal baseline information: The Ocean/Wind Power Ecological Baseline Studies, January 2008–December 2009 completed by the New Jersey Department of Environmental Protection in July 2010 (*https://dspace.njstatelib.org/xmlui/handle/10929/68435*) and the Atlantic Marine Assessment Program for Protected Species (AMAPPS; *https://www.fisheries.noaa.gov/new-england-mid-atlantic/population-assessments/atlantic-marine-assessment-program-protected*) with annual reports available from 2010 to 2020 (*https://www.fisheries.noaa.gov/resource/publication-database/atlantic-marine-assessment-program-protected-species*) that cover the areas across the Atlantic Ocean. NMFS has duly considered this and all available information.

Based on the information presented, NMFS has determined that no new information has become available, nor do the commenters present additional information, that would change our determinations since the publication of the proposed notice.

Comment 19: One commenter suggested that the amount of authorized NARWs takes should be limited to 0.7 instead of the 11 takes proposed for authorization.

Response: The commenter cites Ocean Wind II's application when stating that only 0.7 are allowed to be ''taken from the environment.'' NMFS believes the commenter is referring to the potential biological removal (PBR) value in the draft 2021 SAR for NARWs. The commenter appears mistaken in equating the PBR value to the maximum amount of take that NMFS may authorize. PBR is defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population. That is, PBR represents the amount of mortality and/or serious injury a population can withstand while allowing that stock to reach or maintain the maximum productivity of the population. Ocean Wind II did not request, nor is NMFS authorizing any mortality or serious injury of NARWs. The take authorized is limited to Level B (behavioral) harassment. NMFS has authorized 11 takes of NARWs by Level B harassment and has found that the taking will result in no greater than a negligible impact to the NARW stock (*i.e.,* the specified activity will not adversely affect the species through effects on annual rates of recruitment and/or survival).

Comment 20: One commenter suggested the IHA should not be issued at this time because they believe there is a lack of research on NARW prey.

Response: While much of this commenter's letter focused on wind farm construction, NMFS addresses this comment as though applicable to the site assessment surveys considered here.

We note first that the region where this survey is located is not a significant feeding area for NARW. Primary feeding areas for the species are located further to the north, with the most important use of this area for NARW being as a migratory pathway. However, we further address this comment in general, as other mysticete species occur in the region and in order to thoroughly address the commenter's concern.

NMFS disagrees with the suggestion that we did not adequately consider the potential for effects to prey species. In fact, we considered relevant literature in finding that the most likely impact of survey activity to prey species such as fish and invertebrates would be temporary avoidance of an area, with a rapid return to pre-survey distribution and behavior, and minimal impacts to recruitment or survival anticipated. While there is a lack of specific scientific information to allow an assessment of the duration, intensity, or distribution of effects to prey in specific locations at specific times and in response to specific surveys, the MMPA specifies that the ''best available data'' must be used and NMFS' review of the available information does not indicate that such effects could be significant enough to impact marine mammal prey to the extent that marine mammal fitness would be affected. We addressed the potential for effects to prey, as well as the potential for those effects to impact marine mammal populations, in our notice of proposed IHA (87 FR 14823, March 16, 2022). As stated in that notice, our review of the available information and the specific nature of the activities considered herein suggest that the activities are not likely to have more than short-term adverse effects (if any) on any prey habitat or populations of prey species. Further, any impacts to prey species are not expected to result in significant or long-term consequences for individual marine mammals, or to contribute to adverse impacts on their populations. Additional information relevant to the commenter's specific concern related to NARW prey is summarized below.

With regard to potential impacts on zooplankton (*i.e.,* NARW prey), McCauley *et al.* (2017) found that exposure to noise from airguns (a sound source with significantly more intense sound output than the sources considered herein, with correspondingly greater potential for impacts to marine mammal prey) resulted in significant depletion for more than half the taxa present and that there were two to three times more dead zooplankton after airgun exposure compared with controls for all taxa, within 1 km of the airguns. However, the authors also stated that in order to have significant impacts on *r*-selected species (*i.e.,* those with high growth rates and that produce many offspring) such as plankton, the spatial or temporal scale of impact must be large in comparison with the ecosystem concerned, and it is possible that the findings reflect avoidance by zooplankton rather than mortality (McCauley *et al.,* 2017). In addition, the results of this study are inconsistent with a large body of research that generally finds limited spatial and temporal impacts to zooplankton as a result of exposure to airgun noise (*e.g.,* Dalen and Knutsen, 1987; Payne, 2004; Stanley *et al.,* 2011). Most prior research on this topic, which has focused on relatively small spatial scales, has showed minimal effects (*e.g.,* Kostyuchenko, 1973; Booman *et al.,* 1996; Sætre and Ona, 1996; Pearson *et al.,* 1994; Bolle *et al.,* 2012).

A modeling exercise was conducted as a follow-up to the McCauley *et al.* (2017) study (as recommended by McCauley *et al.*), in order to assess the potential for impacts on ocean ecosystem dynamics and zooplankton population dynamics (Richardson *et al.,* 2017). Richardson *et al.* (2017) found that a full-scale airgun survey would impact copepod abundance within the survey area, but that effects at a regional scale were minimal (2 percent decline in abundance within 150 km of the survey area and effects not discernible over the full region). The authors also found that recovery within the survey area would be relatively quick (3 days following survey completion), and suggest that the quick recovery was due to the fast growth rates of zooplankton, and the dispersal and mixing of zooplankton from both inside and outside of the impacted region.

Notably, a more recent study produced results inconsistent with those of McCauley *et al.* (2017). Researchers conducted a field and laboratory study to assess if exposure to airgun noise affects mortality, predator escape response, or gene expression of the copepod *Calanus finmarchicus* (Fields *et al.,* 2019). Immediate mortality of copepods was significantly higher, relative to controls, at distances of 5 m or less from the airguns. Mortality one week after the airgun blast was significantly higher in the copepods placed 10 m from the airgun but was not significantly different from the controls at a distance of 20 m from the airgun. The increase in mortality, relative to controls, did not exceed 30 percent at any distance from the airgun. Moreover, the authors caution that even this higher mortality in the immediate vicinity of the airguns may be more pronounced than what would be observed in free-swimming animals due to increased flow speed of fluid inside bags containing the experimental animals. There were no sublethal effects on the escape performance or the sensory threshold needed to initiate an escape response at any of the distances from the airgun that were tested. Whereas McCauley *et al.* (2017) reported an SEL of 156 dB at a range of 509–658 m, with zooplankton mortality observed at that range, Fields *et al.* (2019) reported an SEL of 186 dB at a range of 25 m, with no reported mortality at that distance.

Note that the sound sources planned for use in Ocean Wind II's survey activities would result in significantly lesser potential for impacts to zooplankton than was observed in the studies described above. Further, given the typically wide dispersal of survey vessels and brief time to regeneration of the potentially affected zooplankton populations, we do not expect any meaningful follow-on effects to the prey base from Ocean Wind II's survey activities. Nevertheless, we provided the additional information above to clarify NMFS's evaluation of all potentially relevant information in our analysis of potential impacts to prey, including NARW prey.

Comment 21: One commenter suggested the IHA does not contain adequate mitigation measures with respect to vessel strike avoidance measures and there should be assurances to the public these measures are being implemented.

Response: We understand the commenter to be concerned that if Ocean Wind II does not comply with the vessel strike avoidance measures in the IHA, there may be no mechanisms by which to be aware of such violations. NMFS reiterates that (1) no vessel strike is anticipated to occur as a result of this survey activity; (2) the issued IHA contains appropriate reporting mechanisms in reflection of the potential for an unanticipated strike to occur; and (3) any unauthorized take that occurs is in violation of the MMPA. We refer the reader to our responses to comments 8 and 12 above.

Comment 22: One commenter suggested that the proposed exclusion zone (*i.e.,* shutdown zone) is inconsistent with BOEM's ''standard'' marine mammal exclusion zone of 200 m.

Response: The commenter referenced a BOEM website for oil and gas exploration when suggesting that the standard EZ is 200 m. The referenced web page also appears outdated as it

references a decision document issued by BOEM in July 2014. Hence the website cited by the commenter is not applicable to Ocean Wind II's survey activities. Regardless, NMFS prescribes mitigation appropriate to achieve the least practicable adverse impact on the affected species or stocks of marine mammals, as required by the MMPA, and has conditioned the IHA in a manner identical to several previously issued offshore wind HRG IHAs and in accordance with the ESA informal consultation relevant to this action (NMFS, 2021 (revised September 2021)).

Comment 23: One commenter questioned why manatees were discussed in Ocean Wind II's application and why there were no takes of manatees estimated.

Response: The manatee is managed by the U.S. Fish and Wildlife Service. Hence, NMFS has no jurisdiction over the manatee and cannot authorize take for that species.

Changes From the Proposed IHA to Final IHA

There were no changes from proposed IHA to final IHA. NMFS notes that the draft IHA that was posted to our website for review during the 30-day public comment period contained an erroneous amount of take for some species; however, the take for all species was correctly identified in the **Federal Register** notice of proposed IHA (87 FR 14823, March 16). No comments received were related to the take amounts identified in the draft IHA.

As discussed in the **SUMMARY** section, NMFS erroneously referred to the applicant as ''Ocean Wind, LLC'' in the notice of proposed IHA. Here, we correct that reference to ''Ocean Wind II, LLC.''

Since publication of the Notice of proposed IHA, NMFS has acknowledged that the population estimate of NARWs is now under 350 animals (*https://www.fisheries.noaa.gov/species/north-atlantic-right-whale*). However, as discussed in our response to Comment #2 above, NMFS has determined that this change in abundance estimate would not change the estimated take of NARWs or authorized take numbers, nor affect our ability to make the required findings under the MMPA for the Ocean Wind II survey activities. The status and trends of the NARW population remain unchanged.

Description of Marine Mammals in the Area of Specified Activities

Sections 3 and 4 of the application summarize available information regarding status and trends, distribution and habitat preferences, and behavior and life history, of the potentially affected species. Additional information regarding population trends and threats may be found in NMFS' Stock Assessment Reports (SARs; *www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments*) and more general information about these species (*e.g.,* physical and behavioral descriptions) may be found on NMFS' website (*www.fisheries.noaa.gov/find-species*).

Table 2 lists all species or stocks for which take is expected and proposed to be authorized for this action, and summarizes information related to the population or stock, including regulatory status under the MMPA and Endangered Species Act (ESA) and potential biological removal (PBR), where known. For taxonomy, NMFS follows Committee on Taxonomy (2021). PBR is defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population (as described in NMFS' SARs). While no mortality is anticipated or would be authorized here, PBR and annual serious injury and mortality from anthropogenic sources are included as gross indicators of the status of the species and other threats.

Marine mammal abundance estimates presented in this document represent the total number of individuals that make up a given stock or the total number estimated within a particular study or survey area. NMFS' stock abundance estimates for most species represent the total estimate of individuals within the geographic area, if known, that comprises that stock. For some species, this geographic area may extend beyond U.S. waters. All managed stocks in this region are assessed in NMFS' U.S. Atlantic and Gulf of Mexico SARs. All values presented in Table 2 are the most recent available at the time of publication and are available in the Draft 2021 SARs (Hayes *et al.,* 2021), available at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessment-reports.*

TABLE 2—MARINE MAMMAL SPECIES LIKELY TO OCCUR NEAR THE PROJECT AREA THAT MAY BE AFFECTED BY OCEAN WIND II'S ACTIVITY

Common name	Scientific name	Stock	ESA/MMPA status; strategic (Y/N) [1]	Stock abundance (CV, N_{min}, most recent abundance survey) [2]	PBR	Annual M/SI [3]
Order Cetartiodactyla—Cetacea—Superfamily Mysticeti (baleen whales)						
Family Balaenidae:						
NARW	*Eubalaena glacialis*	Western North Atlantic (WNA)	E/D; Y	368 [5] (0; 364; 2019)	0.7	7.7
Family Balaenopteridae (rorquals):						
Humpback whale	*Megaptera novaeangliae*	Gulf of Maine	-/-; Y	1,393 (0.15; 1,375; 2016)	22	58
Fin whale	*Balaenoptera physalus*	WNA	E/D; Y	6,802 (0.24; 5,573; 2016)	11	2.35
Sei whale	*Balaenoptera borealis*	Nova Scotia	E/D; Y	6,292 (1.02; 3,098; 2016)	6.2	1.2
Minke whale	*Balaenoptera acutorostrata*	Canadian East Coast	-/-; N	21,968 (0.31; 17,002; 2016)	170	10.6
Superfamily Odontoceti (toothed whales, dolphins, and porpoises)						
Family Physeteridae:						
Sperm whale	*Physeter macrocephalus*	North Atlantic	E/D; Y	4,349 (0.28; 3,451; 2016)	3.9	0
Family Delphinidae:						
Long-finned pilot whale	*Globicephala melas*	WNA	-/-; N	39,215 (0.30; 30,627; 2016)	306	29
Short finned pilot whale	*Globicephala macrorhynchus*	WNA	-/-; N	28,924 (0.24; 23,637; 2016)	236	136
Bottlenose dolphin	*Tursiops truncatus*	WNA Offshore	-/-; N	62,851 (0.23; 51,914; 2016)	519	28
		WNA Northern Migratory Coastal.	-/D;Y	6,639 (0.41, 4,759, 2016)	48	12.2–21.5
Common dolphin	*Delphinus delphis*	WNA	-/-; N	172,974 (0.21; 145,216; 2016)	1,452	390

TABLE 2—MARINE MAMMAL SPECIES LIKELY TO OCCUR NEAR THE PROJECT AREA THAT MAY BE AFFECTED BY OCEAN WIND II'S ACTIVITY—Continued

Common name	Scientific name	Stock	ESA/ MMPA status; strategic (Y/N) [1]	Stock abundance (CV, N_{min}, most recent abundance survey) [2]	PBR	Annual M/SI [3]
Atlantic white-sided dolphin.	*Lagenorhynchus acutus*	WNA	-/-; N	93,233 (0.71; 54,443; 2016) ..	544	27
Atlantic spotted dolphin	*Stenella frontalis*	WNA	-/-; N	39,921 (0.27; 32,032; 2016) ..	320	0
Risso's dolphin	*Grampus griseus*	WNA	-/-; N	35,215 (0.19; 30,051; 2016) ..	303	54.3
Family Phocoenidae (porpoises):						
Harbor porpoise	*Phocoena phocoena*	Gulf of Maine/Bay of Fundy	-/-; N	95,543 (0.31; 74,034; 2016) ..	851	164
Order Carnivora—Superfamily Pinnipedia						
Family Phocidae (earless seals):						
Gray seal [4]	*Halichoerus grypus*	WNA	-/-; N	27,300 (0.22; 22,785, 2029) ..	1,458	4,453
Harbor seal	*Phoca vitulina*	WNA	-/-; N	61,336 (0.08; 57,637, 2020) ..	1,729	339

[1] ESA status: Endangered (E), Threatened (T)/MMPA status: Depleted (D). A dash (-) indicates that the species is not listed under the ESA or designated as depleted under the MMPA. Under the MMPA, a strategic stock is one for which the level of direct human-caused mortality exceeds PBR or which is determined to be declining and likely to be listed under the ESA within the foreseeable future. Any species or stock listed under the ESA is automatically designated under the MMPA as depleted and as a strategic stock.

[2] NMFS marine mammal stock assessment reports online at: *www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments.* CV is coefficient of variation; N_{min} is the minimum estimate of stock abundance. In some cases, CV is not applicable.

[3] These values, found in NMFS' SARs, represent annual levels of human-caused mortality plus serious injury from all sources combined (*e.g.,* commercial fisheries, ship strike).

[4] NMFS' gray seal stock abundance estimate (and associated PBR value) applies to U.S. population only. Total stock abundance (including animals in Canada) is approximately 451,600. The annual M/SI value given is for the total stock.

[5] The draft 2022 SARs have yet to be released; however, NMFS has updated its species web page to recognize the population estimate for NARWs is now below 350 animals (*https://www.fisheries.noaa.gov/species/north-atlantic-right-whale*).

A detailed description of the species likely to be affected by Ocean Wind II's activities, including information regarding population trends and threats, and local occurrence, were provided in the **Federal Register** notice for the proposed IHA (87 FR 14823, March 16). Since that time, we are not aware of any changes in the status of these species and stocks or other relevant new information; therefore, detailed descriptions are not provided here. Please refer to that **Federal Register** notice for those descriptions. Please also refer to NMFS's website (*https://www.fisheries.noaa.gov/find-species*) for generalized species accounts.

Marine Mammal Hearing

Hearing is the most important sensory modality for marine mammals underwater, and exposure to anthropogenic sound can have deleterious effects. To appropriately assess the potential effects of exposure to sound, it is necessary to understand the frequency ranges marine mammals are able to hear. Current data indicate that not all marine mammal species have equal hearing capabilities (*e.g.,* Richardson *et al.,* 1995; Wartzok and Ketten, 1999; Au and Hastings, 2008). To reflect this, Southall *et al.* (2007) recommended that marine mammals be divided into functional hearing groups based on directly measured or estimated hearing ranges on the basis of available behavioral response data, audiograms derived using auditory evoked potential techniques, anatomical modeling, and other data. Note that no direct measurements of hearing ability have been successfully completed for mysticetes (*i.e.,* low-frequency cetaceans). Subsequently, NMFS (2018) described generalized hearing ranges for these marine mammal hearing groups. Generalized hearing ranges were chosen based on the approximately 65 decibel (dB) threshold from the normalized composite audiograms, with the exception for lower limits for low-frequency cetaceans where the lower bound was deemed to be biologically implausible and the lower bound from Southall *et al.* (2007) retained. Marine mammal hearing groups and their associated hearing ranges are provided in Table 3.

TABLE 3—MARINE MAMMAL HEARING GROUPS

[NMFS, 2018]

Hearing group	Generalized hearing range *
Low-frequency (LF) cetaceans (baleen whales)	7 Hz to 35 kHz.
Mid-frequency (MF) cetaceans (dolphins, toothed whales, beaked whales, bottlenose whales)	150 Hz to 160 kHz.
High-frequency (HF) cetaceans (true porpoises, *Kogia,* river dolphins, Cephalorhynchid, *Lagenorhynchus cruciger* & *L. australis*).	275 Hz to 160 kHz.
Phocid pinnipeds (PW) (underwater) (true seals)	50 Hz to 86 kHz.
Otariid pinnipeds (OW) (underwater) (sea lions and fur seals)	60 Hz to 39 kHz.

* Represents the generalized hearing range for the entire group as a composite (*i.e.,* all species within the group), where individual species' hearing ranges are typically not as broad. Generalized hearing range chosen based on ~65 dB threshold from normalized composite audiogram, with the exception for lower limits for LF cetaceans (Southall *et al.* 2007) and PW pinniped (approximation).

The pinniped functional hearing group was modified from Southall *et al.* (2007) on the basis of data indicating that phocid species have consistently demonstrated an extended frequency range of hearing compared to otariids, especially in the higher frequency range (Hemilä *et al.,* 2006; Kastelein *et al.,* 2009).

For more detail concerning these groups and associated frequency ranges, please see NMFS (2018) for a review of available information. Sixteen marine mammal species (14 cetacean and 2 pinniped (both phocid) species) have the reasonable potential to co-occur with the proposed survey activities. Please refer to Table 2. Of the cetacean species that may be present, five are classified as low-frequency cetaceans (*i.e.,* all mysticete species), eight are classified as mid-frequency cetaceans (*i.e.,* all delphinid species and the sperm whale), and one is classified as a high-frequency cetacean (*i.e.,* harbor porpoise).

Potential Effects of Specified Activities on Marine Mammals and Their Habitat

The effects of underwater noise from the deployed acoustic sources have the potential to result in behavioral harassment of marine mammals in the vicinity of the study area. The **Federal Register** notice for the proposed IHA (87 FR 14823; March 16, 2022) included a discussion of the effects of anthropogenic noise, ship strike, stress, and potential impacts on marine mammals and their habitat, therefore that information is not repeated here; please refer to the **Federal Register** notice for that information.

Estimated Take

This section provides an estimate of the number of incidental takes authorized through this IHA, which will inform both NMFS' consideration of ''small numbers'' and the negligible impact determination.

Harassment is the only type of take expected to result from these activities. Except with respect to certain activities not pertinent here, section 3(18) of the MMPA defines ''harassment'' as any act of pursuit, torment, or annoyance, which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).

Authorized takes would be by Level B harassment only, in the form of disruption of behavioral patterns for individual marine mammals resulting from exposure to noise from certain HRG acoustic sources. Based primarily on the characteristics of the signals produced by the acoustic sources planned for use, Level A harassment is neither anticipated (even absent mitigation), nor has any been authorized. Consideration of the anticipated effectiveness of the mitigation measures (*i.e.,* exclusion zones and shutdown measures), discussed in detail below in the Mitigation section, further strengthens the conclusion that Level A harassment is not a reasonably anticipated outcome of the survey activity. As described previously, no serious injury or mortality is anticipated or proposed to be authorized for this activity. Below we describe how the take is estimated.

Generally speaking, we estimate take by considering: (1) Acoustic thresholds above which NMFS believes the best available science indicates marine mammals will be behaviorally harassed or incur some degree of permanent hearing impairment; (2) the area or volume of water that will be ensonified above these levels in a day; (3) the density or occurrence of marine mammals within these ensonified areas; and, (4) and the number of days of activities. We note that while these basic factors can contribute to a basic calculation to provide an initial prediction of takes, additional information that can qualitatively inform take estimates is also sometimes available (*e.g.,* previous monitoring results or average group size). Below, we describe the factors considered here in more detail and present the take estimates.

Acoustic Thresholds

NMFS uses acoustic thresholds that identify the received level of underwater sound above which exposed marine mammals would be reasonably expected to be behaviorally harassed (equated to Level B harassment) or to incur PTS of some degree (equated to Level A harassment).

Level B Harassment—Though significantly driven by received level, the onset of behavioral disturbance from anthropogenic noise exposure is also informed to varying degrees by other factors related to the source (*e.g.,* frequency, predictability, duty cycle), the environment (*e.g.,* bathymetry), and the receiving animals (hearing, motivation, experience, demography, behavioral context) and can be difficult to predict (Southall *et al.,* 2007; Ellison *et al.,* 2012). NMFS uses a generalized acoustic threshold based on received level to estimate the onset of behavioral harassment. NMFS predicts that marine mammals may be behaviorally harassed (*i.e.,* Level B harassment) when exposed to underwater anthropogenic noise above received levels of 160 dB re 1 µPa (rms) for the impulsive sources (*i.e.,* boomers, sparkers) and non-impulsive, intermittent sources (*e.g.,* CHIRP SBPs) evaluated here for Ocean Wind II's activity.

Level A Harassment—NMFS' Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0) (Technical Guidance, 2018) identifies dual criteria to assess auditory injury (Level A harassment) to five different marine mammal groups (based on hearing sensitivity) as a result of exposure to noise from two different types of sources (impulsive or non-impulsive). For more information, see NMFS' 2018 Technical Guidance, which may be accessed at *www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-acoustic-technical-guidance.*

Ocean Wind II's activity includes the use of impulsive (*i.e.,* sparkers and boomers) and non-impulsive (*e.g.,* CHIRP SBP) sources. However, as discussed above, NMFS has concluded that Level A harassment is not a reasonably likely outcome for marine mammals exposed to noise through use of the sources proposed for use here, and the potential for Level A harassment is not evaluated further in this document. Please see Ocean Wind II's application for details of a quantitative exposure analysis exercise, *i.e.,* calculated Level A harassment isopleths and estimated Level A harassment exposures. Maximum estimated Level A harassment isopleths were less than 5 m for all sources and hearing groups with the exception of an estimated 18 m and 21 m zone calculated for high-frequency cetaceans during use of the TB Chirp III and GeoPulse 5430 CHIRP SBP, respectively (see Table 1 for source characteristics). Ocean Wind II did not request authorization of take by Level A harassment, and no take by Level A harassment is authorized by NMFS.

Ensonified Area

NMFS has developed a user-friendly methodology for estimating the extent of the Level B harassment isopleths associated with relevant HRG survey equipment (NMFS, 2020). This methodology incorporates frequency and directionality to refine estimated ensonified zones. For acoustic sources that operate with different beamwidths, the maximum beamwidth was used, and

the lowest frequency of the source was used when calculating the frequency-dependent absorption coefficient (Table 1).

NMFS considers the data provided by Crocker and Fratantonio (2016) to represent the best available information on source levels associated with HRG equipment and, therefore, recommends that source levels provided by Crocker and Fratantonio (2016) be incorporated in the method described above to estimate isopleth distances to harassment thresholds. In cases when the source level for a specific type of HRG equipment is not provided in Crocker and Fratantonio (2016), NMFS recommends that either the source levels provided by the manufacturer be used, or, in instances where source levels provided by the manufacturer are unavailable or unreliable, a proxy from Crocker and Fratantonio (2016) be used instead. Table 1 shows the HRG equipment types that may be used during the surveys and the source levels associated with those HRG equipment types.

Results of modeling using the methodology described above indicated that, of the HRG survey equipment planned for use by Ocean Wind II that has the potential to result in Level B harassment of marine mammals, the Applied Acoustics Dura-Spark UHD and GeoMarine Geo-Source sparkers would produce the largest Level B harassment isopleth (141 m). Estimated Level B harassment isopleths for all sources evaluated here, including the sparkers, are provided in Table 4. Although Ocean Wind II does not expect to use sparker sources on all planned survey days, it assumes for purposes of analysis that the sparker would be used on all survey days. This is a conservative approach, as the actual sources used on individual survey days may produce smaller harassment distances.

TABLE 4—DISTANCES TO LEVEL B HARASSMENT THRESHOLD

[160 dB rms]

Equipment	Distance to Level B harassment threshold (m)
ET 216 CHIRP	9
ET 424 CHIRP	4
ET 512i CHIRP	6
GeoPulse 5430A	21
TB CHIRP III	48
Pangeo SBI	22
AA Triple plate S-Boom (700/1,000 J)	34
AA, Dura-spark UHD Sparkers	141
GeoMarine Sparkers	141

Marine Mammal Occurrence

In this section, NMFS provides information about the presence, density, or group dynamics of marine mammals that informs the take calculations.

Habitat-based density models produced by the Duke University Marine Geospatial Ecology Laboratory (Roberts *et al.,* 2016, 2017, 2018, 2020) represent the best available information regarding marine mammal densities in the survey area. The density data presented by Roberts *et al.* (2016, 2017, 2018, 2020) incorporates aerial and shipboard line-transect survey data from NMFS and other organizations and incorporates data from 8 physiographic and 16 dynamic oceanographic and biological covariates, and controls for the influence of sea state, group size, availability bias, and perception bias on the probability of making a sighting. These density models were originally developed for all cetacean taxa in the U.S. Atlantic (Roberts *et al.,* 2016). In subsequent years, certain models have been updated based on additional data as well as certain methodological improvements. More information is available online at *seamap.env.duke.edu/models/Duke-EC/.* Marine mammal density estimates in the survey area (animals/km^2) were obtained using the most recent model results for all taxa (Roberts *et al.,* 2016, 2017, 2018, 2020). The updated models incorporate additional sighting data, including sightings from NOAA's Atlantic Marine Assessment Program for Protected Species (AMAPPS) surveys.

For the exposure analysis, density data from Roberts *et al.* (2016, 2017, 2018, 2020) were mapped using a geographic information system (GIS). Density grid cells that included any portion of the survey area were selected for all survey months (see Figure 3 in Ocean Wind II's application).

Densities from each of the selected density blocks were averaged for each month available to provide monthly density estimates for each species (when available based on the temporal resolution of the model products), along with the average annual density. Please see Tables 7 of Ocean Wind II's application for density values used in the exposure estimation process. Additional data regarding average group sizes from survey effort in the region was considered to ensure adequate take estimates are evaluated.

Take Calculation and Estimation

Here NMFS describes how the information provided above is brought together to produce a quantitative take estimate. In order to estimate the number of marine mammals predicted to be exposed to sound levels that would result in harassment, radial distances to predicted isopleths corresponding to Level B harassment thresholds are calculated, as described above. The maximum distance (*i.e.,* 141 m distance associated with sparkers) to the Level B harassment criterion and the estimated trackline distance traveled per day by a given survey vessel (*i.e.,* 70 km) are then used to calculate the daily ensonified area, or zone of influence (ZOI) around the survey vessel.

The ZOI is a representation of the maximum extent of the ensonified area around a sound source over a 24-hr period. The ZOI for each piece of equipment operating below 200 kHz was calculated per the following formula:

$$ZOI = (Distance/day \times 2r) + \pi r^2$$

Where r is the linear distance from the source to the harassment isopleth.

ZOIs associated with all sources with the expected potential to cause take of marine mammals are provided in Table 6 of Ocean Wind II's application. The largest daily ZOI (19.8 km^2), associated with the various sparkers planned for use, was applied to all planned survey days.

Potential Level B harassment exposures are estimated by multiplying the average annual density of each species within either the Lease Area or potential ECR area by the daily ZOI. That product is then multiplied by the number of operating days expected for the survey in each area assessed, and the product is rounded to the nearest whole number. These results are shown in Table 5.

TABLE 5—SUMMARY OF TAKE NUMBERS

Species	Abundance	Level B harassment takes [1]	Max percent population
NARW	368	11	2.98
Fin whale	6,802	4	<1
Sei whale	6,292	0 (1)	<1
Minke whale	21,968	1	<1
Humpback whale	1,393	2	<1
Sperm whale [3]	4,349	0 (3)	<1
Atlantic white-sided dolphin	93,233	6 (50)	<1
Atlantic spotted dolphin	39,921	2 (15)	<1
Common bottlenose dolphin: [2]			
Offshore Stock	62,851		2.9
Migratory Stock	6,639	1,842	27.75
Pilot Whales: [3]			
Short-finned pilot whale	28,924	1 (20)	<1
Long-finned pilot whale	39,215	1 (20)	<1
Risso's dolphin	35,215	0 (30)	<1
Common dolphin	172,974	54 (400)	<1
Harbor porpoise	95,543	90	<1
Seals: [4]			
Gray seal	451,600	25	<1
Harbor seal	61,336	25	<1

[1] Parentheses denote take authorization where different from calculated take estimates. Increases from calculated values are based on assumed average group size for the species; sei whale, Kenney and Vigness-Raposa, 2010; sperm whale and Risso's dolphin, Barkaszi and Kelly, 2018.

[2] At this time, Orsted is not able to identify how much work would occur inshore and offshore of the 20 m isobaths, a common delineation between offshore and coastal bottlenose dolphin stocks. Because Roberts *et al.* does not provide density estimates for individual stocks of common bottlenose dolphins, the take presented here is the total estimated take for both stocks. Although unlikely, for our analysis, we assume all takes could be allocated to either stock.

[3] Roberts (2018) only provides density estimates for pilot whales as a guild. The pilot whale density values were applied to both species of pilot whale; therefore, the total take number proposed for authorization for pilot whales (4) is double the estimated take number for the guild.

[4] Roberts (2018) only provides density estimates for seals without differentiating by species. Harbor seals and gray seals are assumed to occur equally; therefore, density values were split evenly between the two species, *i.e.,* total estimated take for ''seals'' is 22.

The take numbers shown in Table 5 are those requested by Ocean Wind II. NMFS concurs with the requested take numbers and has authorized them. Previous monitoring data compiled by Ocean Wind II (available online at: *www.fisheries.noaa.gov/action/incidental-take-authorization-ocean-wind-marine-site-characterization-surveys-offshore-new*) suggests that the take numbers are sufficient.

Mitigation

In order to issue an IHA under section 101(a)(5)(D) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to the activity, and other means of effecting the least practicable impact on the species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of the species or stock for taking for certain subsistence uses (latter not applicable for this action). NMFS regulations require applicants for incidental take authorizations to include information about the availability and feasibility (economic and technological) of equipment, methods, and manner of conducting the activity or other means of effecting the least practicable adverse impact upon the affected species or stocks and their habitat (50 CFR 216.104(a)(11)).

In evaluating how mitigation may or may not be appropriate to ensure the least practicable adverse impact on species or stocks and their habitat, as well as subsistence uses where applicable, we carefully consider two primary factors:

(1) The manner in which, and the degree to which, the successful implementation of the measure(s) is expected to reduce impacts to marine mammals, marine mammal species or stocks, and their habitat. This considers the nature of the potential adverse impact being mitigated (likelihood, scope, range). It further considers the likelihood that the measure will be effective if implemented (probability of accomplishing the mitigating result if implemented as planned), the likelihood of effective implementation (probability implemented as planned); and

(2) The practicability of the measures for applicant implementation, which may consider such things as cost and impact on operations.

Mitigation for Marine Mammals and Their Habitat

NMFS has prescribed the following mitigation measures be implemented during Ocean Wind II's marine site characterization surveys. Pursuant to section 7 of the ESA, Ocean Wind II would also be required to adhere to relevant Project Design Criteria (PDC) of the NMFS' Greater Atlantic Regional Fisheries Office (GARFO) programmatic consultation (specifically PDCs 4, 5, and 7) regarding geophysical surveys along the U.S. Atlantic coast (*https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-take-reporting-programmatics-greater-atlantic#offshore-wind-site-assessment-and-site-characterization-activities-programmatic-consultation*).

Marine Mammal Exclusion Zones and Harassment Zones

Marine mammal exclusion zones (EZ) will be established around the HRG survey equipment and monitored by protected species observers (PSOs):

- 500 m EZ for NARWs during use of specified acoustic sources (sparkers, boomers, and non-parametric sub-bottom profilers).
- 100 m EZ for all other marine mammals, with certain exceptions specified below, during operation of impulsive acoustic sources (boomer and/or sparker).

If a marine mammal is detected approaching or entering the EZs during

the HRG survey, the vessel operator will adhere to the shutdown procedures described below to minimize noise impacts on the animals. These stated requirements will be included in the site-specific training to be provided to the survey team. We note that in their application, Ocean Wind II requested an EZ of 50 m for all dolphins, seals, and porpoises and also requested that the shutdown requirements be waived for all dolphin, seal, and porpoise species for which take is authorized. NMFS has determined that the standard 100 m EZ for these species is appropriate, with only limited waiver of shutdown requirements as described in the *Shutdown Procedures* section below.

Pre-Start Clearance

Marine mammal clearance zones will be established around the HRG survey equipment and monitored by protected species observers (PSOs):

- 500 m for all ESA-listed marine mammals; and
- 100 m for non all other marine mammals.

Ocean Wind II will implement a 30-minute pre-start clearance period prior to the initiation of ramp-up of specified HRG equipment (see exception to this requirement in the *Shutdown Procedures* section below) During this period, clearance zones will be monitored by the PSOs, using the appropriate visual technology. Ramp-up may not be initiated if any marine mammal(s) is within its respective clearance zone. If a marine mammal is observed within an clearance zone during the pre-start clearance period, ramp-up may not begin until the animal(s) has been observed exiting its respective exclusion zone or until an additional time period has elapsed with no further sighting (*i.e.,* 15 minutes for small odontocetes and seals, and 30 minutes for all other species).

Ramp-Up of Survey Equipment

A ramp-up procedure, involving a gradual increase in source level output, is required at all times as part of the activation of the acoustic source when technically feasible. The ramp-up procedure will be used at the beginning of HRG survey activities in order to provide additional protection to marine mammals near the survey area by allowing them to vacate the area prior to the commencement of survey equipment operation at full power. Operators should ramp up sources to half power for 5 minutes and then proceed to full power.

Ramp-up activities will be delayed if a marine mammal(s) enters its respective exclusion zone. Ramp-up will continue if the animal has been observed exiting its respective exclusion zone or until an additional time period has elapsed with no further sighting (*i.e.,* 15 minutes for small odontocetes and seals and 30 minutes for all other species).

Ramp-up may occur at times of poor visibility, including nighttime, if appropriate visual monitoring has occurred with no detections of marine mammals in the 30 minutes prior to beginning ramp-up. Acoustic source activation may only occur at night where operational planning cannot reasonably avoid such circumstances.

Shutdown Procedures

An immediate shutdown of the impulsive HRG survey equipment will be required if a marine mammal is sighted entering or within its respective exclusion zone. The vessel operator must comply immediately with any call for shutdown by the Lead PSO. Any disagreement between the Lead PSO and vessel operator should be discussed only after shutdown has occurred. Subsequent restart of the survey equipment can be initiated if the animal has been observed exiting its respective exclusion zone or until an additional time period has elapsed (*i.e.* 15 minutes for harbor porpoise, 30 minutes for all other species).

If a species for which authorization has not been granted, or, a species for which authorization has been granted but the authorized number of takes have been met, approaches or is observed within the Level B harassment zone (Table 4), shutdown would occur.

If the acoustic source is shut down for reasons other than mitigation (*e.g.,* mechanical difficulty) for less than 30 minutes, it may be activated again without ramp-up if PSOs have maintained constant observation and no detections of any marine mammal have occurred within the respective exclusion zones. If the acoustic source is shut down for a period longer than 30 minutes, then pre-clearance and ramp-up procedures will be initiated as described in the previous section.

The shutdown requirement is waived for pinnipeds and for small delphinids of the following genera: *Delphinus, Lagenorhynchus, Stenella,* and *Tursiops.* Specifically, if a delphinid from the specified genera or a pinniped is visually detected approaching the vessel (*i.e.,* to bow ride) or towed equipment, shutdown is not required. Furthermore, if there is uncertainty regarding identification of a marine mammal species (*i.e.,* whether the observed marine mammal(s) belongs to one of the delphinid genera for which shutdown is waived), PSOs must use best professional judgement in making the decision to call for a shutdown. Additionally, shutdown is required if a delphinid or pinniped detected in the exclusion zone and belongs to a genus other than those specified.

Shutdown, pre-start clearance, and ramp-up procedures are not required during HRG survey operations using only non-impulsive sources (*e.g.,* echosounders) other than non-parametric sub-bottom profilers (*e.g.,* CHIRPs).

Vessel Strike Avoidance

Ocean Wind II must adhere to the following measures except in the case where compliance would create an imminent and serious threat to a person or vessel or to the extent that a vessel is restricted in its ability to maneuver and, because of the restriction, cannot comply.

- Vessel operators and crews must maintain a vigilant watch for all protected species and slow down, stop their vessel, or alter course, as appropriate and regardless of vessel size, to avoid striking any protected species. A visual observer aboard the vessel must monitor a vessel strike avoidance zone based on the appropriate separation distance around the vessel (distances stated below). Visual observers monitoring the vessel strike avoidance zone may be third-party observers (*i.e.,* PSOs) or crew members, but crew members responsible for these duties must be provided sufficient training to (1) distinguish protected species from other phenomena and (2) broadly to identify a marine mammal as a NARW, other whale (defined in this context as sperm whales or baleen whales other than NARWs), or other marine mammal.
- Members of the monitoring team will consult NMFS NARW reporting system and Whale Alert, as able, for the presence of NARWs throughout survey operations, and for the establishment of a DMA. If NMFS should establish a DMA in the survey area during the survey, the vessels will abide by speed restrictions in the DMA.
- All survey vessels, regardless of size, must observe a 10-knot speed restriction in specific areas designated by NMFS for the protection of NARWs from vessel strikes including seasonal management areas (SMAs) and dynamic management areas (DMAs) when in effect;
- All vessels greater than or equal to 19.8 m in overall length operating from November 1 through April 30 will operate at speeds of 10 knots or less at all times;

• All vessels must reduce their speed to 10 knots or less when mother/calf pairs, pods, or large assemblages of cetaceans are observed near a vessel;

• All vessels must maintain a minimum separation distance of 500 m from NARWs and other ESA-listed large whales;

• If a whale is observed but cannot be confirmed as a species other than a NARW or other ESA-listed large whale, the vessel operator must assume that it is a NARW and take appropriate action;

• All vessels must maintain a minimum separation distance of 100 m from non-ESA listed whales;

• All vessels must, to the maximum extent practicable, attempt to maintain a minimum separation distance of 50 m from all other marine mammals, with an understanding that at times this may not be possible (*e.g.,* for animals that approach the vessel).

• When marine mammals are sighted while a vessel is underway, the vessel shall take action as necessary to avoid violating the relevant separation distance (*e.g.,* attempt to remain parallel to the animal's course, avoid excessive speed or abrupt changes in direction until the animal has left the area). If marine mammals are sighted within the relevant separation distance, the vessel must reduce speed and shift the engine to neutral, not engaging the engines until animals are clear of the area. This does not apply to any vessel towing gear or any vessel that is navigationally constrained.

Project-specific training will be conducted for all vessel crew prior to the start of a survey and during any changes in crew such that all survey personnel are fully aware and understand the mitigation, monitoring, and reporting requirements. Prior to implementation with vessel crews, the training program will be provided to NMFS for review and approval. Confirmation of the training and understanding of the requirements will be documented on a training course log sheet. Signing the log sheet will certify that the crew member understands and will comply with the necessary requirements throughout the survey activities.

Based on our evaluation of these measures, NMFS has determined that the mitigation measures provide the means of effecting the least practicable impact on marine mammal species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

Monitoring and Reporting

In order to issue an IHA for an activity, section 101(a)(5)(D) of the MMPA states that NMFS must set forth requirements pertaining to the monitoring and reporting of such taking. The MMPA implementing regulations at 50 CFR 216.104(a)(13) indicate that requests for authorizations must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present in the proposed action area. Effective reporting is critical both to compliance as well as ensuring that the most value is obtained from the required monitoring.

Monitoring and reporting requirements prescribed by NMFS should contribute to improved understanding of one or more of the following:

• Occurrence of marine mammal species or stocks in the area in which take is anticipated (*e.g.,* presence, abundance, distribution, density);

• Nature, scope, or context of likely marine mammal exposure to potential stressors/impacts (individual or cumulative, acute or chronic), through better understanding of: (1) Action or environment (*e.g.,* source characterization, propagation, ambient noise); (2) affected species (*e.g.,* life history, dive patterns); (3) co-occurrence of marine mammal species with the action; or (4) biological or behavioral context of exposure (*e.g.,* age, calving or feeding areas);

• Individual marine mammal responses (behavioral or physiological) to acoustic stressors (acute, chronic, or cumulative), other stressors, or cumulative impacts from multiple stressors;

• How anticipated responses to stressors impact either: (1) Long-term fitness and survival of individual marine mammals; or (2) populations, species, or stocks;

• Effects on marine mammal habitat (*e.g.,* marine mammal prey species, acoustic habitat, or other important physical components of marine mammal habitat); and

• Mitigation and monitoring effectiveness.

Monitoring Measures

Visual monitoring will be performed by qualified, NMFS-approved PSOs, the resumes of whom will be provided to NMFS for review and approval prior to the start of survey activities. Ocean Wind II will employ independent, dedicated, trained PSOs, meaning that the PSOs must (1) be employed by a third-party observer provider, (2) have no tasks other than to conduct observational effort, collect data, and communicate with and instruct relevant vessel crew with regard to the presence of marine mammals and mitigation requirements (including brief alerts regarding maritime hazards), and (3) have successfully completed an approved PSO training course appropriate for their designated task. On a case-by-case basis, non-independent observers may be approved by NMFS for limited, specific duties in support of approved, independent PSOs on smaller vessels with limited crew capacity operating in nearshore waters. Section 5 of the draft IHA contains further details regarding PSO approval.

The PSOs will be responsible for monitoring the waters surrounding each survey vessel to the farthest extent permitted by sighting conditions, including exclusion zones, during all HRG survey operations. PSOs will visually monitor and identify marine mammals, including those approaching or entering the established exclusion zones during survey activities. It will be the responsibility of the Lead PSO on duty to communicate the presence of marine mammals as well as to communicate the action(s) that are necessary to ensure mitigation and monitoring requirements are implemented as appropriate.

During all HRG survey operations (*e.g.,* any day on which use of an HRG source is planned to occur), a minimum of one PSO must be on duty during daylight operations on each survey vessel, conducting visual observations at all times on all active survey vessels during daylight hours (*i.e.,* from 30 minutes prior to sunrise through 30 minutes following sunset). Two PSOs will be on watch during nighttime operations. The PSO(s) must ensure 360° visual coverage around the vessel from the most appropriate observation posts and will conduct visual observations using binoculars and/or night vision goggles and the naked eye while free from distractions and in a consistent, systematic, and diligent manner. PSOs may be on watch for a maximum of 4 consecutive hours followed by a break of at least 2 hours between watches and may conduct a maximum of 12 hours of observation per 24-hr period. In cases where multiple vessels are surveying concurrently, any observations of marine mammals will be communicated to PSOs on all nearby survey vessels.

PSOs must be equipped with binoculars and have the ability to

estimate distance and bearing to detect marine mammals, particularly in proximity to exclusion zones. Reticulated binoculars must also be available to PSOs for use as appropriate based on conditions and visibility to support the sighting and monitoring of marine mammals. During nighttime operations, night-vision goggles with thermal clip-ons and infrared technology will be used. Position data will be recorded using hand-held or vessel GPS units for each sighting.

During good conditions (*e.g.,* daylight hours; Beaufort sea state (BSS) 3 or less), to the maximum extent practicable, PSOs will also conduct observations when the acoustic source is not operating for comparison of sighting rates and behavior with and without use of the active acoustic sources. Any observations of marine mammals by crew members aboard any vessel associated with the survey will be relayed to the PSO team.

Data on all PSO observations will be recorded based on standard PSO collection requirements. This will include dates, times, and locations of survey operations; dates and times of observations, location and weather; details of marine mammal sightings (*e.g.,* species, numbers, behavior); and details of any observed marine mammal behavior that occurs (*e.g.,* noted behavioral disturbances).

Reporting Measures

Within 90 days after completion of survey activities or expiration of this IHA, whichever comes sooner, a final technical report will be provided to NMFS that fully documents the methods and monitoring protocols, summarizes the data recorded during monitoring, summarizes the number of marine mammals observed during survey activities (by species, when known), summarizes the mitigation actions taken during surveys (including what type of mitigation and the species and number of animals that prompted the mitigation action, when known), and provides an interpretation of the results and effectiveness of all mitigation and monitoring. A final report must be submitted within 30 days following resolution of any comments on the draft report. All draft and final marine mammal and acoustic monitoring reports must be submitted to *PR.ITP.MonitoringReports@noaa.gov* and *ITP.Daly@noaa.gov*. The report must contain at minimum, the following:

- PSO names and affiliations;
- Dates of departures and returns to port with port name;
- Dates and times (Greenwich Mean Time) of survey effort and times corresponding with PSO effort;
- Vessel location (latitude/longitude) when survey effort begins and ends; vessel location at beginning and end of visual PSO duty shifts;
- Vessel heading and speed at beginning and end of visual PSO duty shifts and upon any line change;
- Environmental conditions while on visual survey (at beginning and end of PSO shift and whenever conditions change significantly), including wind speed and direction, Beaufort sea state, Beaufort wind force, swell height, weather conditions, cloud cover, sun glare, and overall visibility to the horizon;
- Factors that may be contributing to impaired observations during each PSO shift change or as needed as environmental conditions change (*e.g.,* vessel traffic, equipment malfunctions); and
- Survey activity information, such as type of survey equipment in operation, acoustic source power output while in operation, and any other notes of significance (*i.e.,* pre-start clearance survey, ramp-up, shutdown, end of operations, etc.).

If a marine mammal is sighted, the following information should be recorded:

- Watch status (sighting made by PSO on/off effort, opportunistic, crew, alternate vessel/platform);
- PSO who sighted the animal;
- Time of sighting;
- Vessel location at time of sighting;
- Water depth;
- Direction of vessel's travel (compass direction);
- Direction of animal's travel relative to the vessel;
- Pace of the animal;
- Estimated distance to the animal and its heading relative to vessel at initial sighting;
- Identification of the animal (*e.g.,* genus/species, lowest possible taxonomic level, or unidentified); also note the composition of the group if there is a mix of species;
- Estimated number of animals (high/low/best);
- Estimated number of animals by cohort (adults, yearlings, juveniles, calves, group composition, etc.);
- Description (as many distinguishing features as possible of each individual seen, including length, shape, color, pattern, scars or markings, shape and size of dorsal fin, shape of head, and blow characteristics);
- Detailed behavior observations (*e.g.,* number of blows, number of surfaces, breaching, spyhopping, diving, feeding, traveling; as explicit and detailed as possible; note any observed changes in behavior);
- Animal's closest point of approach and/or closest distance from the center point of the acoustic source;
- Platform activity at time of sighting (*e.g.,* deploying, recovering, testing, data acquisition, other); and
- Description of any actions implemented in response to the sighting (*e.g.,* delays, shutdown, ramp-up, speed or course alteration, etc.) and time and location of the action.

If a NARW is observed at any time by PSOs or personnel on any project vessels, during surveys or during vessel transit, Ocean Wind II must immediately report sighting information to the NMFS NARW Sighting Advisory System: (866) 755–6622. NARW sightings in any location may also be reported to the U.S. Coast Guard via channel 16.

In the event that Ocean Wind II personnel discover an injured or dead marine mammal, Ocean Wind II will report the incident to the NMFS Office of Protected Resources (OPR) and the NMFS New England/Mid-Atlantic Stranding Coordinator as soon as feasible. The report must include the following information:

- Time, date, and location (latitude/longitude) of the first discovery (and updated location information if known and applicable);
- Species identification (if known) or description of the animal(s) involved;
- Condition of the animal(s) (including carcass condition if the animal is dead);
- Observed behaviors of the animal(s), if alive;
- If available, photographs or video footage of the animal(s); and
- General circumstances under which the animal was discovered.

In the unanticipated event of a ship strike of a marine mammal by any vessel involved in the activities covered by the IHA, Ocean Wind II will report the incident to the NMFS OPR and the NMFS New England/Mid-Atlantic Stranding Coordinator as soon as feasible. The report must include the following information:

- Time, date, and location (latitude/longitude) of the incident;
- Species identification (if known) or description of the animal(s) involved;
- Vessel's speed during and leading up to the incident;
- Vessel's course/heading and what operations were being conducted (if applicable);
- Status of all sound sources in use;
- Description of avoidance measures/requirements that were in place at the

time of the strike and what additional measures were taken, if any, to avoid strike;

- Environmental conditions (*e.g.,* wind speed and direction, Beaufort sea state, cloud cover, visibility) immediately preceding the strike;
- Estimated size and length of animal that was struck;
- Description of the behavior of the marine mammal immediately preceding and following the strike;
- If available, description of the presence and behavior of any other marine mammals immediately preceding the strike;
- Estimated fate of the animal (*e.g.,* dead, injured but alive, injured and moving, blood or tissue observed in the water, status unknown, disappeared); and
- To the extent practicable, photographs or video footage of the animal(s).

Negligible Impact Analysis and Determination

NMFS has defined negligible impact as an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival (50 CFR 216.103). A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (*i.e.,* population-level effects). An estimate of the number of takes alone is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be ''taken'' through harassment, NMFS considers other factors, such as the likely nature of any responses (*e.g.,* intensity, duration), the context of any responses (*e.g.,* critical reproductive time or location, migration), as well as effects on habitat, and the likely effectiveness of the mitigation. NMFS also assesses the number, intensity, and context of estimated takes by evaluating this information relative to population status. Consistent with the 1989 preamble for NMFS's implementing regulations (54 FR 40338; September 29, 1989), the impacts from other past and ongoing anthropogenic activities are incorporated into this analysis via their impacts on the environmental baseline (*e.g.,* as reflected in the regulatory status of the species, population size and growth rate where known, ongoing sources of human-caused mortality, or ambient noise levels).

To avoid repetition, our analysis applies to all the species listed in Table 5 given that NMFS expects the anticipated effects of the survey to be similar in nature. Where there are meaningful differences between species or stocks—as is the case of the NARW—they are included as separate subsections below. NMFS does not anticipate that serious injury or mortality would occur as a result from HRG surveys, even in the absence of mitigation, and no serious injury or mortality is authorized. As discussed in the Potential Effects section, non-auditory physical effects and vessel strike are not expected to occur. NMFS expects that all potential takes would be in the form of short-term Level B behavioral harassment in the form of temporary avoidance of the area or decreased foraging (if such activity was occurring), reactions that are considered to be of low severity and with no lasting biological consequences (*e.g.,* Southall *et al.,* 2007). Even repeated Level B harassment of some small subset of an overall stock is unlikely to result in any significant realized decrease in viability for the affected individuals, and thus would not result in any adverse impact to the stock as a whole. As described above, Level A harassment is not expected to occur given the nature of the operations, the estimated size of the Level A harassment zones, and the required shutdown zones for certain activities.

In addition to being temporary, the maximum expected harassment zone around a survey vessel is 141 m. Although this distance is assumed for all survey activity in estimating take numbers proposed for authorization and evaluated here, in reality much of the survey activity would involve use of non-impulsive acoustic sources with a reduced acoustic harassment zone of 48 m, producing expected effects of particularly low severity. Therefore, the ensonified area surrounding each vessel is relatively small compared to the overall distribution of the animals in the area and their use of the habitat. Feeding behavior is not likely to be significantly impacted as prey species are mobile and are broadly distributed throughout the survey area; therefore, marine mammals that may be temporarily displaced during survey activities are expected to be able to resume foraging once they have moved away from areas with disturbing levels of underwater noise. Because of the temporary nature of the disturbance and the availability of similar habitat and resources in the surrounding area, the impacts to marine mammals and the food sources that they utilize are not expected to cause significant or long-term consequences for individual marine mammals or their populations.

There are no rookeries, mating or calving grounds known to be biologically important to marine mammals within the proposed survey area and there are no feeding areas known to be biologically important to marine mammals within the survey area. There is no designated critical habitat for any ESA-listed marine mammals in the survey area.

NARWs

The status of the NARW population is of heightened concern and, therefore, merits additional analysis. As noted previously, elevated NARW mortalities began in June 2017 and there is an active UME. Overall, preliminary findings support human interactions, specifically vessel strikes and entanglements, as the cause of death for the majority of NARWs. As noted previously, the survey area overlaps a migratory corridor BIA for NARWs. Due to the fact that the survey activities are temporary and the spatial extent of sound produced by the survey would be very small relative to the spatial extent of the available migratory habitat in the BIA, NARW migration is not expected to be impacted by the survey. Given the relatively small size of the ensonified area, it is unlikely that prey availability would be adversely affected by HRG survey operations. Required vessel strike avoidance measures will also decrease risk of ship strike during migration; no ship strike is expected to occur during Ocean Wind II's planned activities. Additionally, only very limited take by Level B harassment of NARWs has been requested and has been authorized by NMFS as HRG survey operations are required to maintain a 500 m EZ and shutdown if a NARW is sighted at or within the EZ. The 500 m shutdown zone for NARWs is conservative, considering the Level B harassment isopleth for the most impactful acoustic source (*i.e.,* sparker) is estimated to be 141 m, and thereby minimizes the potential for behavioral harassment of this species. As noted previously, Level A harassment is not expected due to the small PTS zones associated with HRG equipment types proposed for use. NMFS does not anticipate NARWs takes that would result from Ocean Wind II's activities would impact annual rates of recruitment or survival. Thus, any takes that occur would not result in population level impacts.

Other Marine Mammal Species With Active UMEs

As noted previously, there are several active UMEs occurring in the vicinity of Ocean Wind II's survey area. Elevated humpback whale mortalities have occurred along the Atlantic coast from Maine through Florida since January 2016. Of the cases examined, approximately half had evidence of human interaction (ship strike or entanglement). The UME does not yet provide cause for concern regarding population-level impacts. Despite the UME, the relevant population of humpback whales (the West Indies breeding population, or DPS) remains stable at approximately 12,000 individuals.

Beginning in January 2017, elevated minke whale strandings have occurred along the Atlantic coast from Maine through South Carolina, with highest numbers in Massachusetts, Maine, and New York. This event does not provide cause for concern regarding population level impacts, as the likely population abundance is greater than 20,000 whales.

The required mitigation measures are expected to reduce the number and/or severity of takes for all species listed in Table 5, including those with active UMEs, to the level of least practicable adverse impact. In particular they would provide animals the opportunity to move away from the sound source throughout the survey area before HRG survey equipment reaches full energy, thus preventing them from being exposed to sound levels that have the potential to cause injury (Level A harassment) or more severe Level B harassment. No Level A harassment is anticipated, even in the absence of mitigation measures, or authorized.

NMFS expects that takes would be in the form of short-term Level B behavioral harassment by way of brief startling reactions and/or temporary vacating of the area, or decreased foraging (if such activity was occurring)—reactions that (at the scale and intensity anticipated here) are considered to be of low severity, with no lasting biological consequences. Since both the sources and marine mammals are mobile, animals would only be exposed briefly to a small ensonified area that might result in take. Additionally, required mitigation measures would further reduce exposure to sound that could result in more severe behavioral harassment.

In summary and as described above, the following factors primarily support our determination that the impacts resulting from this activity are not expected to adversely affect the species or stock through effects on annual rates of recruitment or survival:

- No mortality or serious injury is anticipated or proposed for authorization;
- No Level A harassment (PTS) is anticipated, even in the absence of mitigation measures, or authorized;
- Foraging success is not likely to be significantly impacted as effects on species that serve as prey species for marine mammals from the survey are expected to be minimal;
- The availability of alternate areas of similar habitat value for marine mammals to temporarily vacate the survey area during the planned survey to avoid exposure to sounds from the activity;
- Take is anticipated to be primarily Level B behavioral harassment consisting of brief startling reactions and/or temporary avoidance of the survey area;
- While the survey area is within areas noted as a migratory BIA for NARWs, the activities would occur in such a comparatively small area such that any avoidance of the survey area due to activities would not affect migration. In addition, mitigation measures to shutdown at 500 m to minimize potential for Level B behavioral harassment would limit any take of the species; and
- The mitigation measures, including visual monitoring and shutdowns, are expected to minimize potential impacts to marine mammals.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the proposed monitoring and mitigation measures, NMFS finds that the total marine mammal take from the activity will have a negligible impact on all affected marine mammal species or stocks.

Small Numbers

As noted above, only small numbers of incidental take may be authorized under sections 101(a)(5)(A) and (D) of the MMPA for specified activities other than military readiness activities. The MMPA does not define small numbers and so, in practice, where estimated numbers are available, NMFS compares the number of individuals taken to the most appropriate estimation of abundance of the relevant species or stock in our determination of whether an authorization is limited to small numbers of marine mammals. When the predicted number of individuals to be taken is fewer than one third of the species or stock abundance, the take is considered to be of small numbers. Additionally, other qualitative factors may be considered in the analysis, such as the temporal or spatial scale of the activities.

NMFS has authorized incidental take of 16 marine mammal species (with 17 managed stocks). The total amount of takes relative to the best available population abundance is less than 22 percent for one stock (bottlenose dolphin northern coastal migratory stock), less than 3 percent for the NARW, and less than 1 percent for all other species and stocks, which NMFS finds are small numbers of marine mammals relative to the estimated overall population abundances for those stocks. See Table 5.

Based on the analysis contained herein of the proposed activity (including the proposed mitigation and monitoring measures) and the anticipated take of marine mammals, NMFS finds that small numbers of marine mammals will be taken relative to the population size of the affected species or stocks.

Unmitigable Adverse Impact Analysis and Determination

There are no relevant subsistence uses of the affected marine mammal stocks or species implicated by this action. Therefore, NMFS has determined that the total taking of affected species or stocks would not have an unmitigable adverse impact on the availability of such species or stocks for taking for subsistence purposes.

Endangered Species Act

Section 7(a)(2) of the Endangered Species Act of 1973 (ESA: 16 U.S.C. 1531 *et seq.*) requires that each Federal agency insure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat. To ensure ESA compliance for the issuance of IHAs, NMFS OPR consults internally whenever we propose to authorize take for endangered or threatened species, in this case with NMFS Greater Atlantic Regional Fisheries Office (GARFO).

NMFS OPR is authorizing the incidental take of four species of marine mammals which are listed under the ESA: North Atlantic right, fin, sei, and sperm whales. On June 29, 2021 (revised September 2021), GARFO completed an informal programmatic consultation on the effects of certain site assessment and site characterization activities to be carried out to support the

siting of offshore wind energy development projects off the U.S. Atlantic coast. Part of the activities considered in the consultation are geophysical surveys such as those proposed by Ocean Wind II for which we have authorized take. GARFO concluded site assessment surveys (and issuance of associated IHAs) are not likely to adversely affect endangered species or adversely modify or destroy critical habitat. NMFS has determined that issuance of the IHA is covered under the programmatic consultation.

National Environmental Policy Act

To comply with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq.*) and NOAA Administrative Order (NAO) 216–6A, NMFS must review our action (*i.e.,* the issuance of an IHA) with respect to potential impacts on the human environment. This action is consistent with categories of activities identified in Categorical Exclusion B4 (IHAs with no anticipated serious injury or mortality) of the Companion Manual for NOAA Administrative Order 216–6A, which do not individually or cumulatively have the potential for significant impacts on the quality of the human environment and for which we have not identified any extraordinary circumstances that would preclude this categorical exclusion. Accordingly, NMFS has determined that the issuance of the final IHA qualifies to be categorically excluded from further NEPA review.

Authorization

As a result of these determinations, NMFS has issued an IHA to Ocean Wind II for conducting marine site characterization surveys off the coast of New Jersey, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated. The IHA is effective from May 10, 2022 through May 9, 2023 and can be found at *https://www.fisheries.noaa.gov/action/incidental-take-authorization-ocean-wind-llc-marine-site-characterization-surveys-new-0.*

Kimberly Damon-Randall,

Director, Office of Protected Resources, National Marine Fisheries Service.

[FR Doc. 2022–10759 Filed 5–18–22; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF DEFENSE

Department of the Navy

Secretarial Authorization for Members of the Department of the Navy To Serve on the Board of Directors, Navy-Marine Corps Relief Society

AGENCY: Department of the Navy (DoN), Department of Defense (DoD).

ACTION: Notice.

SUMMARY: The Secretary of the Navy, with the concurrence of the Department of Defense General Counsel, has authorized Deputy Commandant, Installations and Logistics, current incumbent Lieutenant General Edward D. Banta, United States Marine Corps (USMC); Command Sergeant Major for Manpower and Reserve Affairs (Headquarters USMC), current incumbent Sergeant Major Rafael Rodriguez, USMC; and Chief of Naval Personnel Fleet Master Chief Petty Officer, current incumbent Master Chief Petty Officer Wesley K. Koshoffer, United States Navy, and successors to these positions, to serve without compensation on the Board of Directors of the Navy-Marine Corps Relief Society. Authorization to serve on the Board of Directors has been made for the purpose of providing oversight and advice to, and coordination with, the Navy-Marine Corps Relief Society. Participation of the above officials in the activities of the Society will not extend to participation in day-to-day operations.

ADDRESSES: Commander Jonathan T. Flynn, Office of the Judge Advocate General, Administrative Law Division, 703–614– 7479.

Dated: May 13, 2022.

J.M. Pike,

Commander, Judge Advocate General's Corps, U.S. Navy, Federal Register Liaison Officer.

[FR Doc. 2022–10745 Filed 5–18–22; 8:45 am]

BILLING CODE 3810–FF–P

DEPARTMENT OF EDUCATION

[Docket No. ED–2022–SCC–0067]

Agency Information Collection Activities; Comment Request; Guaranty Agency Financial Report

AGENCY: Federal Student Aid (FSA), Department of Education (ED).

ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995, ED is proposing an extension without change of a currently approved collection.

DATES: Interested persons are invited to submit comments on or before July 18, 2022.

ADDRESSES: To access and review all the documents related to the information collection listed in this notice, please use *http://www.regulations.gov* by searching the Docket ID number ED–2022–SCC–0067. Comments submitted in response to this notice should be submitted electronically through the Federal eRulemaking Portal at *http://www.regulations.gov* by selecting the Docket ID number or via postal mail, commercial delivery, or hand delivery. If the *regulations.gov* site is not available to the public for any reason, ED will temporarily accept comments at *ICDocketMgr@ed.gov.* Please include the docket ID number and the title of the information collection request when requesting documents or submitting comments. *Please note that comments submitted by fax or email and those submitted after the comment period will not be accepted.* Written requests for information or comments submitted by postal mail or delivery should be addressed to the PRA Coordinator of the Strategic Collections and Clearance Governance and Strategy Division, U.S. Department of Education, 400 Maryland Ave SW, LBJ, Room 6W208D, Washington, DC 20202–8240.

FOR FURTHER INFORMATION CONTACT: For specific questions related to collection activities, please contact Beth Grebeldinger, 202–570–8414.

SUPPLEMENTARY INFORMATION: The Department of Education (ED), in accordance with the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3506(c)(2)(A)), provides the general public and Federal agencies with an opportunity to comment on proposed, revised, and continuing collections of information. This helps the Department assess the impact of its information collection requirements and minimize the public's reporting burden. It also helps the public understand the Department's information collection requirements and provide the requested data in the desired format. ED is soliciting comments on the proposed information collection request (ICR) that is described below. The Department of Education is especially interested in public comment addressing the following issues: (1) Is this collection necessary to the proper functions of the Department; (2) will this information be processed and used in a timely manner; (3) is the estimate of burden accurate; (4) how might the Department enhance the quality, utility, and clarity of the information to be collected; and (5) how might the Department minimize the

burden of this collection on the respondents, including through the use of information technology. Please note that written comments received in response to this notice will be considered public records.

Title of Collection: Guaranty Agency Financial Report.

OMB Control Number: 1845–0026.

Type of Review: An extension without change of a currently approved collection.

Respondents/Affected Public: State, Local, and Tribal Governments; Private Sector.

Total Estimated Number of Annual Responses: 432.

Total Estimated Number of Annual Burden Hours: 23,760.

Abstract: The Department of Education (ED) is requesting renewal by extension of the information collection 1845–0026 for the Guaranty Agency Financial Report. There has been no change to the underlying statute or regulations.

The Guaranty Agency Financial Report is used by a guaranty agency to request payments of reinsurance for defaulted student loans; make payments for amounts due ED, for collections on default and lender of last resort loan (default) claims on which reinsurance has been paid and for refunding amounts previously paid for reinsurance claims. The form is also used to determine required reserve levels for agencies; and to collect debt information as required for the ''Report on Accounts and Loans Receivable Due from the Public,'' SF 220–9 (Schedule 9 Report) as required by the U.S. Department of Treasury.

Dated: May 16, 2022.

Kun Mullan,

PRA Coordinator, Strategic Collections and Clearance, Governance and Strategy Division, Office of Chief Data Officer, Office of Planning, Evaluation and Policy Development.

[FR Doc. 2022–10767 Filed 5–18–22; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. AC22–152–000]

Florida Power & Light Company; Notice of Filing

Take notice that on May 12, 2022, Florida Power & Light Company (FPL) submitted a waiver request to the Chief Accountant of the Federal Energy Regulatory Commission (Commission or FERC) related to Account 165, Prepayments, of the Commission's Uniform System of Accounts to allow FPL to apply a $100,000 materiality threshold for recording prepayments on the balance sheet, or alternatively, to apply a 0.5 percent threshold of the prior year ending balance in Account 165 when determining the number of prepayments to record. FPL requests that this waiver is applied prospectively, with a limited duration of ten years if the Commission requires such limitation.

Any person desiring to intervene or to protest this filing must file in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214). Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Any person wishing to become a party must file a notice of intervention or motion to intervene, as appropriate. Such notices, motions, or protests must be filed on or before the comment date. Anyone filing a motion to intervene or protest must serve a copy of that document on the Applicant. On or before the comment date, it is not necessary to serve motions to intervene or protests on persons other than the Applicant.

In addition to publishing the full text of this document in the **Federal Register**, the Commission provides all interested persons an opportunity to view and/or print the contents of this document via the internet through the Commission's Home Page (*http://ferc.gov*) using the ''eLibrary'' link. Enter the docket number excluding the last three digits in the docket number field to access the document. At this time, the Commission has suspended access to the Commission's Public Reference Room, due to the proclamation declaring a National Emergency concerning the Novel Coronavirus Disease (COVID–19), issued by the President on March 13, 2020. For assistance, contact FERC at *FERCOnlineSupport@ferc.gov* or call toll-free, (886) 208–3676 or TYY, (202) 502–8659.

The Commission strongly encourages electronic filings of comments, protests and interventions in lieu of paper using the ''eFiling'' link at *http://www.ferc.gov.* Persons unable to file electronically may mail similar pleadings to the Federal Energy Regulatory Commission, 888 First Street NE, Washington, DC 20426. Hand delivered submissions in docketed proceedings should be delivered to Health and Human Services, 12225 Wilkins Avenue, Rockville, Maryland 20852.

Comment Date: 5:00 p.m. Eastern Time on May 23, 2022.

Dated: May 13, 2022.

Kimberly D. Bose,

Secretary.

[FR Doc. 2022–10779 Filed 5–18–22; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. CP21–465–000; CP21–465–001; CP21–465–002]

Driftwood Pipeline LLC; Notice of Availability of the Draft Environmental Impact Statement for the Proposed Line 200 and Line 300 Project

The staff of the Federal Energy Regulatory Commission (FERC or Commission) has prepared a draft environmental impact statement (EIS) for the Line 200 and Line 300 Project (Project), proposed by Driftwood Pipeline LLC (Driftwood) in the above-referenced docket. Driftwood proposes to construct and operate dual 42-inch-diameter natural gas pipelines originating near Ragley in Beauregard Parish, Louisiana southward to a proposed receiver facility near Carlyss in Calcasieu Parish, Louisiana. Additional facilities include one new compressor station, eleven meter stations, six mainline valves, and other aboveground facilities. The Project would provide a maximum seasonal capacity of 5.7 billion cubic feet of natural gas per day to the Lake Charles market. According to Driftwood, its Project would provide enhanced supply access, resilience, and reliability to the natural gas market in the Lake Charles area.

The draft EIS assesses the potential environmental effects of the construction and operation of the Project in accordance with the requirements of the National Environmental Policy Act (NEPA). The FERC staff concludes that approval of the proposed Project, with the mitigation measures recommended in the EIS, would result in some adverse environmental impacts, but none that are considered significant. Regarding climate change impacts, the Project's construction and operation emissions would increase the atmospheric concentration of greenhouse gasses (GHG), in combination with past, present, and future emissions from all other sources. This EIS is not

characterizing the Project's GHG emissions as significant or insignificant because the Commission is conducting a generic proceeding to determine whether and how the Commission will conduct significance determinations going forward.[1] The EIS also concludes that no system, route, or other alternative would meet the Project objective while providing a significant environmental advantage over the Project as proposed.

The U.S. Environmental Protection Agency participated as a cooperating agency in the preparation of the EIS. Cooperating agencies have jurisdiction by law or special expertise with respect to resources potentially affected by the proposal and participate in the NEPA analysis.

The draft EIS addresses the potential environmental effects of the construction and operation of the following project facilities:

- Installation of 36.9 miles of 42-inch-diameter pipeline in Beauregard and Calcasieu Parishes, Louisiana (Line 200);
- installation of 30.8 miles of 42-inch-diameter pipeline in Beauregard and Calcasieu Parishes, Louisiana (Line 300);
- installation of the new Indian Bayou Compressor Station (up to 211,200 horsepower of electric-driven compression in Beauregard Parish);
- installation of twelve new meter stations in Beauregard and Calcasieu Parishes;
- installation of a dual receiver facility at the terminus of Line 200 and Line 300 in Calcasieu Parish; and
- installation of six new mainline valves in Beauregard and Calcasieu Parishes.

The Commission mailed a copy of the *Notice of Availability* to federal, state, and local government representatives and agencies; elected officials; environmental and public interest groups; Native American tribes; potentially affected landowners and other interested individuals and groups; and newspapers and libraries in the project area. The draft EIS is only available in electronic format. It may be viewed and downloaded from the FERC's website (*www.ferc.gov*), on the natural gas environmental documents page (*https://www.ferc.gov/industries-data/natural-gas/environment/environmental-documents*). In addition, the draft EIS may be accessed by using the eLibrary link on the FERC's website. Click on the eLibrary link (*https://elibrary.ferc.gov/eLibrary/search*) select ''General Search'' and enter the docket number in the ''Docket Number'' field, excluding the last three digits (*i.e.,* CP21–465). Be sure you have selected an appropriate date range. For assistance, please contact FERC Online Support at *FercOnlineSupport@ferc.gov* or toll free at (866) 208–3676, or for TTY, contact (202) 502–8659.

The draft EIS is not a decision document. It presents Commission staff's independent analysis of the environmental issues for the Commission to consider when addressing the merits of all issues in this proceeding. Any person wishing to comment on the draft EIS may do so. Your comments should focus on draft EIS's disclosure and discussion of potential environmental effects, measures to avoid or lessen environmental impacts, and the completeness of the submitted alternatives, information and analyses. To ensure consideration of your comments on the proposal in the final EIS, it is important that the Commission receive your comments on or before 5:00 p.m. Eastern Time on July 5, 2022.

For your convenience, there are four methods you can use to submit your comments to the Commission. The Commission will provide equal consideration to all comments received, whether filed in written form or provided verbally. The Commission encourages electronic filing of comments and has staff available to assist you at (866) 208–3676 or *FercOnlineSupport@ferc.gov.* Please carefully follow these instructions so that your comments are properly recorded.

(1) You can file your comments electronically using the eComment feature on the Commission's website (*www.ferc.gov*) under the link to FERC Online. This is an easy method for submitting brief, text-only comments on a project;

(2) You can file your comments electronically by using the eFiling feature on the Commission's website (*www.ferc.gov*) under the link to FERC Online. With eFiling, you can provide comments in a variety of formats by attaching them as a file with your submission. New eFiling users must first create an account by clicking on ''eRegister.'' If you are filing a comment on a particular project, please select ''Comment on a Filing'' as the filing type;

(3) You can file a paper copy of your comments by mailing them to the Commission. Be sure to reference the project docket number (CP21–465) on your letter. Submissions sent via the U.S. Postal Service must be addressed to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 888 First Street NE, Room 1A, Washington, DC 20426. Submissions sent via any other carrier must be addressed to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 12225 Wilkins Avenue, Rockville, Maryland 20852; or

(4) In lieu of sending written or electronic comments, the Commission invites you to attend one of the virtual comment meetings to receive comments on the draft EIS. The dates and times of these meetings will be provided in a supplemental notice.

The primary goal of these comment sessions is to have you identify the specific environmental issues and concerns that should be considered in the environmental document. Individual oral comments will be taken on a one-on-one basis with a court reporter present on the line. This format is designed to receive the maximum amount of oral comments, in a convenient way during the timeframe allotted, and is in response to the ongoing COVID–19 pandemic. There will not be a formal presentation by Commission staff when the session opens.

Your verbal comments will be recorded by the court reporter (with FERC staff or representative present) and become part of the public record for this proceeding. Transcripts will be publicly available on FERC's eLibrary system (see page 3 for instructions on using eLibrary). If a significant number of people are interested in providing verbal comments in the one-on-one settings, a time limit of 5 minutes may be implemented for each commentor.

It is important to note that verbal comments hold the same weight as written or electronically submitted comments. Although there will not be a formal presentation, Commission staff will be available to answer your questions about the environmental review process.

Any person seeking to become a party to the proceeding must file a motion to intervene pursuant to Rule 214 of the Commission's Rules of Practice and Procedures (18 CFR part 385.214). Motions to intervene are more fully described at *https://www.ferc.gov/ferc-online/ferc-online/how-guides.* Only intervenors have the right to seek rehearing or judicial review of the Commission's decision. The Commission grants affected landowners and others with environmental concerns intervenor status upon showing good cause by stating that they have a clear and direct interest in this proceeding

[1] *Consideration of Greenhouse Gas Emissions in Natural Gas Infrastructure Project Reviews,* 178 FERC ¶ 61,108 (2022); 178 FERC 61,197 (2022).

which no other party can adequately represent. Simply filing environmental comments will not give you intervenor status, but you do not need intervenor status to have your comments considered.

Questions?

Additional information about the project is available from the Commission's Office of External Affairs, at (866) 208–FERC, or on the FERC website (*www.ferc.gov*) using the eLibrary link. The eLibrary link also provides access to the texts of all formal documents issued by the Commission, such as orders, notices, and rulemakings.

In addition, the Commission offers a free service called eSubscription that allows you to keep track of all formal issuances and submittals in specific dockets. This can reduce the amount of time you spend researching proceedings by automatically providing you with notification of these filings, document summaries, and direct links to the documents. Go to *https://www.ferc.gov/ferc-online/overview* to register for eSubscription.

Dated: May 13, 2022.

Kimberly D. Bose,

Secretary.

[FR Doc. 2022–10776 Filed 5–18–22; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Combined Notice of Filings

Take notice that the Commission has received the following Natural Gas Pipeline Rate and Refund Report filings:

Filings Instituting Proceedings

Docket Numbers: RP22–922–000.

Applicants: Viking Gas Transmission Company.

Description: § 4(d) Rate Filing: Amendment to Non-Conforming Agreement AF0360 with NSP to be effective 11/1/2022.

Filed Date: 5/13/22.

Accession Number: 20220513–5049.

Comment Date: 5 p.m. ET 5/25/22.

Docket Numbers: RP22–923–000.

Applicants: Rockies Express Pipeline LLC.

Description: Compliance filing: REX 2022–05–13 2022 Annual Penalty Charge Reconciliation to be effective N/A.

Filed Date: 5/13/22.

Accession Number: 20220513–5062.

Comment Date: 5 p.m. ET 5/25/22.

Docket Numbers: RP22–924–000.

Applicants: Tallgrass Interstate Gas Transmission, LLC.

Description: Compliance filing: TIGT 2022–05–13 2022 Annual Penalty Charge Reconciliation to be effective N/A.

Filed Date: 5/13/22.

Accession Number: 20220513–5064.

Comment Date: 5 p.m. ET 5/25/22.

Any person desiring to intervene or protest in any of the above proceedings must file in accordance with Rules 211 and 214 of the Commission's Regulations (18 CFR 385.211 and 385.214) on or before 5:00 p.m. Eastern time on the specified comment date. Protests may be considered, but intervention is necessary to become a party to the proceeding.

Filings in Existing Proceedings

Docket Numbers: RP20–1060–005.

Applicants: Columbia Gas Transmission, LLC.

Description: Refund Report: Settlement Refund Report—RP20–1060 *et al.* to be effective N/A.

Filed Date: 5/13/22.

Accession Number: 20220513–5068.

Comment Date: 5 p.m. ET 5/25/22.

Docket Numbers: RP21–388–000.

Applicants: Gulf South Pipeline Company, LLC.

Description: Report Filing: Compliance Activity Report Filing in Docket No. RP21–388–000 to be effective N/A.

Filed Date: 5/12/22.

Accession Number: 20220512–5088.

Comment Date: 5 p.m. ET 5/24/22.

Any person desiring to protest in any the above proceedings must file in accordance with Rule 211 of the Commission's Regulations (18 CFR 385.211) on or before 5:00 p.m. Eastern time on the specified comment date.

The filings are accessible in the Commission's eLibrary system (*https://elibrary.ferc.gov/idmws/search/fercgensearch.asp*) by querying the docket number.

eFiling is encouraged. More detailed information relating to filing requirements, interventions, protests, service, and qualifying facilities filings can be found at: *http://www.ferc.gov/docs-filing/efiling/filing-req.pdf.* For other information, call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Dated: May 13, 2022.

Kimberly D. Bose,

Secretary.

[FR Doc. 2022–10777 Filed 5–18–22; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Project No. 2547–095]

Village of Swanton, Vermont; Notice of Application Tendered for Filing With the Commission and Soliciting Additional Study Requests and Establishing Procedural Schedule for Relicensing and a Deadline for Submission of Final Amendments

Take notice that the following hydroelectric application has been filed with the Commission and is available for public inspection.

a. *Type of Application:* New Major License.

b. *Project No.:* 2547–095.

c. *Date Filed:* April 29, 2022.

d. *Applicant:* Village of Swanton, Vermont (Village).

e. *Name of Project:* Highgate Falls Hydroelectric Project.

f. *Location:* On Missisquoi River in Franklin County, Vermont. The project does not occupy any federal land.

g. *Filed Pursuant to:* Federal Power Act 16 U.S.C. 791(a)–825(r).

h. *Applicant Contact:* Reginald R. Beliveau, Jr., Manager—Village of Swanton, 120 First Street, Swanton, Vermont 05488; call at (802) 868–3397; email at *rbeliveau@swanton.net.*

i. *FERC Contact:* Amy Chang at (202) 502–8250, or *Amy.Chang@ferc.gov.*

j. *Cooperating agencies:* Federal, state, local, and tribal agencies with jurisdiction and/or special expertise with respect to environmental issues that wish to cooperate in the preparation of the environmental document should follow the instructions for filing such requests described in item l below. Cooperating agencies should note the Commission's policy that agencies that cooperate in the preparation of the environmental document cannot also intervene. *See* 94 FERC ¶ 61,076 (2001).

k. Pursuant to section 4.32(b)(7) of 18 CFR of the Commission's regulations, if any resource agency, Indian Tribe, or person believes that an additional scientific study should be conducted in order to form an adequate factual basis for a complete analysis of the application on its merit, the resource agency, Indian Tribe, or person must file a request for a study with the Commission not later than 60 days from the date of filing of the application, and serve a copy of the request on the applicant.

l. *Deadline for filing additional study requests and requests for cooperating agency status:* June 28, 2022.

The Commission strongly encourages electronic filing. Please file additional study requests and requests for cooperating agency status using the Commission's eFiling system at *https://ferconline.ferc.gov/FERCOnline.aspx.* For assistance, please contact FERC Online Support at *FERCOnlineSupport@ferc.gov,* (866) 208–3676 (toll free), or (202) 502–8659 (TTY). In lieu of electronic filing, you may submit a paper copy. Submissions sent via the U.S. Postal Service must be addressed to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 888 First Street NE, Room 1A, Washington, DC 20426. Submissions sent via any other carrier must be addressed to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 12225 Wilkins Avenue, Rockville, MD 20852. All filings must clearly identify the project name and docket number on the first page: Highgate Falls Hydroelectric Project (P–2547–095).

m. The application is not ready for environmental analysis at this time.

n. *Project Description:* The existing project consists of: (1) A dam about 670 feet long comprised of: (i) A 235-foot-long earth-filled embankment on the west bank; (ii) a 174-foot-long concrete intake structure; (iii) a 226-foot-long ogee-shaped concrete spillway section with a 15-foot-high pneumatic crest gate and a maximum crest elevation of 190.0 foot National Geodetic Vertical Datum of 1929 (NGVD29) when fully inflated; and (iv) a 35-foot-long concrete abutment on the east bank; (2) an impoundment with a storage capacity of 3,327 acre-feet at an elevation of 190.0 feet NGVD29; (3) a 509-foot-long, 10.5-foot-wide, and 10.5-foot-high concrete conduit connecting to a 243-foot-long, 12-foot-diameter steel penstock that conveys flow from the intake structure to the main powerhouse; (4) a surge tank; (5) a concrete and masonry main powerhouse containing two 1,000-kilowatt (kW), one 2,800-kW, and one 6,000-kW vertical Francis turbine-generators; (6) a 75-foot-long, 5-foot-diameter steel penstock conveying flow from the intake structure to a 710-kW crossflow turbine-generator located within a secondary concrete powerhouse; (7) an outdoor substation; and (8) appurtenant facilities. The project creates an approximately 1,100-foot-long bypassed reach of the Missisquoi River between the dam and the powerhouse discharge.

The current license requires the project operate as a run-of-river facility such that outflow approximates inflow between March 31 and June 1. From June 1 through March 30, the Village operates the project as a peaking facility by generating electricity during daily peak demand periods. When peaking, the Village limits the daily impoundment drawdown to 30 inches or less from the full pond elevation of 190 feet NGVD29. The current license also requires a minimum flow release of 200 cubic feet per second (cfs) or inflow, whichever is less, to the Missisquoi River downstream of the powerhouse, including 35 cfs from the dam to the bypassed reach. The average annual generation of the project was approximately 39,442 megawatt-hours from 2013 through 2020.

The applicant proposes modify current project operations to: (1) Operate the project in run-of-river mode from March 31 through June 15, and during periods when inflow is 400 cfs or less; (2) limit impoundment drawdowns during peaking operation to 18 to 24 inches, instead of 30 inches under current operation; (3) refill the impoundment within 8 hours of each drawdown for peaking operation; (4) continue to provide a minimum flow of 200 cfs downstream of the powerhouse, including the following minimum flows to the bypassed reach: 150 cfs in April and May, 70 cfs in June, and 35 cfs from July through March; (5) develop a freshwater mussel plan for relocating mussels when the impoundment is lowered to 186 feet NGVD 29 or less for prolonged periods of time; (6) develop a plan for protecting horn-leaved riverweed downstream of the Swanton Dam ledges, which are located approximately 7 miles downstream of the powerhouse; (7) provide aesthetic flows of 1 to 3 inches of spill over the dam during certain holidays; (8) improve an existing parking area to accommodate 5 to 7 cars for recreation users; (9) develop a plan to provide access for hand-carry water craft to the impoundment and downstream of the project; and (10) develop an historic properties management plan to protect historic properties.

The applicant also proposes to: (1) Conduct a post-licensing evaluation of the feasibility of using the existing downstream Swanton Dam canal works for upstream fish passage; (2) develop a recreational maintenance and enhancement plan to guide regular maintenance activities at recreation facilities; (3) install a warning system to alert recreation users to increases in flow in the bypassed reach and downstream of the powerhouse; and (4) install an electric vehicle charging station for five vehicles using electricity produced by the hydroelectric plant.

o. In addition to publishing the full text of this notice in the **Federal Register**, the Commission provides all interested persons an opportunity to view and/or print the contents of this notice, as well as other documents in the proceeding (*e.g.,* license application) via the internet through the Commission's Home Page (*http://www.ferc.gov*) using the ''eLibrary'' link. Enter the docket number excluding the last three digits in the docket number field to access the document (P–2547). For assistance, contact FERC at *FERCOnlineSupport@ferc.gov* or call toll-free, (866) 208–3676 or (202) 502–8659 (TTY).

You may also register online at *https://ferconline.ferc.gov/FERCOnline.aspx* to be notified via email of new filings and issuances related to this or other pending projects. For assistance, contact FERC Online Support.

p. *Procedural schedule:* The application will be processed according to the following preliminary schedule. Revisions to the schedule will be made as appropriate.

Issue Deficiency Letter (if necessary) June 2022
Request Additional Information June 2022
Issue Scoping Document 1 for comments September 2022
Request Additional Information (if necessary) October 2022
Issue Acceptance Letter October 2022
Issue Scoping Document 2 (if necessary) November 2022
Issue Notice of Ready for Environmental Analysis November 2022

q. Final amendments to the application must be filed with the Commission no later than 30 days from the issuance date of the notice of ready for environmental analysis.

Dated: May 13, 2022.

Kimberly D. Bose,

Secretary.

[FR Doc. 2022–10780 Filed 5–18–22; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Combined Notice of Filings #1

Take notice that the Commission received the following electric rate filings:

Docket Numbers: ER16–2122–001.

Applicants: Sunshine Gas Producers, LLC.

Description: Compliance filing: Sunshine Gas Producers MBR Revision Filing to be effective 5/14/2022.

Filed Date: 5/13/22.
Accession Number: 20220513–5125.
Comment Date: 5 p.m. ET 6/3/22.

Docket Numbers: ER21–2523–002.
Applicants: Gulf Power Company.
Description: Compliance filing: Order No. 676–I Compliance Filing to be effective 5/1/2022.
Filed Date: 5/13/22.
Accession Number: 20220513–5070.
Comment Date: 5 p.m. ET 6/3/22.

Docket Numbers: ER22–1385–000.
Applicants: BHER Market Operations, LLC.
Description: Supplement to March 18, 2022 BHER Market Operations, LLC Market-Based Rate Application.
Filed Date: 5/9/22.
Accession Number: 20220509–5186.
Comment Date: 5 p.m. ET 5/19/22.

Docket Numbers: ER22–1863–000.
Applicants: Arizona Public Service Company.
Description: Compliance filing: Order No. 881 Compliance Filing to be effective 5/13/2022.
Filed Date: 5/12/22.
Accession Number: 20220513–5000.
Comment Date: 5 p.m. ET 6/2/22.

Docket Numbers: ER22–1864–000.
Applicants: Alabama Power Company, Georgia Power Company, Mississippi Power Company.
Description: Tariff Amendment: Alabama Power Company submits tariff filing per 35.15: Iron City Solar LGIA Termination Filing to be effective 5/13/2022.
Filed Date: 5/13/22.
Accession Number: 20220513–5101.
Comment Date: 5 p.m. ET 6/3/22.

Docket Numbers: ER22–1865–000.
Applicants: PJM Interconnection, L.L.C.
Description: § 205(d) Rate Filing: Interim ISA, SA No. 6443; Queue No. AF1–158 to be effective 4/20/2022.
Filed Date: 5/13/22.
Accession Number: 20220513–5104.
Comment Date: 5 p.m. ET 6/3/22.

Docket Numbers: ER22–1866–000.
Applicants: Sunshine Gas Producers, LLC.
Description: § 205(d) Rate Filing: Sunshine Gas Producers MBR Revisions to be effective 5/14/2022.
Filed Date: 5/13/22.
Accession Number: 20220513–5108.
Comment Date: 5 p.m. ET 6/3/22.

Docket Numbers: ER22–1867–000.
Applicants: Lykins Energy Solutions.
Description: Notice of Cancellation of Market Based Rate Tariff of Lykins Energy Solutions.
Filed Date: 5/12/22.
Accession Number: 20220512–5170.
Comment Date: 5 p.m. ET 6/2/22.

Docket Numbers: ER22–1868–000.
Applicants: Midcontinent Independent System Operator, Inc., Hoosier Energy Rural Electric Cooperative, Pioneer Transmission LLC.
Description: § 205(d) Rate Filing: Midcontinent Independent System Operator, Inc. submits tariff filing per 35.13(a)(2)(iii): 2022–05–13_ROE Administrative Filing to be effective 7/13/2022.
Filed Date: 5/13/22.
Accession Number: 20220513–5113.
Comment Date: 5 p.m. ET 6/3/22.

Docket Numbers: ER22–1869–000.
Applicants: Bishop Hill Energy LLC.
Description: Baseline eTariff Filing: Reactive Power Compensation Baseline to be effective 5/14/2022.
Filed Date: 5/13/22.
Accession Number: 20220513–5139.
Comment Date: 5 p.m. ET 6/3/22.

Docket Numbers: ER22–1870–000.
Applicants: Vansycle II Wind, LLC.
Description: Baseline eTariff Filing: Vansycle II Wind, LLC Application for Market-Based Rate Authorization to be effective 7/13/2022.
Filed Date: 5/13/22.
Accession Number: 20220513–5152.
Comment Date: 5 p.m. ET 6/3/22.

Docket Numbers: ER22–1871–000.
Applicants: Arizona Public Service Company.
Description: § 205(d) Rate Filing: Service Agreement No. 399—LGIA with AES to be effective 4/13/2022.
Filed Date: 5/13/22.
Accession Number: 20220513–5154.
Comment Date: 5 p.m. ET 6/3/22.

Docket Numbers: ER22–1872–000.
Applicants: PJM Interconnection, L.L.C.
Description: § 205(d) Rate Filing: Original NSA, Service Agreement No. 6469; Queue No. AE2–059 to be effective 4/13/2022.
Filed Date: 5/13/22.
Accession Number: 20220513–5155.
Comment Date: 5 p.m. ET 6/3/22.

Docket Numbers: ER22–1873–000.
Applicants: Arizona Public Service Company.
Description: Tariff Amendment: Service Agreement No. 386—Notice of Cancellation to be effective 7/13/2022.
Filed Date: 5/13/22.
Accession Number: 20220513–5157.
Comment Date: 5 p.m. ET 6/3/22.

The filings are accessible in the Commission's eLibrary system (*https://elibrary.ferc.gov/idmws/search/fercgensearch.asp*) by querying the docket number.

Any person desiring to intervene or protest in any of the above proceedings must file in accordance with Rules 211 and 214 of the Commission's Regulations (18 CFR 385.211 and 385.214) on or before 5:00 p.m. Eastern time on the specified comment date. Protests may be considered, but intervention is necessary to become a party to the proceeding.

eFiling is encouraged. More detailed information relating to filing requirements, interventions, protests, service, and qualifying facilities filings can be found at:*http://www.ferc.gov/docs-filing/efiling/filing-req.pdf.* For other information, call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Dated: May 13, 2022.

Kimberly D. Bose,

Secretary.

[FR Doc. 2022–10778 Filed 5–18–22; 8:45 am]

BILLING CODE 6717–01–P

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OAR–2022–0429; FRL–9866–01–OAR]

Clean Air Act Advisory Committee (CAAAC): Notice of Meeting

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of meeting.

SUMMARY: Pursuant to the Federal Advisory Committee Act (FACA), the Environmental Protection Agency (EPA) is announcing a public meeting of the Clean Air Act Advisory Committee (CAAAC) to be conducted via remote/virtual participation only. The EPA renewed the CAAAC charter on November 19, 2020, to provide independent advice and counsel to EPA on economic, environmental, technical, scientific and enforcement policy issues associated with implementation of the Clean Air Act of 1990.

DATES: The CAAAC will hold its next public meeting remotely/virtually on Wednesday, June 15, 2022, from 1:00 p.m. to 4:00 p.m. (EDT). Members of the public may register to listen to the meeting or provide comments, by emailing *caaac@epa.gov* by 5:00 p.m. (EDT) June 14, 2022. In addition, the CAAAC will hold the next hybrid public meeting; in-person at EPA Headquarters, Washington, DC and virtual on Tuesday, September 13, 2022, from 1:00 p.m. to 4:00 p.m. and Wednesday, September 14, 2022, from approximately 9:00 a.m. to 12:00 p.m. (EDT). Members of the public may register to attend or listen to the meeting or provide comments, by emailing *caaac@epa.gov* by 5:00 p.m. (EST) September 12, 2022.

FOR FURTHER INFORMATION CONTACT: Lorraine Reddick, Designated Federal Officer, Clean Air Act Advisory Committee (6103A), Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Washington, DC 20460; telephone number: 202–564–1293; email address: *reddick.lorraine@epa.gov.* Additional information about this meeting, the CAAAC, and its subcommittees and workgroups can be found on the CAAAC website: *http://www.epa.gov/caaac/.*

SUPPLEMENTARY INFORMATION: Pursuant to 5 U.S.C. App. 2 section 10(a)(2), notice is hereby given that the Clean Air Act Advisory Committee will hold its next public meeting remotely/virtually on Wednesday, June 15, 2022, 1:00 p.m. to 4:00 p.m. (EST). In addition, the CAAAC will hold the next hybrid public meeting, in person at EPA Headquarters, Washington, DC with a virtual option on Tuesday, September 13, from 1:00 p.m. to 4:00 p.m. (EDT), and Wednesday, September 14, 2022, from approximately 9:00 a.m. to 12:00 p.m. (EDT).

The committee agenda and any documents prepared for the meeting will be publicly available on the CAAAC website at *http://www.epa.gov/caaac/* prior to the meeting. Thereafter, these documents, together with CAAAC meeting minutes, will be available on the CAAAC website or by contacting the Office of Air and Radiation Docket and requesting information under docket EPA–HQ–OAR–2022–0429. The docket office can be reached by email at: *a-and-r-Docket@epa.gov* or FAX: 202–566–9744.

For information on access or services for individuals with disabilities, please contact Lorraine Reddick at *reddick.lorraine@epa.gov,* preferably at least 7 days prior to the meeting to give EPA as much time as possible to process your request.

Dated: May 13, 2022.

John Shoaff,

Director, Office of Air Policy and Program Support, Office of Air and Radiation.

[FR Doc. 2022–10711 Filed 5–18–22; 8:45 am]

BILLING CODE 6560–50–P

FEDERAL DEPOSIT INSURANCE CORPORATION

Sunshine Act Meeting

TIME AND DATE: 10:41 a.m. on Tuesday, May 17, 2022.

PLACE: The meeting was held in the Board Room located on the sixth floor of the FDIC Building located at 550 17th Street NW, Washington, DC.

STATUS: Closed.

MATTERS TO BE CONSIDERED: In calling the meeting, the Board determined, on motion of Director Michael J. Hsu (Acting Comptroller of the Currency), seconded by Director Rohit Chopra (Director, Consumer Financial Protection Bureau), and concurred in by Acting Chairman Martin J. Gruenberg, that the public interest did not require consideration of the matters in a meeting open to public observation; and that the matters could be considered in a closed meeting by authority of subsections (c)(2), (c)(4), (c)(6), (c)(8), (c)(9)(A)(ii), and (c)(9)(B) of the ''Government in the Sunshine Act'' (5 U.S.C. 552b (c)(2), (c)(4), (c)(6), (c)(8), (c)(9)(A)(ii), and (c)(9)(B).

CONTACT PERSON FOR MORE INFORMATION: Requests for further information concerning the meeting may be directed to Debra A. Decker, Executive Secretary of the Corporation, at 202–898–8748.

Dated this the 17th day of May, 2022.

Federal Deposit Insurance Corporation.

James P. Sheesley,

Assistant Executive Secretary.

[FR Doc. 2022–10910 Filed 5–17–22; 4:15 pm]

BILLING CODE 6714–01–P

FEDERAL ELECTION COMMISSION

Sunshine Act Meeting

TIME AND DATE: Tuesday, May 24, 2022 at 10:00 a.m. and its continuation at the conclusion of the open meeting on May 26, 2022.

PLACE: 1050 First Street NE, Washington, DC and virtual (this meeting will be a hybrid meeting).

STATUS: This meeting will be closed to the public.

MATTERS TO BE CONSIDERED: Compliance matters pursuant to 52 U.S.C. 30109.

Information the premature disclosure of which would be likely to have a considerable adverse effect on the implementation of a proposed Commission action.

Matters concerning participation in civil actions or proceedings or arbitration.

* * * * *

CONTACT PERSON FOR MORE INFORMATION: Judith Ingram, Press Officer, Telephone: (202) 694–1220.

(Authority: Government in the Sunshine Act, 5 U.S.C. 552b)

Vicktoria J. Allen,

Acting Deputy Secretary of the Commission.

[FR Doc. 2022–10943 Filed 5–17–22; 4:15 pm]

BILLING CODE 6715–01–P

FEDERAL HOUSING FINANCE AGENCY

[No. 2022–N–5]

Proposed Collection; Comment Request

AGENCY: Federal Housing Finance Agency.

ACTION: 30-Day notice of submission of information collection for approval from the Office of Management and Budget.

SUMMARY: In accordance with the requirements of the Paperwork Reduction Act of 1995 (PRA), the Federal Housing Finance Agency (FHFA) is seeking public comments concerning an information collection known as the ''American Survey of Mortgage Borrowers (ASMB),'' which has been assigned control number 2590–0015 by the Office of Management and Budget (OMB). FHFA intends to submit the information collection to OMB for review and approval of a three-year reinstatement of the control number, which expired on March 31, 2021.

DATES: Interested persons may submit comments on or before June 21, 2022.

ADDRESSES: Submit comments to the Office of Information and Regulatory Affairs of the Office of Management and Budget, Attention: Desk Officer for the Federal Housing Finance Agency, Washington, DC 20503, Fax: (202) 395–3047, Email: *OIRA_submission@omb.eop.gov.* Please also submit comments to FHFA, identified by ''Proposed Collection; Comment Request: 'American Survey of Mortgage Borrowers, (No. 2022–N–5)' '' by any of the following methods:

- *Agency Website: www.fhfa.gov/open-for-comment-or-input.*
- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments. If you submit your comment to the *Federal eRulemaking Portal,* please also send it by *email* to FHFA at *RegComments@fhfa.gov* to ensure timely receipt by the agency.
- *Mail/Hand Delivery:* Federal Housing Finance Agency, 400 Seventh Street SW, Washington, DC 20219, ATTENTION: Proposed Collection; Comment Request: ''American Survey of Mortgage Borrowers, (No. 2022–N–5).'' Please note that all mail sent to FHFA via U.S. Mail is routed through a national irradiation facility, a process that may delay delivery by approximately two weeks. For any time-sensitive correspondence, please plan accordingly.

We will post all public comments we receive without change, including any

personal information you provide, such as your name and address, email address, and telephone number, on the FHFA website at *http://www.fhfa.gov.* In addition, copies of all comments received will be available for examination by the public through the electronic comment docket for this PRA Notice also located on the FHFA website.

FOR FURTHER INFORMATION CONTACT: Saty Patrabansh, Manager, National Mortgage Database Program, *Saty.Patrabansh@fhfa.gov,* (202) 649–3213; or Angela Supervielle, Counsel, *Angela.Supervielle@fhfa.gov,* (202) 649–3973, (these are not toll-free numbers), Federal Housing Finance Agency, 400 Seventh Street SW, Washington, DC 20219. For TTY/TRS users with hearing and speech disabilities, dial 711 and ask to be connected to any of the contact numbers above.

SUPPLEMENTARY INFORMATION:

A. Background

The American Survey of Mortgage Borrowers (ASMB) is a component of the ''National Mortgage Database'' (NMDB®) Program, which is a joint effort of FHFA and the Consumer Financial Protection Bureau (CFPB) (jointly, ''the agencies''). The NMDB Program is designed to satisfy the Congressionally-mandated requirements of section 1324(c) of the Federal Housing Enterprises Financial Safety and Soundness Act.[1] Section 1324(c) requires that FHFA conduct a monthly survey to collect data on the characteristics of individual prime and subprime mortgages, and on the borrowers and properties associated with those mortgages, in order to enable it to prepare a detailed annual report on the mortgage market activities of the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac) for review by the appropriate Congressional oversight committees. Section 1324(c) also authorizes and requires FHFA to compile a database of otherwise unavailable residential mortgage market information and to make that information available to the public in a timely fashion.

As a means of fulfilling those and other statutory requirements, as well as to support policymaking and research regarding the residential mortgage markets, FHFA and CFPB jointly established the NMDB Program in 2012. The Program is designed to provide comprehensive information about the U.S. mortgage market and has three primary components: (1) The NMDB; (2) the quarterly National Survey of Mortgage Originations (NSMO); and (3) the ASMB.

The NMDB is a de-identified loan-level database of closed-end first-lien residential mortgage loans that is representative of the market as a whole, contains detailed loan-level information on the terms and performance of the mortgages and the characteristics of the associated borrowers and properties, is continually updated, has an historical component dating back to 1998, and provides a sampling frame for surveys to collect additional information. The core data in the NMDB are drawn from a random 1-in-20 sample of all closed-end first-lien mortgages outstanding at any time between January 1998 and the present in the files of Experian, one of the three national credit repositories, with a random sample of mortgages newly reported to Experian added each quarter.

The NMDB draws additional information on mortgages in the NMDB datasets from other existing sources, including Home Mortgage Disclosure Act (HMDA) data that are maintained by the Federal Financial Institutions Examination Council (FFIEC), property valuation models, and administrative data files maintained by Fannie Mae and Freddie Mac and by federal agencies. FHFA also obtains data from the two surveys conducted as part of the program—the NSMO and the ASMB.

The NSMO is a quarterly survey that provides critical and timely information on newly-originated mortgages and associated borrowers that are not available from other sources, including: The range of nontraditional and subprime mortgage products being offered, the methods by which these mortgages are being marketed, and the characteristics of borrowers for these types of loans.[2]

While the NSMO provides information on newly-originated mortgages, the ASMB focuses on borrowers' experience with maintaining their existing mortgages. This includes their experience maintaining mortgages under financial stress, their experience in soliciting financial assistance, their success in accessing federally sponsored programs designed to assist them, and, where applicable, any challenges they may have had in terminating a mortgage loan. The ASMB is designed to collect information necessary to allow empirical analysis of two questions of vital importance to residential mortgage market policymakers and stakeholders: (1) What factors explain or predict which borrowers will become delinquent on their mortgages; and (2) once a borrower becomes delinquent, what factors explain or predict whether the borrower will (a) become current on the loan, (b) decide they cannot afford the mortgage and sell the property or modify the mortgage, or (c) remain delinquent and enter into foreclosure.

From 2016 through 2018, the ASMB questionnaire was sent once annually to a stratified random sample of 10,000 borrowers with mortgages in the NMDB. FHFA did not undertake the ASMB during 2019, but sent the survey again in the fall of 2020 with a specific focus on the experiences of borrowers during the COVID–19 pandemic using a stratified random sample of 10,000 borrowers. The 2020 survey was substantially similar to the 2018 survey, except it included a number of questions specifically relating to the COVID–19 pandemic and its effects. In 2020, the ASMB had a 21 percent overall response rate, which yielded 2,100 survey responses. The 2022 survey is similar to the 2020 survey in its focus on how the pandemic impacted borrowers and extends the focus to the experiences of those who used forbearance.

Seven completely new questions have been added regarding expanded mortgage payment forbearance options and borrowers' overall financial health. Additionally, four questions were added which were not in the 2020 ASMB, but were in either the 2018 ASMB or the current NSMO questionnaire. The remaining questions existed in the 2020 questionnaire, although some have been revised to address issues leaving forbearance rather than issues entering it. Because of the elimination of several questions, as well as the combination of some other questions, the total number of questions has decreased from 92 on the 2020 survey questionnaire to 86 on the 2022 questionnaire.

Each of the 86 questions on the 2022 ASMB survey questionnaire is designed to elicit one or more of five different categories of information that are not available in the administrative data and that are needed either to properly analyze the issues described above or information is needed to validate the survey responses. These categories are: (1) Information needed to validate that the survey reached the correct borrower and that the borrower is providing answers about the correct loan; (2) information about the mortgage loan that does not exist in sufficient detail in the administrative data; (3) information about the borrower's economic

[1] 12 U.S.C. 4544(c).

[2] OMB has cleared the NSMO under the PRA and assigned it control no. 2590–0012, which expires on June 30, 2023.

circumstances that does not exist, or exists in insufficient detail, in the administrative data; (4) information about the borrower's attitudes regarding their mortgage, property, interactions with lenders and servicers, and life circumstances; and (5) information needed to determine the ultimate outcome of the borrower's forbearance or delinquency and the interim steps that led to that outcome.

B. Need for and Use of the Information Collection

FHFA views the NMDB Program as a whole, including the ASMB, as the monthly ''survey'' required by section 1324(c) of the Safety and Soundness Act. Core inputs to the NMDB, such as a regular refresh of the credit repository data, occur monthly, though the actual surveys conducted under the NMDB Program do not. The information collected through the ASMB is used, in combination with information obtained from existing sources in the NMDB, to assist FHFA in understanding how the performance of existing mortgages is influencing the residential mortgage market, what borrower groups are discussing with their servicers when they are under financial stress, and consumers' opinions of federally-sponsored programs designed to assist them. This important, but otherwise unavailable, information assists FHFA in the supervision of its regulated entities (Fannie Mae, Freddie Mac, and the Federal Home Loan Banks) and in the development and implementation of appropriate and effective policies and programs. The information may also be used for research and analysis by CFPB and other federal agencies that have regulatory and supervisory responsibilities and mandates related to mortgage markets and to provide a resource for research and analysis by academics and other interested parties outside of the government.

As discussed above, the agencies have added to the 2022 ASMB survey questionnaire several questions relating to the effect of the COVID–19 pandemic on home mortgage borrowers. The CARES Act of 2020 [3] allowed a forbearance for mortgage borrowers impacted by the pandemic so they could pause or delay their mortgage payments. FHFA and CFPB are actively engaged in monitoring the outcomes of these borrowers and the effects of this policy on the residential mortgage market. As borrowers exit their forbearance periods, it is critical for both agencies to have timely access to this information to assist in evidenced-based policymaking in these areas.

FHFA is also seeking OMB approval to continue to conduct cognitive pre-testing of the survey materials. The Agency uses information collected through that process to assist in drafting and modifying the survey questions and instructions, as well as the related communications, to read in the way that will be most readily understood by the survey respondents and that will be most likely to elicit usable responses. Such information is also used to help the Agency decide on how best to organize and format the survey questionnaires.

C. Burden Estimate

This information collection comprises two components: (1) The ASMB survey; and (2) the pre-testing of the survey questionnaire and related materials through the use of cognitive testing. FHFA conducted the survey annually from 2016 through 2018, but did not conduct the survey in 2019 nor 2021. FHFA assumes that it will conduct the survey once annually over the next three years and that it will conduct two rounds of pre-testing on each year of survey materials.

FHFA has analyzed the total hour burden on members of the public associated with conducting the survey (4,200 hours) and with pre-testing the survey materials (24 hours) and estimates the total annual hour burden imposed on the public by this information collection to be 4,224 hours. The estimate for each phase of the collection was calculated as follows:

I. Conducting the Survey

FHFA estimates that the ASMB questionnaire will be sent to 10,000 recipients each time it is conducted. Although it expects that only about 2,100 of those surveys will be returned, FHFA has calculated the burden estimates below as if all of the surveys will be returned. Based on the reported experience of respondents to earlier ASMB questionnaires, FHFA estimates that it will take each respondent 25 minutes to complete each survey, including the gathering of necessary materials to respond to the questions. This results in a total annual burden estimate of 4,200 hours for the survey phase of this collection (1 survey per year × 10,000 respondents per survey × 25 minutes per respondent = 4,200 hours).

II. Pre-Testing the Materials

FHFA estimates that it will sponsor 2 rounds of 12 cognitive interviews prior to conducting each annual survey for a total of 24 cognitive interview participants. It estimates the participation time for each cognitive interview participant to be one hour, resulting in a total annual burden estimate of 24 hours for the pre-testing phase of the collection.

D. Comment Request

In accordance with the requirements of 5 CFR 1320.8(d), FHFA published an initial notice and request for public comments regarding this information collection in the **Federal Register** on December 28, 2021.[4] The 60-day comment period closed on February 28, 2022. FHFA received no comments.

FHFA requests written comments on the following: (1) Whether the collection of information is necessary for the proper performance of FHFA functions, including whether the information has practical utility; (2) the accuracy of FHFA's estimates of the burdens of the collection of information; (3) ways to enhance the quality, utility, and clarity of the information collected; and (4) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology.

Shawn Bucholtz,

Chief Data Officer, Federal Housing Finance Agency.

BILLING CODE 8070–01–P

[3] Coronavirus Aid, Relief, and Economic Security Act, Public Law 116–136 (2020).

[4] *See* 86 FR 73770 (Dec. 28, 2021).

The covid pandemic and your mortgage

American Survey of Mortgage Borrowers

You can complete this paper copy or complete the survey online. The online version may be easier to complete because it skips questions that do not apply to you. Online responses are also processed more quickly making it less likely that you will receive reminders to complete this survey.

To complete the survey online, in English or Spanish

Go to: www.ASMBsurvey.com

Enter the unique access code provided in the letter we sent you.

Para contestar la encuesta por Internet en inglés o en español

*Vaya a: **www.ASMBsurvey.com***

Ingrese el código de acceso único que se le envió en la carta.

If you have any questions, please call us toll free 1-855-531-0724 or visit our websites, fhfa.gov/ASMB or consumerfinance.gov/ASMB

American Survey of Mortgage Borrowers

WHO ARE THE SURVEY SPONSORS?

The **Federal Housing Finance Agency (FHFA),** is an independent regulatory agency responsible for the effective supervision, regulation, and housing mission oversight of **Fannie Mae, Freddie Mac,** the Federal Home Loan Bank System, and the Office of Finance, and ensures a competitive, liquid, efficient, and resilient housing finance market.

The **Consumer Financial Protection Bureau (CFPB)** is a Federal agency created in 2010 to make mortgages, credit cards, automobile and other consumer loans work better and ensure that these markets are fair, transparent, and competitive.

WHY TAKE THIS SURVEY?

The most effective way for the sponsoring agencies to understand the benefits and problems with mortgages and owning a home is to ask you about your experiences. It is especially important today as many people faced difficult financial situations since the start of the covid pandemic.

HOW LONG WILL IT TAKE?

The time will vary based on your experiences, but you can expect to spend 15-25 minutes.

HOW WERE YOU SELECTED?

Survey recipients were selected at random from across the United States. Your answers will not be connected to your name or any other identifying information.

Thank you for helping us assist future borrowers.

Privacy Act Notice: In accordance with the Privacy Act, as amended (5 U.S.C. § 552a), the following notice is provided. The information requested on this survey is collected pursuant to 12 U.S.C. 4544 for the purposes of gathering information for the National Mortgage Database. Routine uses which may be made of the collected information can be found in the Federal Housing Finance Agency's System of Records Notice (SORN) FHFA-21 National Mortgage Database. Providing the requested information is voluntary. Submission of the survey authorizes FHFA to collect the information provided and to disclose it as set forth in the referenced SORN.

Paperwork Reduction Act Statement: Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the Paperwork Reduction Act, unless that collection of information displays a currently valid OMB Control Number.

OMB No. XXXX-XXXX
Expires xx/xx/xxxx

The covid pandemic has affected all aspects of people's lives with many facing financial difficulties, particularly in paying their mortgage. Your experience is very important as we learn how you worked through this difficult time.

Financial and Household Events During the Pandemic

1. Think back to March 2020, the start of the covid pandemic. Since then, did your household experience any of the following?

	Yes	No
Major decrease in household income	☐	☐
Major increase in household expenses	☐	☐
Change in the number of persons living in your household	☐	☐

2. Since the start of the pandemic, was your household impacted financially by any of the following?

	Yes	No
Unexpected home repairs	☐	☐
Unexpected medical expenses	☐	☐
Increase in childcare expenses	☐	☐
Loss of rental income	☐	☐
Business failure	☐	☐
Having to provide financial help to family or friends	☐	☐

3. Did you delay, reduce, or cancel any of the following during the pandemic?

	Yes	No
Major home improvement	☐	☐
Major purchases	☐	☐
Home maintenance	☐	☐
Payments on credit cards or other loans (not your mortgage)	☐	☐
Planned move or sale of a property	☐	☐

4. Were any of the following done to address your financial situation during the pandemic?

	Yes	No
Borrowed money from family or friend	☐	☐
Borrowed from or cashed out a retirement account	☐	☐
Borrowed money from a bank	☐	☐
Sold investment property or second home	☐	☐
Sold other assets (car, boat etc.)	☐	☐
Rented out part of my property or added roommates	☐	☐
Got unemployment benefits	☐	☐

Your Mortgage at the Start of the Pandemic

5. At the start of the pandemic, March 2020, did you have a mortgage loan?

☐ Yes, I had at least one mortgage loan

☐ No, I did not have a mortgage loan on any property → **Skip to 57 on page 7**

If you had more than one mortgage loan at the start of the pandemic, refer to the mortgage you took out the earliest, even if it was subsequently refinanced, modified, or paid off.

6. Did your loan servicer on this mortgage change since the start of the pandemic? *A loan servicer is the company to whom you send your mortgage payments and make inquiries about your mortgage.*

☐ Yes
☐ No
☐ Don't know

7. Did you have any contact with your loan servicer to…?

	Yes	No
Confirm receipt of a payment	☐	☐
Correct errors in your file	☐	☐
Discuss escrow, insurance or tax issues	☐	☐
Ask about pre-paying or paying more than the required regular payment	☐	☐

8. During the pandemic did your servicer do any of the following?

	Yes	No
Make it difficult to contact them	☐	☐
Mishandle any payments	☐	☐
Change terms of your servicing agreement	☐	☐
Change due date or frequency of payments	☐	☐
Change mortgage payments or loan terms	☐	☐

9. Did you have any contact with your servicer since the start of the pandemic?

☐ Yes
☐ No **Skip to 13**

10. Was the servicer contact about…?

	Yes	No
A way to defer or delay mortgage payments	☐	☐
Changing the terms of your mortgage	☐	☐
Refinancing your mortgage	☐	☐
A way to get caught up on missed payments	☐	☐
Available government programs	☐	☐
Financial counseling	☐	☐
Debt consolidation	☐	☐
Selling or giving up the property	☐	☐

11. Were any of the following a challenge to you in communicating with your servicer?

	Yes	No
Servicer was unable/unwilling to help me	☐	☐
Did not feel comfortable talking with the servicer representative	☐	☐
Servicer gave inconsistent or conflicting information	☐	☐
Did not know I qualified for any program	☐	☐
Did not know how to apply for programs	☐	☐
Application process for programs was too much trouble	☐	☐
Was told I did not qualify for a program	☐	☐
Difficulty getting the correct documents submitted in a timely manner	☐	☐
Turned down for the programs I applied to	☐	☐
Other problem (specify) _____ _____	☐	☐

12. Since the start of the pandemic, did your servicer offer you any of the following?

	Yes	No	Don't Know
Way to make up missed payments	☐	☐	☐
Way for you to modify your mortgage payment permanently	☐	☐	☐
Way to sell the property to satisfy the mortgage	☐	☐	☐
Way to give the property to the lender to satisfy the mortgage	☐	☐	☐

13. Since the start of the pandemic, did you have any concerns or difficulties making payments on this mortgage?

☐ Yes
☐ No

14. Which of the following best describes what happened to payments on this mortgage since the start of the pandemic?

☐ Made all payments in full and on time
☐ Made all payments but some were late or partial
☐ Missed one or more payments

15. Overall, how satisfied were you with your servicer?

☐ Very ☐ Somewhat ☐ Not at all

16. At any time since the start of the pandemic did you get advice or help to address any payment concerns/difficulties on this mortgage from any of the following?

	Yes	No
Professional housing counselor	☐	☐
Real estate agent	☐	☐
Family or friends	☐	☐
Lawyer	☐	☐
Financial planner	☐	☐
Bank or credit union	☐	☐
Government/private agency	☐	☐
Course about managing your finances	☐	☐
Other (specify) _____ _____	☐	☐

17. Did you pay someone who promised to resolve your payment concerns/difficulties on this mortgage?

☐ Yes, and it was helpful
☐ Yes, but it was not helpful
☐ No

Mortgage Forbearance on this Mortgage

18. During the covid pandemic, many borrowers were able to obtain a forbearance plan from their servicer. Did you get a forbearance on this mortgage *(a deferral, payment holiday, temporary pause or reduction in mortgage payments)***?**

☐ Yes
☐ No **Skip to 25**

19. When you got a forbearance, were you clear on what would happen at the end of the forbearance period and how to repay any missed payments?

☐ Yes
☐ No

20. What is the current status of your forbearance?

☐ Still in forbearance
☐ In the process of getting out of forbearance now
☐ Out of forbearance

21. Which one of the following best describes how any missed payments were/will be repaid?

☐ Paid when the forbearance period was/is up *(lump sum payment)*
☐ Added to the mortgage and paid when the mortgage was/is paid off or property was/is sold
☐ Paid through a loan modification, repayment plan, or other arrangement
☐ Unsure/don't know how missed payments will be repaid

☐ Did not/will not have any missed payments

22. Did the missed payments enable you to do any of the following?

	Yes	No
Pay for emergency expenses (car repair, medical expenses, etc.)	☐	☐
Pay other bills or debts	☐	☐
Make home repairs/improvements	☐	☐
Make up for lost income	☐	☐
Put money into savings	☐	☐

☐ Did not/will not have any missed payments

23. Did you encounter any of the following regarding your forbearance?

	Yes	No
Needed more time in forbearance	☐	☐
Trouble reaching a person knowledgeable about my account	☐	☐
Servicer provided conflicting or inaccurate information	☐	☐
Problems submitting documents to the servicer *(lost or had to resubmit, etc.)*	☐	☐
Payments made during forbearance not applied in the way I wanted or expected	☐	☐
Mortgage payments or balance after forbearance ended were not what I expected	☐	☐
Repayment plan wasn't what I wanted or expected	☐	☐

24. Is there any additional problem you encountered with your forbearance that you'd like to tell us about?

_____
_____
_____

Terms of this Mortgage

25. Which one of these reasons best describes why you took out this mortgage?

☐ To buy a property
☐ To refinance or modify an earlier mortgage
☐ To add/remove co-signer(s)/co-owner(s)
☐ To finance a construction loan
☐ To take out a new loan on a mortgage-free property
☐ Some other purpose (specify) _____

_____

26. When did you take out this mortgage?

_____/_____
month year

27. When you took out this mortgage, what was the dollar amount you borrowed?

$_____ . 00 ☐ Don't know

28. What was the monthly payment, including the amount paid to escrow for taxes and insurance?

$_____. 00 ☐ Don't know

29. What was the interest rate on this mortgage?

_____% ☐ Don't know

30. Who signed or co-signed for this mortgage?
Mark all that apply.

- ☐ I signed
- ☐ Spouse/partner including a former spouse/partner
- ☐ Parents
- ☐ Children
- ☐ Other relatives
- ☐ Other (e.g., friend, business partner)

31. When you took out this mortgage, did this mortgage have…

	Yes	No	Don't Know
A prepayment penalty *(fee if the mortgage is paid off early)*	☐	☐	☐
An escrow account for taxes and/or homeowner insurance	☐	☐	☐
An adjustable rate *(one that can change over the life of the loan)*	☐	☐	☐
A balloon payment	☐	☐	☐
Interest-only monthly payments	☐	☐	☐
Private mortgage insurance	☐	☐	☐

32. When you took out this mortgage, how satisfied were you with the…

	Very	Somewhat	Not At All
Mortgage lender/broker you used	☐	☐	☐
Application process	☐	☐	☐
Documentation process required for the loan	☐	☐	☐
Loan closing process	☐	☐	☐
Information in mortgage disclosure documents	☐	☐	☐
Timeliness of mortgage disclosure documents	☐	☐	☐
Settlement agent	☐	☐	☐

33. At the time you took out this mortgage, how satisfied were you that it was the one with the…

	Very	Somewhat	Not At All
Best terms to fit your needs	☐	☐	☐
Lowest interest rate you could qualify for	☐	☐	☐
Lowest closing cost	☐	☐	☐

Property Associated with this Mortgage

34. When did you first become the owner of the property associated with this mortgage?

_____/_____
month year

35. Which one of the following best describes this property?

- ☐ Single-family detached house
- ☐ Mobile home or manufactured home
- ☐ Townhouse, row house, or villa
- ☐ 2-unit, 3-unit, or 4-unit dwelling
- ☐ Apartment (or condo/co-op) in apartment building
- ☐ Unit in a partly commercial structure
- ☐ Other (specify) _____

36. What was the purchase price of this property, or if you built it, how much did the construction and land cost?

$_____. 00 ☐ Don't know

37. About how much do you think this property is worth now or the sale price if you sold it?

$_____. 00 ☐ Don't know

38. Which one of the following best describes how you use this property today?

- ☐ Primary residence *(where you spend the majority of your time)*
- ☐ Seasonal or second home
- ☐ Home for other relatives
- ☐ Rental or investment property
- ☐ Vacant
- ☐ No longer have the property
- ☐ Other (specify)_____

39. Did we mail this survey to the address of the property you financed with this mortgage?

- ☐ Yes
- ☐ No

40. What do you think will happen to the prices of homes in this property's neighborhood over the next couple of years?

- ☐ Increase a lot
- ☐ Increase a little
- ☐ Stay about the same
- ☐ Decrease a little
- ☐ Decrease a lot

41. In the next couple of years, how do you expect the overall desirability of living in this property's neighborhood to change?

- ☐ Become more desirable
- ☐ Stay about the same
- ☐ Become less desirable

This Mortgage Today

42. Did you, or are you in the process of, getting a repayment plan to deal with any missed payments?

- ☐ Yes
- ☐ No
- ☐ No missed payments

43. Since March 2020, did you, or are you in the process of doing, any of the following with this mortgage?

- ☐ Refinance it
- ☐ Modify it
- ☐ Pay it off/sell property
- ☐ No change in mortgage

Skip to 47

44. How does/will the new mortgage compare to the old mortgage?

	Higher	Same	Lower
Monthly payment	☐	☐	☐
Principal balance	☐	☐	☐
Interest rate	☐	☐	☐
Remaining years/months on loan	☐	☐	☐

45. Were any of the following a reason you did/will refinance or modify this mortgage?

	Yes	No
Change to a fixed-rate loan	☐	☐
Get a lower interest rate	☐	☐
Remove private mortgage insurance	☐	☐
Get a lower monthly payment	☐	☐
Consolidate or pay down other debt	☐	☐
Buy out co-signer(s)/co-owner(s)	☐	☐
Repay the loan more quickly	☐	☐
Take out cash	☐	☐
Needed to pay back missed payments	☐	☐
Required by the lender or servicer	☐	☐

46. When did you (or expect to) refinance, modify or pay off this mortgage?

_____ / _____
Month / Year

47. How would you describe your situation today with the property associated with this mortgage?

- ☐ Still own it
- ☐ In the process of selling or in foreclosure
- ☐ No longer own it

Skip to 50 on page 6

48. Were any of the following a reason you did not sell this property?

	Yes	No
Didn't want to sell	☐	☐
Can't afford to move/sell	☐	☐
Selling is too much trouble	☐	☐
Problems not severe enough to sell	☐	☐
Not enough equity in the property	☐	☐

49. In the next year or two, how likely is it that you will…

	Very	Somewhat	Not at all
Sell your property	☐	☐	☐
Move but keep your property	☐	☐	☐
Refinance the mortgage	☐	☐	☐
Pay off your mortgage and own mortgage-free	☐	☐	☐
Lose your property because you cannot afford the payment	☐	☐	☐

Skip to 57 on page 6 →

No Longer Own this Property

50. Which one of the following best describes what happened to the property you no longer have?

- ☐ Sold the property - regular sale
- ☐ Sold the property at reduced price agreed to by lender (short sale)
- ☐ In the process of being foreclosed
- ☐ Property was taken in foreclosure
- ☐ Gave home to lender to cancel mortgage debt (deed-in-lieu, mortgage release, "cash for keys")
- ☐ Walked away and let the lender have the property
- ☐ Other (specify) _____

51. When did this happen?

_____/_____
Month / Year

52. Was what happened to your property primarily…

- ☐ Your or your family's decision
- ☐ Lender or servicer's decision
- ☐ Other (specify) _____

53. Were any of the following a reason you no longer have this property?

	Yes	No
Difficulties making the mortgage payments	☐	☐
Owed more on the loan than the property was worth or could sell it for	☐	☐
Separated, divorced or partner left	☐	☐
Married, remarried or new partner	☐	☐
Death of a household member	☐	☐
Addition to your household (not spouse/partner)	☐	☐
Moved within the area (less than 50 miles)	☐	☐
Moved to a new area (50 miles or more)	☐	☐

54. Do you currently own or rent your primary residence?

- ☐ Own → **Skip to 57**
- ☐ Rent
- ☐ Live with family or friends

55. When do you think you might purchase a primary residence?

- ☐ Less than 3 years
- ☐ 3 – 5 years
- ☐ More than 5 years
- ☐ Never

56. Would any of the following events cause you to consider either buying a primary residence sooner or at all?

	Yes	No
Increase in income more hours at work	☐	☐
Improved credit score	☐	☐
Saving more for a down payment	☐	☐
Paying off other debts first	☐	☐
Lower interest rate	☐	☐
Lower required credit score	☐	☐
Other (specify) _____	☐	☐

- ☐ Nothing, will not buy again

Your Household

57. What is your current marital status?

- ☐ Married
- ☐ Separated
- ☐ Never married
- ☐ Divorced
- ☐ Widowed

58. Do you have a partner who shares the decision-making and responsibilities of running your household but is not your legal spouse?

- ☐ Yes
- ☐ No

Please answer the following questions for you and your spouse or partner, if applicable.

	You	Spouse/ Partner
59. Age at last birthday:	_____years	_____years

60. Sex:

	You	Spouse/ Partner
Male	☐	☐
Female	☐	☐

61. Highest level of education achieved:

	You	Spouse/ Partner
Some schooling	☐	☐
High school graduate	☐	☐
Technical school	☐	☐
Some college	☐	☐
College graduate	☐	☐
Postgraduate studies	☐	☐

62. Hispanic or Latino:

	You	Spouse/ Partner
Yes	☐	☐
No	☐	☐

63. Race: *Mark all that apply.*

	You	Spouse/ Partner
White	☐	☐
Black or African American	☐	☐
American Indian or Alaska Native	☐	☐
Asian	☐	☐
Native Hawaiian or Other Pacific Islander	☐	☐

64. Current work status: *Mark all that apply.*

	You	Spouse/ Partner
Self-employed full time	☐	☐
Self-employed part time	☐	☐
Employed full time	☐	☐
Employed part time	☐	☐
Retired	☐	☐
Unemployed, temporarily laid-off, furloughed	☐	☐
Not working for pay (*student, homemaker, disabled)*	☐	☐

65. How do you or your spouse currently get paid? *Mark all that apply.*

	You	Spouse/ Partner
Salary	☐	☐
Commissions	☐	☐
Bonus	☐	☐
Contract worker	☐	☐
Hourly wages	☐	☐
Tips	☐	☐
Self-employed/other	☐	☐
Not working	☐	☐

66. Did any of these work changes occur during the pandemic? *Mark all that apply.*

	You	Spouse/ Partner
Reduced hours at work	☐	☐
Reduction in pay	☐	☐
Temporarily laid-off, furloughed	☐	☐
Job loss, unemployment	☐	☐
None of the above	☐	☐

67. Did you or your spouse do any of the following during the pandemic? *Mark all that apply.*

	You	Spouse/ Partner
Retired as planned	☐	☐
Retired earlier than planned	☐	☐
Quit job/reduced hours to care for children	☐	☐
Quit job/reduced hours to care for other family members	☐	☐
Quit job for other reasons	☐	☐
Increased work hours or overtime	☐	☐
Took a higher-paying job	☐	☐
Took a lower-or same- paying job	☐	☐
Took a second job	☐	☐
None of the above	☐	☐

68. Ever serve on active duty in the U.S. Armed Forces, Reserves or National Guard?

	You	Spouse/ Partner
Never served in the military	☐	☐
Only on active duty for training in the Reserves or National Guard	☐	☐
Now on active duty	☐	☐
On active duty in the past, but not now	☐	☐

69. Besides you (and your spouse/partner), who else permanently lives in your home? *Mark all that apply.*

- ☐ Children/grandchildren 12 and under
- ☐ Children/grandchildren 13 -18
- ☐ Children/grandchildren aged 19 or older
- ☐ Parents of you or your spouse/partner
- ☐ Other relatives like siblings or cousins
- ☐ Non-relatives
- ☐ No one else

70. Has anyone temporarily moved into your home? *Mark all that apply.*

- ☐ College students
- ☐ Other adult children
- ☐ Grandchildren
- ☐ Parents
- ☐ Someone else

☐ No one

71. Since the start of the pandemic, did any of the following happen?

	Yes	No
Married, remarried or new partner	☐	☐
Separated, divorced or partner left	☐	☐
Disability of a household member	☐	☐
Serious illness of a household member	☐	☐
New permanent addition to your household (not spouse/partner)	☐	☐
Death of household member	☐	☐
Person left household (not spouse/partner)	☐	☐

72. Do you speak a language other than English at home?

- ☐ Yes
- ☐ No → **Skip to 74**

73. How well do you speak English?

- ☐ Very well
- ☐ Well
- ☐ Not well
- ☐ Not at all

74. Approximately how much is your total annual household income from all sources *(wages, salaries, tips, interest, child support, investment income, retirement, social security, and alimony)*?

- ☐ Less than $35,000
- ☐ $35,000 to $49,999
- ☐ $50,000 to $74,999
- ☐ $75,000 to $99,999
- ☐ $100,000 to $174,999
- ☐ $175,000 or more

75. How does your income now compare to pre-pandemic?

- ☐ A lot higher
- ☐ Somewhat higher
- ☐ About the same
- ☐ Somewhat lower
- ☐ A lot lower

76. How likely is it that your total annual household income will increase next year?

- ☐ Very likely
- ☐ Somewhat likely
- ☐ Not at all likely

77. Does your total annual household income include any of the following sources?

	Yes	No
Wages or salary	☐	☐
Business or self-employment	☐	☐
Interest or dividends	☐	☐
Alimony or child support	☐	☐
Social Security, pension or other retirement benefits	☐	☐

78. Do you or anyone in your household have any of the following?

	Yes	No
401(k), 403(b), IRA, or pension plan	☐	☐
Stocks, bonds, or mutual funds *(not in retirement accounts or pension plans)*	☐	☐
Certificates of deposit	☐	☐
Investment real estate	☐	☐

79. Which one of the following statements best describes the amount of financial risk you are willing to take when you save or make investments?

- ☐ Take substantial risks expecting to earn substantial returns
- ☐ Take above-average risks expecting to earn above-average returns
- ☐ Take average risks expecting to earn average returns
- ☐ Not willing to take any financial risks

80. Since the pandemic, how have the following changed?

	Significant Increase	Little/No Change	Significant Decrease
Housing expenses	☐	☐	☐
Non-housing expenses	☐	☐	☐

81. Over the next 12 months, how do you expect the following to change?

	Significant Increase	Little/No Change	Significant Decrease
Housing expenses	☐	☐	☐
Non-housing expenses	☐	☐	☐

82. How likely is it, that if needed, you would be able to…?

	Very	Somewhat	Not At All
Pay your bills for the next 3 months without borrowing	☐	☐	☐
Get significant financial help from family or friends	☐	☐	☐
Borrow a significant amount from a bank or credit union	☐	☐	☐
Significantly increase your income	☐	☐	☐

83. Which one of the following best describes your willingness or ability to move from your primary residence?

- ☐ Willing and able to move
- ☐ Willing but unable to move
- ☐ Unwilling to move
- ☐ Unsure/Don't know at this time

84. Do you know anyone in the past year who…?

	Yes	No
Is behind in making their mortgage payments	☐	☐
Stopped making monthly mortgage payments when they could afford it	☐	☐
Has gotten forbearance relief from their lender or servicer	☐	☐
Has gone through foreclosure where the lender took over the property	☐	☐

85. How well could you explain to someone the…

	Very	Somewhat	Not At All
Process of taking out a mortgage	☐	☐	☐
Difference between a fixed- and an adjustable-rate mortgage	☐	☐	☐
Difference between a prime and a subprime loan	☐	☐	☐
Difference between a mortgage's interest rate and its APR	☐	☐	☐
Amortization of a loan	☐	☐	☐
Consequences of not making required mortgage payments	☐	☐	☐
Difference between lender's and owner's title insurance	☐	☐	☐
Relationship between discount points and interest rate	☐	☐	☐
Reason payments into an escrow account can change	☐	☐	☐

86. Do you agree or disagree with the following statements?

	Agree	Disagree
Owning a home is a good financial investment	☐	☐
Most mortgage lenders generally treat borrowers well	☐	☐
Most mortgage lenders would offer me roughly the same rates and fees	☐	☐
Late payments will lower my credit rating	☐	☐
Lenders shouldn't care about any late payments, only whether loans are fully repaid	☐	☐
It is okay to stop making mortgage payments when you can afford it	☐	☐
It is okay to stop making mortgage payments to pay other bills	☐	☐
I would consider counseling or taking a course about managing my finances if I faced financial difficulties	☐	☐

We have provided space below for any additional comments. If the covid pandemic affected your ability to make your mortgage payments in ways we have not covered in this survey, please tell us about it here.

Please do not put your name or address on the questionnaire.

Thank you for completing our survey!

Please use the enclosed business-reply envelope to return your completed questionnaire.

FHFA
1600 Research Blvd, RC B16
Rockville, MD 20850

[FR Doc. 2022–10772 Filed 5–18–22; 8:45 am]
BILLING CODE 8070–01–C

FEDERAL MEDIATION AND CONCILIATION SERVICE

Notice of Stakeholder Surveys for Facilitation and Other Purposes

AGENCY: Federal Mediation and Conciliation Service (FMCS).

ACTION: 30-Day notice and request for comments.

SUMMARY: FMCS invites the general public and other Federal Agencies to take this opportunity to comment on the surveys and other information FMCS will collect to inform the process and participants for its conflict prevention, management, and resolution services provided to Federal Agencies, particularly public policy mediations and facilitations that include participants external to the federal government.

DATES: Comments must be submitted on or before June 21, 2022.

ADDRESSES: You may submit comments through one of the following methods:

- *Email: register@fmcs.gov.*
- *Mail:* Stakeholder Survey Comments c/o Sarah Cudahy, One Independence Square, 250 E St. SW,

Washington, DC 20427. Please note that at this time, mail is sometimes delayed. Therefore, we encourage emailed comments.

FOR FURTHER INFORMATION CONTACT: Sarah Cudahy, 202–606–8090, *register@fmcs.gov.*

SUPPLEMENTARY INFORMATION: Copies of the proposed questions are available below. Paper copies are available by emailing *register@fmcs.gov.* Please ask for the Stakeholder Survey.

I. Information Collection Request

Agency: Federal Mediation and Conciliation Service.

Form Number: Not yet assigned.

Type of Request: New collection; generic clearance.

Affected Entities: Private sector; state, local, and tribal governments; individuals or households; and federal government.

Frequency: These methods of engagement are utilized on an as-needed basis. Each engagement is completed once.

Abstract: Pursuant to the Administrative Dispute Resolution Acts of 1990 and 1996, 5 U.S.C. 561 *et seq.* and 571 *et seq.,* and 29 U.S.C. 173(f), the Federal Mediation and Conciliation Service provides conflict prevention, management, and resolution services, including, but not limited to, public policy facilitation and mediation services, to Federal agencies. As part of these services, sometimes FMCS employees need to survey or ask questions to determine the best process and participants to prevent, manage, or resolve the issue, particularly for public policy mediations, public policy or environmental facilitations, or negotiated rulemaking. To do so, FMCS has created a set of questions to ask various stakeholders about issues, concerns, engagement, and appropriate stakeholders relevant to the issues. The survey format will differ depending on the project but may be conducted in one or more of the following ways, both in-person and virtually: Individual or group interviews, individual or group discussions, or written surveys. The survey requests information such as stakeholder understanding of the particular issue, stakeholder interests in the particular issue, appropriate stakeholders, methods of engagement with the issue, and other similar information that will allow FMCS to best create a successful process. A link to the survey is found here: *https://tags.fmcs.gov/4DAction/FC/DoAsynchTop?Fedreg*UPPJ*919/10300.* To log in, go to: *https://tags.fmcs.gov/,* use username ''Fedreg'' and password ''UPPJ.'' The collection of such information is critical for ensuring the appropriate process, stakeholders, and stakeholder input in the process. No other collections are being conducted that would provide this information to FMCS.

Burden: The current total annual burden estimate is that FMCS will receive information from approximately 15,000 respondents per year. Interviews and discussions would be approximately thirty minutes in duration. Written surveys would take approximately ten minutes to complete. FMCS expects the total burden to not exceed 2,535 hours per year.

II. Request for Comments

FMCS solicits comments to:

i. Evaluate whether the proposed collections of information are necessary for the proper performance of the functions of the agency, including whether the information will have practical utility.

ii. Enhance the accuracy of the agency's estimates of the burden of the proposed collection of information.

iii. Enhance the quality, utility, and clarity of the information to be collected.

iv. Minimize the burden of the collections of information on those who are to respond, including the use of appropriate automated, electronic collection technologies or other forms of information technology.

III. 60-Day Comment Period

This information was previously published in the **Federal Register** on March 16, 2022, allowing for a 60-day public comment period under Document 2022–05543 at 87 FR 14857. FMCS received no comments.

IV. The Official Record

The official records are electronic records.

List of Subjects

Information Collection Requests.

Dated: May 13, 2022.

Anna Davis,

Acting General Counsel.

[FR Doc. 2022–10752 Filed 5–18–22; 8:45 am]

BILLING CODE 6732–01–P

FEDERAL TRADE COMMISSION

[File No. 222 3023]

Lions Not Sheep; Analysis of Proposed Consent Order To Aid Public Comment

AGENCY: Federal Trade Commission.

ACTION: Proposed consent agreement; request for comment.

SUMMARY: The consent agreement in this matter settles alleged violations of federal law prohibiting unfair or deceptive acts or practices. The attached Analysis of Proposed Consent Order to Aid Public Comment describes both the allegations in the draft complaint and the terms of the consent order—embodied in the consent agreement—that would settle these allegations.

DATES: Comments must be received on or before June 21, 2022.

ADDRESSES: Interested parties may file comments online or on paper by following the instructions in the Request for Comment part of the **SUPPLEMENTARY INFORMATION** section below. Please write ''Lions Not Sheep; File No. 222 3023'' on your comment and file your comment online at *https://www.regulations.gov* by following the instructions on the web-based form. If you prefer to file your comment on paper, mail your comment to the following address: Federal Trade Commission, Office of the Secretary, 600 Pennsylvania Avenue NW, Suite CC–5610 (Annex D), Washington, DC 20580, or deliver your comment to the following address: Federal Trade Commission, Office of the Secretary, Constitution Center, 400 7th Street SW, 5th Floor, Suite 5610 (Annex D), Washington, DC 20024.

FOR FURTHER INFORMATION CONTACT: Julia Solomon Ensor (202–326–2377), Bureau of Consumer Protection, Federal Trade Commission, 600 Pennsylvania Avenue NW, Washington, DC 20580.

SUPPLEMENTARY INFORMATION: Pursuant to Section 6(f) of the Federal Trade Commission Act, 15 U.S.C. 46(f), and FTC Rule 2.34, 16 CFR 2.34, notice is hereby given that the above-captioned consent agreement containing a consent order to cease and desist, having been filed with and accepted, subject to final approval, by the Commission, has been placed on the public record for a period of thirty (30) days. The following Analysis to Aid Public Comment describes the terms of the consent agreement and the allegations in the complaint. An electronic copy of the full text of the consent agreement package can be obtained at *https://www.ftc.gov/news-events/commission-actions.*

You can file a comment online or on paper. For the Commission to consider your comment, we must receive it on or before June 21, 2022. Write ''Lions Not Sheep; File No. 222 3023'' on your comment. Your comment—including your name and your state—will be placed on the public record of this proceeding, including, to the extent practicable, on the *https://www.regulations.gov* website.

Because of heightened security screening, postal mail addressed to the Commission will be subject to delay. We strongly encourage you to submit your comments online through the *https://www.regulations.gov* website.

If you prefer to file your comment on paper, write ''Lions Not Sheep; File No. 222 3023'' on your comment and on the envelope, and mail your comment to the following address: Federal Trade Commission, Office of the Secretary, 600 Pennsylvania Avenue NW, Suite CC–5610 (Annex D), Washington, DC 20580.

Because your comment will be placed on the publicly accessible website at *https://www.regulations.gov,* you are solely responsible for making sure your comment does not include any sensitive or confidential information. In particular, your comment should not include sensitive personal information, such as your or anyone else's Social Security number; date of birth; driver's license number or other state identification number, or foreign country equivalent; passport number; financial account number; or credit or debit card number. You are also solely responsible for making sure your comment does not include sensitive health information, such as medical records or other individually identifiable health information. In addition, your comment should not include any ''trade secret or any commercial or financial information which . . . is privileged or confidential''—as provided by Section 6(f) of the FTC Act, 15 U.S.C. 46(f), and FTC Rule 4.10(a)(2), 16 CFR 4.10(a)(2)—including competitively sensitive information such as costs, sales statistics, inventories, formulas, patterns, devices, manufacturing processes, or customer names.

Comments containing material for which confidential treatment is requested must be filed in paper form, must be clearly labeled ''Confidential,'' and must comply with FTC Rule 4.9(c). In particular, the written request for confidential treatment that accompanies the comment must include the factual and legal basis for the request, and must identify the specific portions of the comment to be withheld from the public record. *See* FTC Rule 4.9(c). Your comment will be kept confidential only if the General Counsel grants your request in accordance with the law and the public interest. Once your comment has been posted on the *https://www.regulations.gov* website—as legally required by FTC Rule 4.9(b)—we cannot redact or remove your comment from that website, unless you submit a confidentiality request that meets the requirements for such treatment under FTC Rule 4.9(c), and the General Counsel grants that request.

Visit the FTC website at *http://www.ftc.gov* to read this document and the news release describing the proposed settlement. The FTC Act and other laws the Commission administers permit the collection of public comments to consider and use in this proceeding, as appropriate. The Commission will consider all timely and responsive public comments that it receives on or before June 21, 2022. For information on the Commission's privacy policy, including routine uses permitted by the Privacy Act, see *https://www.ftc.gov/site-information/privacy-policy.*

Analysis of Proposed Consent Order To Aid Public Comment

The Federal Trade Commission (''FTC'' or ''Commission'') has accepted, subject to final approval, an agreement containing a consent order from Lions Not Sheep Apparel, LLC; Lions Not Sheep Products, LLC; Lions Not Sheep Ventures, LLC; Lions Not Sheep LLC; and Sean Whalen (''Respondents'').

The proposed consent order has been placed on the public record for thirty (30) days for receipt of comments by interested persons. Comments received during this period will become part of the public record. After thirty (30) days, the Commission will again review the agreement and the comments received and decide whether it should withdraw from the agreement or make final the agreement's proposed order.

This matter involves Respondents' advertising of hats, accessories, and apparel as ''Made in USA.'' According to the FTC's complaint, Respondents represented that hats and non-apparel accessories were all or virtually all made in the United States. However, the complaint alleges that, in numerous instances, those hats and non-apparel accessories are wholly imported or contain significant imported content. Based on the foregoing, the complaint alleges Respondents engaged in deceptive acts or practices in violation of Section 5(a) of the FTC Act.

The complaint further alleges Respondents violated the Textile Fiber Products Identification Act by (1) advertising articles of wearing apparel as of U.S. origin despite the fact they are wholly imported or incorporate significant imported materials, and (2) removing tags containing information required pursuant to the Textile Fiber Products Identification Act and replacing those tags with false country-of-origin designations.

The proposed consent order contains provisions designed to prevent Respondents from engaging in similar acts and practices in the future. Consistent with the FTC's Made in USA Labeling Rule, 16 CFR part 323, and Enforcement Policy Statement on U.S.-Origin Claims, Part I prohibits Respondents from making U.S.-origin claims for their products unless: (1) The final assembly or processing of the product occurs in the United States, all significant processing that goes into the product occurs in the United States, and all or virtually all ingredients or components of the product are made and sourced in the United States; (2) a clear and conspicuous qualification appears immediately adjacent to the representation that accurately conveys the extent to which the product contains foreign parts, ingredients or components, and/or processing; or (3) for a claim that a product is assembled in the United States, the product is last substantially transformed in the United States, the product's principal assembly takes place in the United States, and United States assembly operations are substantial.

Part II prohibits Respondents from making any representation about a product or service, including any representation regarding country of origin, unless the representation is not misleading and Respondents have a reasonable basis substantiating it.

Part III requires Respondents to make certain disclosures about the country of origin of any product subject to the Textile Fiber Products Identification Act.

Parts IV through VI are monetary provisions. Part IV imposes a judgment of $211,335. Part V includes additional monetary provisions relating to collections. Part VI requires Respondents to provide sufficient customer information to enable the Commission to administer consumer redress, if appropriate.

Part VII is a notice provision requiring Respondents to identify and notify certain consumers of the FTC's action within 30 days after the issuance of the order, or within 30 days of the consumer's identification, if identified later. Respondents are also required to

submit reports regarding their notification program.

Parts VIII through XI are reporting and compliance provisions. Part VIII requires Respondents to acknowledge receipt of the order, to provide a copy of the order to certain current and future principals, officers, directors, and employees, and to obtain an acknowledgement from each such person that they have received a copy of the order. Part IX requires Respondents to file a compliance report within one year after the order becomes final and to notify the Commission within 14 days of certain changes that would affect compliance with the order. Part X requires Respondents to maintain certain records, including records necessary to demonstrate compliance with the order. Part XI requires Respondents to submit additional compliance reports when requested by the Commission and to permit the Commission or its representatives to interview Respondents' personnel.

Finally, Part XII is a ''sunset'' provision, terminating the order after twenty (20) years, with certain exceptions.

The purpose of this analysis is to aid public comment on the proposed order. It is not intended to constitute an official interpretation of the proposed order or to modify its terms in any way.

By direction of the Commission.

April J. Tabor,

Secretary.

[FR Doc. 2022–10748 Filed 5–18–22; 8:45 am]

BILLING CODE 6750–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention

Solicitation of Nominations for Appointment to CDC's Advisory Committee to the Director (ACD) Data and Surveillance Workgroup (DSW); Re-Opening of Solicitation Period

AGENCY: Centers for Disease Control and Prevention (CDC), Department of Health and Human Services.

ACTION: Notice.

SUMMARY: Notice is hereby given of a change in the solicitation of CDC's Advisory Committee to the Director (ACD) Data and Surveillance Workgroup (DSW). In the **Federal Register** notice published on May 4, 2022, nominations for appointment to CDC's ACD DSW workgroup were due May 16, 2022. Nominations are now due May 27, 2022.

DATES: Nominations for membership on the DSW workgroup must be received no later than May 27, 2022. Late nominations will not be considered for membership.

ADDRESSES: All nominations (cover letters and curriculum vitae) should be emailed to *DSWACD@cdc.gov* with the subject line: ''Nomination for CDC ACD DSW Workgroup.''

FOR FURTHER INFORMATION CONTACT: Rachel Holloway, MPH, Office of the Chief of Staff, Centers for Disease Control and Prevention, 1600 Clifton Road NE, Mailstop H21–10, Atlanta, Georgia 30329–4027; Telephone: (404) 639–7000; Email: *DSWACD@cdc.gov*.

SUPPLEMENTARY INFORMATION:

Background: The purpose of the ACD, CDC is to advise the Secretary, HHS, and the Director, CDC, on policy and broad strategies that will enable CDC to fulfill its mission of protecting health through health promotion, prevention, and preparedness. The ACD, CDC consists of up to 15 non-federal members, including the Chair, knowledgeable in areas pertinent to the CDC mission, such as health policy, public health, global health, preparedness, preventive medicine, the faith-based and community-based sector, and allied fields.

Purpose: The establishment and formation of the DSW is to provide input to the ACD, CDC on agency-wide activities related to the scope and implementation of CDC's data modernization strategy across the agency, ultimately playing a key role in the agency's work with public health, healthcare, and academic and private sector partners and with the promotion of equity. The DSW membership will consist of approximately 15 members. It will be co-chaired by two current ACD, CDC Special Government Employees. The DSW co-chairs will present their findings, observations, and work products at one or more ACD, CDC meetings for discussion, deliberation, and decisions (final recommendations to CDC).

Nomination Criteria: DSW members will serve terms ranging from six months to one year and be required to attend DSW meetings approximately one to two times per month (virtually or in person), and contribute time between meetings for research, consultation, discussion, and writing assignments.

Nominations are being sought for individuals who have the expertise and qualifications necessary to contribute to the accomplishments of the committee's/workgroup's objectives. Nominees will be selected based on expertise in the fields of public health science and practice; public health preparedness and response; public health policy development, analysis, and implementation; public health surveillance and informatics; data analysis, data science, and forecasting; health information technology; and healthcare delivery from jurisdictional government agencies, non-government organizations, academia, and the private sector. To ensure a diverse workgroup composition, nominees with front line and field experience at the local, state, tribal, and territorial levels are encouraged to apply. This includes nominees with experience working for, and with, community-based organizations and other non-profit organizations. Federal employees will not be considered for membership. Selection of members is based on candidates' qualifications to contribute to the accomplishment of the DSW's objectives.

HHS policy stipulates that membership be balanced in terms of points of view represented and the workgroup's function. Appointments shall be made without discrimination based on age, race, ethnicity, gender, sexual orientation, gender identity, HIV status, disability, and cultural, religious, or socioeconomic status. Nominees must be U.S. citizens and cannot be full-time employees of the U.S. Government. Current participation on federal workgroups or prior experience serving on a federal advisory committee does not disqualify a candidate; however, HHS policy is to avoid excessive individual service on advisory committees and multiple committee memberships. Interested candidates should submit the following items:

- A one-half to one-page cover letter that includes your understanding of, and commitment to, the time and work necessary; one to two sentences on your background and experience; and one to two sentences on the skills/perspective you would bring to the DSW.
- Current curriculum vitae which highlights the experience and work history being sought relevant to the criteria set forth above, including complete contact information (telephone numbers, mailing address, email address).

Nominations may be submitted by the candidate him or herself, or by the person/organization recommending the candidate.

The Director, Strategic Business Initiatives Unit, Office of the Chief Operating Officer, Centers for Disease Control and Prevention, has been delegated the authority to sign **Federal Register** notices pertaining to announcements of meetings and other

committee management activities, for both the Centers for Disease Control and Prevention and the Agency for Toxic Substances and Disease Registry.

Kalwant Smagh,

Director, Strategic Business Initiatives Unit, Office of the Chief Operating Officer, Centers for Disease Control and Prevention.

[FR Doc. 2022–10791 Filed 5–18–22; 8:45 am]

BILLING CODE 4163–18–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Medicare & Medicaid Services

[Document Identifiers: CMS–10545]

Agency Information Collection Activities: Submission for OMB Review; Comment Request

AGENCY: Centers for Medicare & Medicaid Services, Health and Human Services (HHS).

ACTION: Notice.

SUMMARY: The Centers for Medicare & Medicaid Services (CMS) is announcing an opportunity for the public to comment on CMS' intention to collect information from the public. Under the Paperwork Reduction Act of 1995 (PRA), federal agencies are required to publish notice in the **Federal Register** concerning each proposed collection of information, including each proposed extension or reinstatement of an existing collection of information, and to allow a second opportunity for public comment on the notice. Interested persons are invited to send comments regarding the burden estimate or any other aspect of this collection of information, including the necessity and utility of the proposed information collection for the proper performance of the agency's functions, the accuracy of the estimated burden, ways to enhance the quality, utility, and clarity of the information to be collected, and the use of automated collection techniques or other forms of information technology to minimize the information collection burden.

DATES: Comments on the collection(s) of information must be received by the OMB desk officer by June 21, 2022.

ADDRESSES: Written comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice to *www.reginfo.gov/public/do/PRAMain.* Find this particular information collection by selecting ''Currently under 30-day Review—Open for Public Comments'' or by using the search function.

To obtain copies of a supporting statement and any related forms for the proposed collection(s) summarized in this notice, you may make your request using one of following:

1. Access CMS' website address at website address at: *https://www.cms.gov/Regulations-and-Guidance/Legislation/PaperworkReductionActof1995/PRA-Listing.*

FOR FURTHER INFORMATION CONTACT: William Parham at (410) 786–4669.

SUPPLEMENTARY INFORMATION: Under the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501–3520), federal agencies must obtain approval from the Office of Management and Budget (OMB) for each collection of information they conduct or sponsor. The term ''collection of information'' is defined in 44 U.S.C. 3502(3) and 5 CFR 1320.3(c) and includes agency requests or requirements that members of the public submit reports, keep records, or provide information to a third party. Section 3506(c)(2)(A) of the PRA (44 U.S.C. 3506(c)(2)(A)) requires federal agencies to publish a 30-day notice in the **Federal Register** concerning each proposed collection of information, including each proposed extension or reinstatement of an existing collection of information, before submitting the collection to OMB for approval. To comply with this requirement, CMS is publishing this notice that summarizes the following proposed collection(s) of information for public comment:

1. *Type of Information Collection Request:* Revision of a currently approved collection; *Title of Information Collection:* Outcome and Assessment Information Set OASIS–E; *Use:* This request is for OMB approval to modify the Outcome and Assessment Information Set (OASIS) that home health agencies (HHAs) are required to collect in order to participate in the Medicare program. The current version of the OASIS, OASIS–D (0938–1279) data item set was approved by the Office of Management and Budget (OMB) on December 6, 2018 and implemented on January 1, 2019. We are seeking OMB approval for the proposed revised OASIS item set, referred to hereafter as OASIS–E, scheduled for implementation on January 1, 2023. The OASIS–E includes changes pursuant to the Improving Medicare Post-Acute Care Transformation Act of 2014 (the IMPACT Act); and, to accommodate data element removals to reduce burden; and improve formatting throughout the document. Subsequent to publishing the 60-day **Federal Register** notice (87 FR 7457), we removed the GG activity items from the Follow-Up time point which resulted in a decrease in the burden hours. *Form Number:* CMS–10545 (OMB control number: 0938–1279); *Frequency:* Occasionally; *Affected Public:* Private Sector (Business or other for-profit and Not-for-profit institutions); *Number of Respondents:* 11,354; *Total Annual Responses:* 18,030,766; *Total Annual Hours:* 13,012,051. (For policy questions regarding this collection contact Joan Proctor at 410–786–0949).

Dated: May 16, 2022.

William N. Parham, III,

Director, Paperwork Reduction Staff, Office of Strategic Operations and Regulatory Affairs.

[FR Doc. 2022–10792 Filed 5–18–22; 8:45 am]

BILLING CODE 4120–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Administration for Children and Families

Proposed Information Collection Activity; Evaluation of the Child Welfare Capacity Building Collaborative (0970–0576)

AGENCY: Children's Bureau, Administration for Children and Families, HHS.

ACTION: Request for public comment.

SUMMARY: The Children's Bureau, Administration for Children and Families (ACF), U.S. Department of Health and Human Services (HHS), is proposing to collect additional data for an evaluation of the services provided to child welfare jurisdictions and Court Improvement Programs (CIPs) by the Child Welfare Capacity Building Collaborative. This new data collection is the second part of a data collection effort already underway (OMB #0970–0576, expiration 9/30/2024). This notice details the second group of instruments that will be used for data collection as part of this evaluation.

DATES: *Comments due within 30 days of publication.* OMB is required to make a decision concerning the collection of information between 30 and 60 days after publication of this document in the **Federal Register**. Therefore, a comment is best assured of having its full effect if OMB receives it within 30 days of publication.

ADDRESSES: Written comments and recommendations for the proposed information collection should be sent within 30 days of publication of this

notice to *www.reginfo.gov/public/do/PRAMain.* Find this particular information collection by selecting ''Currently under 30-day Review—Open for Public Comments'' or by using the search function. You can also obtain copies of the proposed collection of information by emailing *infocollection@acf.hhs.gov.* Identify all emailed requests by the title of the information collection.

SUPPLEMENTARY INFORMATION:

Description: The Capacity Building Collaborative includes three centers (Center for States, Center for Tribes, Center for Courts) funded by the Children's Bureau to provide national child welfare expertise and evidence-informed training and technical assistance services to state, tribal and U.S. territorial public child welfare agencies, and CIPs. The Centers offer services including Web-based content and resources, product development and dissemination, self-directed and group-based training, virtual learning and peer networking events, and tailored consultation, coaching, and facilitation (''tailored services''). Centers' services are being evaluated by Center-specific evaluations and a cross-Center evaluation. *The cross-Center evaluation* examines collaboration among Centers and with federal staff, services delivered by the Centers, service recipient satisfaction with service quality, federal staff's experiences of assessment and work planning services offered by the Centers, effectiveness of Center services, how Centers apply a common ''change management approach'' in their work; what affects child welfare jurisdiction engagement with Center services, and the costs of Center services. *The Center for States' evaluation* consists of data collection around two research questions focusing on understanding usefulness, relevance, and satisfaction from a stakeholder perspective as well as outcomes of services. *The Center for Tribes' evaluation* examines the extent to which the Center provides effective, culturally responsive services that meet the needs of tribal child welfare programs, the satisfaction of service recipients with service quality, and service outcomes for tribal child welfare programs and stakeholders. *The Center for Courts' evaluation* assesses satisfaction with and effectiveness of service delivery; progress toward meeting Center goals and the needs of CIP to promote continuous quality improvement (CQI); and increased knowledge, collaboration, and capacity to improve court performance and child and family outcomes.

An initial set of instruments was approved and are currently in use for these evaluations. For information about these instruments, see: *https://www.reginfo.gov/public/do/PRAViewICR?ref_nbr=202105-0970-015.* These instruments will continue to be used for data collection through July 2024.

The second group of data sources proposed include (1) a guide for conducting focus groups with teams of child welfare and CIP staff implementing tailored service projects with Center support (one version for use with states and one version for use with CIP); (2) a protocol to collect interview data from Center tailored service providers (known as Liaisons or Child Welfare Specialists) about their service provision experiences, relationships and interactions with jurisdictions and federal staff, perceptions of their role, and their Centers' approach to diversity, equity, and inclusion (DEI) services; (3) a protocol to collect interview data from jurisdiction staff implementing tailored service projects about how Centers' technical assistance addresses diversity, equity, and inclusion; (4) a protocol to collect interview/focus group data from tribal child welfare program staff about strategies and contextual factors associated with achievement of program goals, the capacity to use data for CQI and evaluation, and the outcomes of services delivered by Center for Tribes; and (5) a survey to collect feedback from CIP directors/coordinators about the CIP's experiences and satisfaction with capacity building services delivered by the Center for Courts, and the perceived impact on CIP capacity.

Respondents: Respondents to the data collection instruments will include (1) child welfare and judicial professionals that receive Center services and (2) Center tailored service providers.

Annual Burden Estimates

The following details the burden associated with the new instruments. For burden currently approved and ongoing, visit *https://www.reginfo.gov/public/do/PRAViewICR?ref_nbr=202105-0970-015.*

Instrument	Total number of respondents	Total number of responses per respondent	Average burden hours per response	Total burden hours	Annual burden hours
Cross-Center: Tailored Services Focus Group Guide (for states)	50	1	1	50	17
Cross-Center: Tailored Services Focus Group Guide (for CIPs)	25	1	1	25	8
Cross-Center: Liaison/Child Welfare Specialist interview protocol	23	1	1	23	8
Cross-Center: Tailored Services Jurisdiction Staff DEI Interview Protocol	30	1	.75	23	8
Center for Tribes: Jurisdiction Staff Interviews	25	2	1	50	17
Center for Tribes: Jurisdiction Staff Focus Groups	25	3	1.5	113	38
Center for Courts: CIP Capacity Building Services Feedback Survey	53	2	.25	27	9

Estimated Total Annual Burden Hours: 105.

Authority: Sec. 5106, Pub. L. 111–320, the Child Abuse Prevention and Treatment Act Reauthorization Act of 2010, and titles IV–B and IV–E of the Social Security Act.

Mary B. Jones,

ACF/OPRE Certifying Officer.

[FR Doc. 2022–10753 Filed 5–18–22; 8:45 am]

BILLING CODE 4184–44–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Administration for Children and Families

[OMB No. 0970–0476]

Submission for OMB Review; Generic Clearance for Disaster Information Collection Forms

AGENCY: Office of Human Services Emergency Preparedness and Response, Administration for Children and Families, HHS.

ACTION: Request for public comment.

SUMMARY: The Administration for Children and Families (ACF) is requesting a 3-year extension of the Generic Clearance for Disaster Information Collection Forms (OMB #0970–0476) and the five forms currently approved for ACF programs. There are no changes requested to the umbrella generic and no substantial changes to the currently approved forms.

DATES: *Comments due within 30 days of publication.* OMB must make a decision about the collection of information between 30 and 60 days after publication of this document in the **Federal Register**. Therefore, a comment is best assured of having its full effect if OMB receives it within 30 days of publication.

ADDRESSES: Written comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice to *www.reginfo.gov/public/do/PRAMain.* Find this particular information collection by selecting ''Currently under 30-day Review—Open for Public Comments'' or by using the search function. You can also obtain copies of the proposed collection of information by emailing *infocollection@acf.hhs.gov.* Identify all emailed requests by the title of the information collection.

SUPPLEMENTARY INFORMATION:

Description: The information collected through the forms approved under the Generic Clearance for Disaster Information Collection Forms is used to provide real-time updates during the response and recovery phases of a disaster. The same generic form has been tailored for each of the five following ACF offices or programs: The Children's Bureau, the Family Violence Prevention and Services Program, the Office of Child Care, the Office of Head Start, and the Runaway and Homeless Youth (RHY) Program. It is possible that more program offices may request approval of a tailored version in the future. The requested information is submitted by ACF grantees, which includes states and tribes.

Currently Approved Forms

Family and Youth Services Bureau, Family Violence Prevention and Services Program. This form collects information on post-disaster impacts and disaster recovery, including requests for assistance from state administrators, tribes/tribal organizations, state coalitions, or resource centers comprising the Domestic Violence Resource Network; shelters that have been evacuated due to damage; shelter residents being served in alternate locations; reports of an increase in requests for assistance; capacity shortfalls; and reported increase in domestic violence post-disaster.

Office of Child Care. The baseline information includes the number of licensed, regulated, and license-exempt child care providers in the state; the number of children who are served by the ACF Office of Child Care's Child Care and Development Fund (CCDF); emergency contact information for the CCDF administrator, the licensing contacts, and resource and referral agencies; interruptions in systems that facilitate contacting the child care providers; contact person for state recordkeeping systems; number of children served; and damage assessment plans of the licensing agency. The disaster impact information includes the number and type of child care providers closed, the number of closed providers that serve children who benefit from ACF CCDF, the number of children with CCDF subsidies affected by the closures, total child care capacity lost, whether the providers whose facilities have closed will be able to reopen, whether damaged facilities have been able to remain open, degree of disruption in services; state decision to implement temporary operating standards for child care providers; and requests for behavioral and mental health services for children, families, and staff. Post-disaster recovery questions include ability of child care providers to reopen, number of service slots lost due to closures, total number of child care providers that are open in the disaster impact zone; and staff shortages.

Family and Youth Services Bureau, Runaway and Homeless Youth Program. This form collects information on post-disaster impacts and disaster recovery, including requests from grantees for technical assistance; a safety and accountability report for children and youth in RHY programs; reports of damage to RHY facilities; and a report of any children or youth that have been relocated due to damages to facilities.

Children's Bureau. This form requests information on any disaster-caused disruptions of the child abuse/neglect reporting and investigation system; reports of unaccompanied children needing protection, identification, and reunification with legal caregivers; actions taken by the Child Welfare Agency; impacts to Chafee Foster Care Independence Program providers; accountability and safety report for youth receiving services; reports on any increase in the number of child abuse or neglect reports in the affected areas; impacts to Safe and Stable Families or Community Based Child Abuse Prevention providers; whether families receiving in-home services are being supported; displaced or temporarily relocated foster families; coordination of needed services and supervision by the Child Welfare Agency; new or increased interstate challenges; and compromised program records.

Office of Head Start. Number of Head Start (HS) centers and service slots located in the disaster impact zone; number of centers and available service slots open and number closed post-disaster; number of HS centers with undetermined status; general access to services for children and families in the impacted areas; disruptions in transportation; ability of families to receive care elsewhere; number of HS centers closed post-disaster and number of service slots lost; and other program service interruptions.

Respondents: ACF Grantees and State Administrators.

ANNUAL BURDEN ESTIMATES

Instrument	Number of respondents	Number of responses per respondent	Average burden hours per response	Annual burden hours
Children's Bureau Disaster Information Collection Form	10	1	1	10
Family Violence Prevention and Services Program Disaster Information Collection Form	10	1	1	10
Office of Child Care Disaster Information Collection Form	7	1	2	14
Office of Head Start Disaster Information Collection Form	10	1	2	20
Runaway and Homeless Youth Program Disaster Information Collection Form	10	1	1	10
Future Program Office Disaster Information Collection Forms	40	1	1.5	60

Estimated Total Annual Burden Hours: 124.

Authority: 42 U.S.C. 68 Disaster Relief; 42 U.S.C. Section 5121; Pub. L. 113–5.

Mary B. Jones,

ACF/OPRE Certifying Officer.

[FR Doc. 2022–10786 Filed 5–18–22; 8:45 am]

BILLING CODE 4182–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Health Resources and Services Administration

Criteria for Determining Maternity Care Health Professional Target Areas

AGENCY: Health Resources and Services Administration (HRSA), Department of Health and Human Services (HHS).

ACTION: Final response.

SUMMARY: Section 332 of the Public Health Service Act (PHSA) directs the Department of Health and Human Services (HHS), through the Health Resources and Services Administration (HRSA), to identify Maternity Care Target Areas (MCTA), or geographic areas within health professional shortage areas that have a shortage of maternity care health professionals, for the purpose of providing maternity health care assistance to such health professional shortage areas. On September 21, 2021, the Health Resources and Services Administration (HRSA) published a **Federal Register** notice soliciting feedback on proposed criteria to be used to identify Maternity Care Target Areas (MCTAs). HRSA requested feedback on six proposed criteria for inclusion in a composite scale to identify MCTAs with the greatest shortage of maternity care health professionals: (1) Ratio of females ages 15–44 -to-full time equivalent maternity care health professional ratio; (2) percentage of females 15–44 with income at or below 200 percent of the federal poverty level (FPL); (3) travel time and distance to the nearest provider location with access to comprehensive maternity care services; (4) fertility rate; (5) the Social Vulnerability Index; and (6) four Maternal Health Indicators (pre-pregnancy obesity, pre-pregnancy diabetes, pre-pregnancy hypertension, and prenatal care initiation in the first trimester). This notice summarizes and responds to the comments received during the 60-day comment period and presents the final criteria which will be used to identify and score MCTAs.

ADDRESSES: Additional information about MCTAs is available at *https://bhw.hrsa.gov/workforce-shortage-areas/shortage-designation.*

FOR FURTHER INFORMATION CONTACT: Dr. Janelle McCutchen, Chief, Shortage Designation Branch, Division of Policy and Shortage Designation, Bureau of Health Workforce, HRSA, 5600 Fishers Lane, Rockville, Maryland 20857, *sdmp@hrsa.gov,* or 301.443.9156.

SUPPLEMENTARY INFORMATION: Section 332 of the Public Health Service Act (PHSA), 42 U.S.C. 254e, provides that the Secretary designate Health Professional Shortage Areas (HPSAs) based on criteria established by regulation. HPSAs are defined in section 332 to include (1) urban and rural geographic areas which the Secretary determines have shortages of health professionals, (2) population groups with such shortages, and (3) public or private medical facilities or other public facilities with such shortages. The required regulations setting forth the criteria for designating HPSAs are codified at 42 CFR part 5.

Section 332(k)(1) provides that the Secretary, acting through the Administrator of HRSA, identify shortages of maternity care services ''within health professional shortage areas.'' Section 332(k)(1) further requires HRSA to identify MCTAs and distribute maternity care health professionals within HPSAs using the MCTAs so identified. HRSA must also collect and publish data in the **Federal Register** comparing the availability and need of maternity care health services in HPSAs and must seek input from relevant provider organizations and other stakeholders.

In a September 21, 2021, **Federal Register** notice (86 FR 53324), HRSA requested feedback on six proposed criteria to identify MCTAs: (1) Ratio of females ages 15–44 -to-full time equivalent maternity care health professional ratio; (2) percentage of females 15–44 with income at or below 200 percent of the federal poverty level (FPL); (3) travel time and distance to the nearest provider location with access to comprehensive maternity care services; (4) fertility rate; (5) the Social Vulnerability Index; and (6) four Maternal Health Indicators (pre-pregnancy obesity, pre-pregnancy diabetes, pre-pregnancy hypertension, and prenatal care initiation in the first trimester).

HRSA carefully evaluated and analyzed the comments received and used them to guide the development of the final MCTA criteria.

Comments on the Proposed Criteria for Identifying Maternity Care Target Areas

HRSA received 21 responses to the request for comments. Comments and responses are summarized below.

Health Care Capacity Factors

Summary of Comments

Population-to-Provider Ratio

All commenters supported the inclusion of a population-to-provider ratio and agreed with HRSA's proposal of a population ratio of females ages 15–44 -to-full time equivalent maternity care health professional ratio. However, several commenters questioned the use of only Obstetrician/Gynecologists (OB/GYNs) and Certified Nurse Midwives (CNMs) in the provider ratio and recommended the inclusion of family medicine physicians, physician assistants, and nurse practitioners. Specifically, one commenter indicated

''that a comprehensive system of maternity healthcare services is comprised of multiple types of care and considerations should be made for the inclusion of family medicine physicians in rural areas that deliver maternity care services.''

Response

HRSA appreciates the recommendation for the inclusion of additional provider types and recognizes the important contribution all of these professionals play in the delivery of obstetrics care. Currently, standardized nationwide data is not readily available outlining the number of hours that individual family medicine physicians, physician assistants, and nurse practitioners spend providing these services, and thus the agency would have no way of uniformly comparing the hours that these providers spend contributing maternity care services. HRSA recognizes the important role of these clinicians in the provision of maternity care and will continue to review the availability of these data points to determine if additional provider types may be incorporated into the MCTA scoring criteria in the future. We continue to welcome recommendations on nationally available data sets for the incorporation of these provider types into MCTAs. Until that data is readily available for inclusion, HRSA will proceed with the population-to-provider ratio as proposed.

Travel Time and Distance (TTD) to Nearest Source of Care (NSC)

HRSA proposed including a measure of travel time and distance (TTD) to the nearest source of care (NSC) with access to comprehensive maternity care services. All commenters supported the inclusion of TTD to NSC criteria but presented varied methodologies on how to implement and score the criteria. Some commenters were concerned with the TTD point scale outline in the proposed criteria and suggested that HRSA adjust and expand the scoring scale to provide points for facilities identified within the 30 minute/mile TTD. A separate commenter requested that, ''In terms of distance from comprehensive services, I would ask HRSA to clarify that as the distance from a site that has more than one or two on-staff OB/GYN.'' Another commenter indicated that TTD should be the largest weighted factor, as it relates to the geographic accessibility of services and is part of the assessment needed to fully address the MCTA statutory requirements

Response

Section 332(k)(5) of the PHSA defines 'full scope maternity care health services' as care provided during labor, birthing, prenatal care, and postpartum care, with no specification regarding the quantity of providers available at the facility. As to the comment regarding including points for distance less than 30 minute/mile, the United States currently lacks an established benchmark for timely access to a facility for obstetric care. However, the American College of Obstetricians and Gynecologist (ACOG) proposes a 30-mintue capability for decision-to-incision for emergency cesarean delivery.[1] HRSA will therefore retain its proposed approach.

In reference to the comment for the explicit definition of ''distance from a site that has more than one or two on-staff OB/GYN,'' HRSA will apply the current Primary Care HPSA NSC policy, which identifies the NSC based on the presence of a provider trained and licensed to provide the necessary care regardless of the number of providers at the location. In response to the comment regarding geographic accessibility, HRSA recognizes the importance of this measure and will retain it as proposed and continue to monitor this issue in the future.

Health Care Need Factors

HRSA proposed the use of four Maternal Health Indicators (pre-pregnancy obesity, pre-pregnancy diabetes, pre-pregnancy hypertension, and prenatal care initiation in the first trimester).

Summary of Comments

Inclusion of Cigarette Smoking as Maternal Health Indicator

Several commenters suggested inclusion of a tobacco usage indicator. Commenters noted that smoking in the 3 months leading up to pregnancy can increase the risk of preterm birth and of adverse maternal health outcomes, and recommended inclusion of tobacco use as an indicator. Additionally, commenters highlighted that a significant proportion of women who smoked cigarettes prior to pregnancy continue to smoke into the later stages of gestation.

Response

HRSA agrees that the smoking of cigarettes is a significant risk factor for adverse maternal health outcomes and will add *cigarette smoking* as a Maternal Health Indicator. For this purpose, cigarette smoking will be defined as women who report smoking one or more cigarettes daily for the 3 months prior to pregnancy or during any of the trimesters of their pregnancy.

One point will be added if the prevalence of cigarette smoking before or during pregnancy in the MCTA is greater than or equal to the median among all counties in the United States. If the prevalence of cigarette smoking before or during pregnancy in the MCTA is less than the median among all counties, zero points will be added.

Cigarette smoking	Points
Prevalence of Cigarette Smoking Before or During Pregnancy ≥50th percentile	1
Prevalence of Cigarette Smoking Before or During Pregnancy <50th percentile	0

To accommodate the inclusion of this factor, one point will be removed from the total possible number of points awarded for the percent of the population living at or below the 200 percent Federal Poverty Level indicator. The rationale for this change is that household income relative to the federal poverty line is represented not only in this criterion but also in the Social Vulnerability Index criterion.

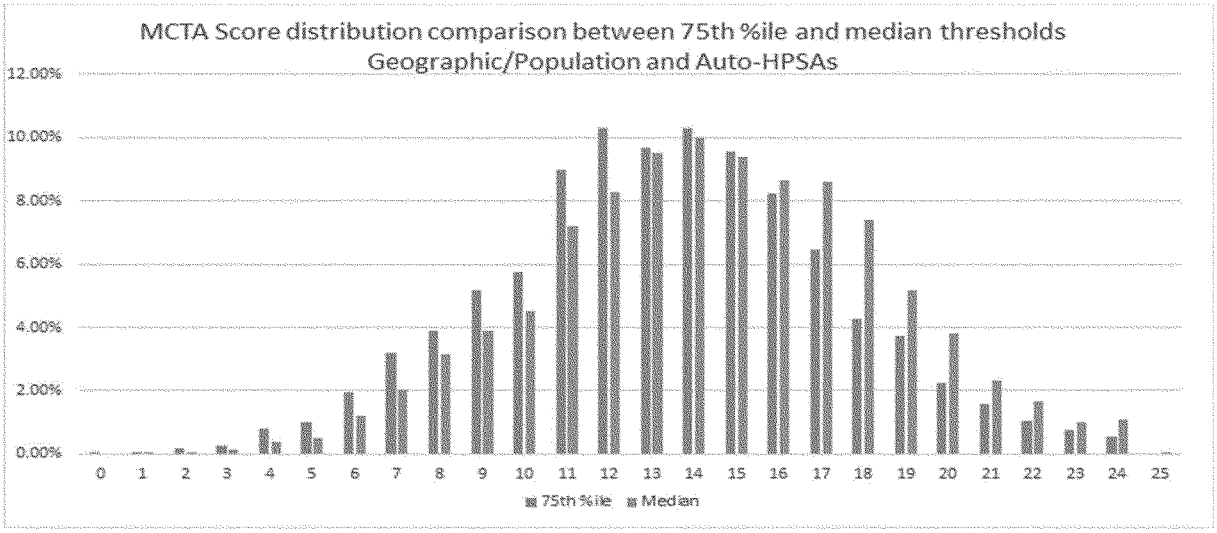
Lower Point Threshold for Maternal Health Indicators

HRSA proposed that the threshold for receiving points for Maternal Health Indicators would be 75%. Two commenters noted that the threshold to receive a point for the Maternal Health Indicators was ''too restrictive.'' One commenter recommended that the threshold be decreased for each indicator from the top quartile (75th percentile) to the median (50th percentile).

[1] 1Roa, Lina et al., ''Travel Time to Access Obstetric and Neonatal Care in the United States.'' *Obstetrics and Gynecology* (New York. 1953) vol. 136, no. 3 (2020): 610–612.

Response

HRSA conducted an impact analysis applying both percentiles to existing primary care HPSAs. The results of the analysis indicated that lowering the percentile threshold for Maternal Health Indicators to the median resulted in a slightly more standard distribution of the points across currently designated primary care HPSAs. The chart below provides a visual of the difference in the score distribution between the two thresholds. Based on this analysis, HRSA will adjust the threshold for the Maternal Health Indicators to reflect the 50th percentile recommendation of the commenters.



Social Vulnerability Index

Several commenters requested that HRSA provide points based on the individual factors of the Social Vulnerability Index (SVI) to allow for an increased impact of the social determinant factors within the SVI. Additionally, commenters proposed increasing the number of points allotted to the entire SVI.

Response

HRSA recognizes the importance of the SVI in the prioritization and distribution of resources. The scientific research that correlates the SVI to a need for additional health care resources was conducted using the entire index and not the individual factors. In addition, accommodating all 15 of the individual factors of the SVI would dilute the impact of Maternal Health Indicators that are more closely associated with the need for maternal health care. Increasing the weight of the SVI in the MCTA scoring criteria would decrease the impact of other factors, such as initiation of prenatal care and pre-pregnancy diabetes. HRSA will continue to apply the SVI as a whole to the MCTA scoring criteria and maintain the proposed point scale.

Inclusion of Behavioral Health Factor as Maternal Health Indicator

Several commenters recommended the inclusion of a behavioral health factor as part of the Maternal Health Indicators. One commenter specifically recommended a composite point based on prevalence of perinatal mood, anxiety disorders, and substance use disorder. Commenters highlighted that a pre-pregnancy diagnosis of a mental health illness can be an indicator of an increased risk of mental health concerns during pregnancy, which also increases the potential for adverse perinatal/post-partum health outcomes.

Response

HRSA recognizes the important impact of behavioral health factors on maternal health outcomes. A Report from the 14-state Maternal Mortality Review Committee found that 11% of the 421 pregnancy related deaths with an identified underlying cause of death determination, were due to mental health conditions. The Review Committee also determined that 100% of the pregnancy-related mental health deaths with a preventability determination were preventable.[2]

The Centers for Disease Control and Prevention (CDC) and Emory University conducted a cross-sectional multilevel analysis of all pregnancy-related deaths and all live births with available ZIP code or county data in the Pregnancy Mortality Surveillance System during 2011–2016 for non-Hispanic Black, Hispanic (all races), and non-Hispanic White women aged 15–44 years. Among health care need and service indicators, the number of mental health care professionals per 100,000 population had a strong inverse relationship with the pregnancy-related mortality ratio. Each standard unit increase in the number of mental health care professionals was associated with 5.55 (95% CI −8.11 to −2.99) fewer deaths per 100,000 live births among Black women and 1.42 (95% CI −2.08 to −0.76) fewer deaths per 100,000 live births among White women.[3]

HRSA agrees that access to behavioral health is a significant risk factor for adverse maternal health outcomes and will include a *behavioral health* access factor as a Maternal Health Indicator.

One point will be awarded if a portion or all of MCTA service area is designated as a Mental Health HPSA meeting the following population-to-provider median ratio thresholds based on its mental health provider type. Zero points will be awarded if a portion or all of the MCTA service area is not designated as a Mental Health HPSA or

[2] Trost, Susanna L., et al. ''Preventing Pregnancy-Related Mental Health Deaths: Insights from 14 US Maternal Mortality Review Committees, 2008–17: Health Affairs Journal.'' *Health Affairs,* 1 Oct. 2021, *https://www.healthaffairs.org/doi/10.1377/hlthaff.2021.00615.*

[3] Barrera, C., & Et.Al. (2022). County-Level Associations Between Pregnancy-Related Mortality Ratios and Contextual Sociospatial Indicators. *Journal Of Obstet Gynecol, 00*(00), 1–11.

the Mental Health designation does not meet the population to provider ratio threshold.

Behavioral health	Points
Portion or all of MCTA service area is designated as a Mental Health HPSA meeting the following population-to-provider ratio thresholds based on its mental health provider type • *Psychiatrist ONLY:* Psychiatrist population-to-provider ratio ≥45,000:1. • *Core Mental Health:* Core mental health population-to-provider ratio ≥18,000:1. • *Psychiatrist and Core Mental Health:* Psychiatrist population-to-provider ratio ≥35,000:1 and Core mental health population-to-provider ratio ≥6,000:1. • *No Psychiatrists or Core Mental Health Providers:* ≥7,500: 0.	1
Portion or all of MCTA service area is designated as a Mental Health HPSA and does *not* meet the population-to-provider ratio thresholds above, *OR* is not designated as a Mental Health HPSA	0

To accommodate the inclusion of this factor, one point will be removed from the total possible number of points awarded for the travel time and distance (TTD) to nearest source of care (NSC) criteria. The rationale for this change is to ensure that all Health Care Capacity Factors are equal in value.

Conclusion of Comment Response

HRSA appreciates the comments and recommendations received and has used them to guide the development of the final Maternity Care Health Professional Target Area criteria. Comments were not received on the proposed Federal Poverty Level or Fertility Rate factors; they will be finalized as proposed. The final MCTA criteria are included below. If you have any questions, please contact Dr. Janelle McCutchen at *sdmp@hrsa.gov.*

Final Approach for Determining Maternity Care Health Professional Target Areas

An MCTA score will be generated for each primary care HPSA using the HPSA's service area. The following six scoring criteria will be included in a composite scale that will be used to identify MCTAs with the greatest shortage of maternity care health professionals: (1) Ratio of females ages 15–44 -to-full time equivalent maternity care health professional ratio; (2) percentage of females 15–44 with income at or below 200 percent of the FPL; (3) travel time and distance to the nearest provider trained and licensed to provide the necessary care; (4) fertility rate; (5) the SVI; and (6) Maternal Health Index which contains the following six indicators: Pre-pregnancy obesity, pre-pregnancy diabetes, pre-pregnancy hypertension, prenatal care initiation in the first trimester, cigarette smoking, and the behavioral health factor. Each of these six criteria will be assigned a relative weight based on the significance of that criterion relative to all the others.

The weighted scores will be summed to develop a composite MCTA score ranging from zero to 25, with 25 indicating the greatest need for maternity care health professionals in the MCTA. Accordingly, the higher the composite score, the higher the degree of need for maternity care health services.

Score for Population-to-Full-Time-Equivalent Maternity Care Health Professional Ratio

Population-to-provider ratio will measure the number of women of childbearing age in the service area compared to the number of maternity care health professionals in the service area. Women of childbearing age will be defined as women between the ages of 15–44 years old and maternity care health professionals will be defined as OB/GYNs and CNMs. A population-to-provider ratio of 1500:1 will be used as a minimum requirement for a population to be considered reasonably served by OB/GYNs and CNMs.

Population-to-provider Ratio point values will be distributed as follows:

Population-to-provider ratio	Points
Ratio ≥6,000:1, or No CNMs or OB–GYNs and Population (Pop) ≥500	5
6,000:1 > Ratio ≥5,000:1, or No CNMs or OB–GYNs and Pop ≥400	4
5,000:1 > Ratio ≥3,000:1, or No CNMs or OB–GYNs and Pop ≥300	3
3,000:1 > Ratio ≥2,000:1, or No CNMs or OB–GYNs and Pop ≥200	2
2,000:1 > Ratio ≥1,500:1, or No CNMs or OB–GYNs and Pop ≥100	1
Ratio <1,500:1, or No CNMs or OB–GYNs and Pop <100	0

Score for Percentage of Population With Income at or Below 200 Percent of the Federal Poverty Level

The percentage of people living in the service area at or below 200 percent of the FPL will be used to score MCTAs, based on poverty data from the U.S. Census Bureau.

Population with income at or below 200 percent of the FPL point values will be distributed as follows:

Population with income at or below 200% FPL ratio	Points
Percentage of population with income at or below 200% FPL ≥50%	5
50% > Percentage of population with income at or below 200% FPL ≥45%	4
45% > Percentage of population with income at or below 200% FPL ≥40%	3
40% > Percentage of population with income at or below 200% FPL ≥35%	2
35% > Percentage of population with income at or below 200% FPL ≥30%	1
Percentage of population with income at or below 200% FPL <30%	0

Score for Travel Distance/Time to Nearest Source of Accessible Care Outside of the MCTA

The Nearest Source of Care is defined as the nearest provider trained and licensed to provide the necessary care, as determined by the ESRI StreetMap Premium road network. Travel Time and Distance is defined as the average time to travel by road miles or the actual distance in road miles to the nearest source of care.

Travel Time and Distance to the Nearest Source of Care point values will be distributed as follows:

Travel time and distance	Points
Time ≥90 min or Distance ≥90 miles	5
90 min > Time ≥75 min or 90 miles > Distance ≥75 miles	4
75 min > Time ≥60 min or 75 miles > Distance ≥60 miles	3
60 min > Time ≥45 min or 60 miles > Distance ≥45 miles	2
45 min > Time ≥30 min or 45 miles > Distance ≥30 miles	1
Time < 30 min and Distance <30 miles	0

Score for Fertility Rate

Fertility rate has been included to reflect the increased need for maternity care services among populations that experience a higher rate of births. Women of childbearing age will be derived from the American Community Survey and births will be derived from the National Vital Statistics System.

Fertility Rate point values will be distributed as follows:

Fertility rate	Points
Fertility Rate ≥90th Percentile	2
90th Percentile > Fertility Rate ≥50th Percentile	1
Fertility Rate <50th Percentile	0

Score for Social Vulnerability

Social vulnerability is defined as the resilience of communities when confronted by external hazards such as disasters or disease outbreaks per the Agency for Toxic Substances and Disease Registry's Geospatial Research, Analysis and Services Program within the Centers for Disease Control and Prevention. A score for overall social vulnerability will be incorporated into the MCTA composite score using the Centers for Disease Control and Prevention's SVI.

Social Vulnerability point values will be distributed as follows:

Social vulnerability index	Points
Social Vulnerability ≥75th Percentile	2
75th Percentile > Social Vulnerability ≥50th Percentile	1
Social Vulnerability <50th Percentile	0

Score for Maternal Health Indicators

Maternal Health Indicators are defined as factors associated with poor maternal health outcomes using data from the National Vital Statistics System and the Shortage Designation Management System. Scores will consider pre-pregnancy obesity, diabetes, hypertension, cigarette smoking, and whether prenatal care began in the first trimester as well as access to behavioral health services. Only women of childbearing age will be considered for these indicators. HRSA will use the National Vital Statistics System Natality file as the data source to determine the sub-score for pre-pregnancy obesity, diabetes, hypertension, cigarette smoking, and whether prenatal care began in the first trimester. The Shortage Designation Management System Mental Health Professional Shortage Area file will be the data source to determine the sub-score for the behavioral health access factor.

Maternal Health Indicator criteria point values will be distributed as follows:

Pre-pregnancy obesity	Points
Prevalence of pre-pregnancy obesity ≥50th percentile	1
Prevalence of pre-pregnancy obesity <50th percentile	0

- *Pre-Pregnancy Obesity*

Pre-pregnancy obesity is defined as having a Body Mass Index of 30 or higher. One point will be awarded if the prevalence of pre-pregnancy obesity in the area is greater than or equal to the 50th percentile among all counties in the United States. If the prevalence of pre-pregnancy obesity in the area is less than the 50th percentile among all counties, zero points will be awarded.

- *Pre-Pregnancy Diabetes*

One point will be awarded if the prevalence of pre-pregnancy diabetes in the area is greater than or equal to the 50th percentile among all counties in the United States. If the prevalence of pre-pregnancy diabetes in the area is less than the 50th percentile among all counties, zero points will be awarded.

Pre-pregnancy diabetes	Points
Prevalence of pre-pregnancy diabetes ≥50th percentile	1
Prevalence of pre-pregnancy diabetes <50th percentile	0

• *Pre-Pregnancy Hypertension*

One point will be awarded if the prevalence of pre-pregnancy hypertension among women in the area is greater than or equal to the 50th percentile among all counties in the nation. If the prevalence of pre-pregnancy hypertension among women in the area is less than the 50th percentile among all counties, zero points will be awarded.

Pre-pregnancy hypertension	Points
Prevalence of pre-pregnancy hypertension ≥50th percentile	1
Prevalence of pre-pregnancy hypertension <50th percentile	0

• *Cigarette Smoking*

One point will be awarded if the prevalence of cigarette smoking before or during pregnancy among women in the area is greater than or equal to the 50th percentile among all counties in the nation. Before pregnancy will be defined as smoking one or more cigarettes daily for the 3 months prior to pregnancy. During pregnancy will be defined as smoking one or more cigarettes during any trimester of pregnancy. If the prevalence of cigarette smoking before or during pregnancy among women in the area is less than the 50th percentile among all counties, zero points will be awarded.

Cigarette smoking	Points
Prevalence of Cigarette Smoking Before or During Pregnancy ≥50th percentile	1
Prevalence of Cigarette Smoking Before or During Pregnancy <50th percentile	0

• *Prenatal Care Initiation in the 1st Trimester*

One point will be awarded if the prevalence of women who did not initiate prenatal care in the first trimester of their pregnancy is greater than or equal to the 50th percentile among all counties in the nation. Zero points will be awarded if the prevalence of women who did not initiate prenatal care in the first trimester of their pregnancy is less than the 50th percentile among all counties.

Prenatal care in first trimester	Points
Prevalence of No Prenatal Care in First Trimester ≥50th percentile	1
Prevalence of No Prenatal Care in First Trimester <50th percentile	0

• *Behavioral Health Factor*

One point will be awarded if a portion or all of MCTA service area is designated as a Mental Health HPSA meeting the following population-to-provider median ratio thresholds based on its mental health provider type. Zero points will be awarded if a portion or all of the MCTA service area is not designated as a Mental Health HPSA or if the Mental Health designation does not meet the population to provider ratio threshold.

Behavioral health factor	Points
Portion or all of MCTA service area is designated as a Mental Health HPSA meeting the following population-to-provider ratio thresholds based on its mental health provider type • *Psychiatrist ONLY:* Psychiatrist population-to-provider ratio ≥45,000:1. *Core Mental Health:* Core mental health population-to-provider ratio ≥18,000:1. • *Psychiatrist and Core Mental Health:* Psychiatrist population-to-provider ratio ≥35,000:1 and Core mental health population-to-provider ratio ≥6,000:1. • *No Psychiatrists or Core Mental Health Providers:* ≥7,500: 0	1
Portion or all of MCTA service area is designated as a Mental Health HPSA and does not meet the population-to-provider ratio thresholds above, OR is not designated as a Mental Health HPSA	0

Paperwork Reduction Act

The criteria used to identify MCTAs under section 332(k) of the PHSA, as described in this announcement, will not involve data collection activities that fall under the purview of the Paperwork Reduction Act of 1995. If the methods for determining MCTAs fall under the purview of the Paperwork Reduction Act, HRSA will seek the Office of Management and Budget clearance for proposed data collection activities.

Carole Johnson,

Administrator.

[FR Doc. 2022–10783 Filed 5–18–22; 8:45 am]

BILLING CODE 4165–15–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

[Document Identifier: OS–0990–new]

Agency Information Collection Request; 60-Day Public Comment Request

AGENCY: Office of the Secretary, HHS.

ACTION: Notice.

SUMMARY: In compliance with the requirement of the Paperwork Reduction Act of 1995, the Office of the Secretary (OS), Department of Health and Human Services, is publishing the following summary of a proposed collection for public comment.

DATES: Comments on the ICR must be received on or before July 18, 2022.

ADDRESSES: Submit your comments to *Sherrette.Funn@hhs.gov* or by calling (202) 795–7714.

FOR FURTHER INFORMATION CONTACT: When submitting comments or requesting information, please include the document identifier 0990–New–60D and project title for reference, to Sherrette A. Funn, email: *Sherrette.Funn@hhs.gov,* or call (202) 795–7714 the Reports Clearance Officer.

SUPPLEMENTARY INFORMATION: Interested persons are invited to send comments regarding this burden estimate or any other aspect of this collection of information, including any of the following subjects: (1) The necessity and utility of the proposed information collection for the proper performance of the agency's functions; (2) the accuracy of the estimated burden; (3) ways to enhance the quality, utility, and clarity of the information to be collected; and (4) the use of automated collection techniques or other forms of information technology to minimize the information collection burden.

Title of the Collection: Title X Implementation Study.

Type of Collection: New.

OMB No. 0990–NEW–Office of Population Affairs—OASH.

Abstract: The Office of Population Affairs (OPA), U.S. Department of Health and Human Services (HHS), is requesting 3 years of approval by OMB on a new collection. The Title X Implementation Study will document how organizations funded by the Title X Service Grants program design and implement their program services. The study will document (1) how grantees ensure access to equitable, affordable, client-centered quality family planning services; (2) the steps that Title X grantees take to provide clients from diverse communities with equitable access to affordable, high-quality, client-centered health services; (3) any pivots and/or accommodations to providing care they made in recent years, including during the COVID–19 pandemic; and (4) how they assess their impact. To carry out these objectives, the study team will rely on the following five proposed data sources: (1) A web-based survey of the 2022 cohort of Title X grantees; (2) grantee telephone interviews; (3) in-person or virtual listening visits with clinic administrators, service providers, and community outreach or partner staff at a subset of Title X sub-recipients and service delivery sites; (4) a web-based survey of clients at up to 10 of the sites selected for listening visits; and (5) telephone interviews with subject matter experts. Data collection will begin in fall 2022, pending OMB approval, with the grantee survey and interviews, which will inform selection of sites for the listening visits.

ANNUALIZED BURDEN HOUR TABLE

Forms (if necessary)	Respondents (if necessary)	Number of respondents	Number of responses per respondents	Average burden per response	Total burden hours
Grantee web survey	Grantee project director	26	1	1	26
Grantee interview topic guide	Grantee staff	52	1	90/60	78
Listening visit topic guide for clinic administrators.	Clinic administrators	27	1	45/60	20
Listening visit topic guide for clinical service providers.	Clinicians, RN, LPN, MA, health educator, public health nurses, health educators.	53	1	1	53
Listening visit topic guide for community outreach and partner staff.	Clinic community outreach and partner staff.	27	1	45/60	20
Client survey	Title X clients	100	1	10/60	17
Subject Matter Expert Topic Guide	Title X subject matter experts	8	1	1	8
Total			7		222

Sherrette A. Funn,

Paperwork Reduction Act Reports Clearance Officer, Office of the Secretary.

[FR Doc. 2022–10747 Filed 5–18–22; 8:45 am]

BILLING CODE 4150–34–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

[Document Identifier: OS–0990–xxxx]

Agency Information Collection Request; 30-Day Public Comment Request

AGENCY: Office of the Secretary, HHS.

ACTION: Notice.

SUMMARY: In compliance with the requirement of the Paperwork Reduction Act of 1995, the Office of the Secretary (OS), Department of Health and Human Services, is publishing the following summary of a proposed collection for public comment.

DATES: Comments on the ICR must be received on or before June 21, 2022.

ADDRESSES: Written comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice. To be assured consideration, comments and recommendations must be submitted *www.reginfo.gov/public/do/PRAMain.* Find this particular information collection by selecting ''Currently under 30-day Review—Open for Public Comments'' or by using the search function.

FOR FURTHER INFORMATION CONTACT: Sherrette Funn, *Sherrette.Funn@hhs.gov* or (202) 795–7714. When submitting comments or requesting information, please include the document identifier 0990–xxxx 30D and project title for reference.

SUPPLEMENTARY INFORMATION: Interested persons are invited to send comments regarding this burden estimate or any

other aspect of this collection of information, including any of the following subjects: (1) The necessity and utility of the proposed information collection for the proper performance of the agency's functions; (2) the accuracy of the estimated burden; (3) ways to enhance the quality, utility, and clarity of the information to be collected; and (4) the use of automated collection techniques or other forms of information technology to minimize the information collection burden.

Title of the Collection: Understanding Economic Risk for Low Income Families: Economic Security, Program Benefits, and Decisions about Work.

Type of Collection: New.

OMB No.: 0990–NEW—Office of the Assistant Secretary for Planning and Evaluation.

Abstract: The primary purpose of this study is to identify the risks that federal program benefit recipients weigh when faced with an opportunity to increase earnings, including benefit reductions, earnings instability, and the ease of regaining lost benefits if needed.

The study will use a discrete choice experiment to explore the importance of these considerations when low-income individuals are presented with a hypothetical opportunity to increase earnings. Statistical analysis will explore interactions between factors and threshold effects. The focus population will be persons currently receiving benefits from at least one of the following programs: Supplemental Nutrition Assistance Program (SNAP), Medicaid/Children's Health Insurance Program (CHIP), housing assistance, Child Care Development Fund (CCDF) subsidies, and/or Temporary Assistance for Needy Families (TANF). The study will explore whether different preferences are exhibited by parents with children and by persons of different races and ethnicities.

The results of this study will provide HHS with a better understanding of the economic risks that people weigh when they make decisions about increasing earnings, which will inform HHS policy and programs at large, and further lines of research around benefit programs and employment decisions.

The data will be collected once, using primarily a web-based survey, from a sample of low-income persons receiving one or more federal benefit programs. Respondents will be asked to review the vignette and choose whether they think the hypothetical individual should accept the earnings increase. In addition, the questionnaire includes follow-up questions for each vignette/experimental condition, and a set of demographic questions.

ANNUALIZED BURDEN HOUR TABLE

Number of respondents	Number of responses per respondents	Average burden per response (in hours)	Total burden hours
2,000	1	15/60	500

Sherrette A. Funn,

Paperwork Reduction Act Reports Clearance Officer, Office of the Secretary.

[FR Doc. 2022–10730 Filed 5–18–22; 8:45 am]

BILLING CODE 4154–05–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Cardiovascular and Respiratory Sciences Integrated Review Group; Lung Injury, Repair, and Remodeling Study Section.

Date: June 23–24, 2022.

Time: 8:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Ghenima Dirami, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 4122, MSC 7814, Bethesda, MD 20892, 240–498–7546, *diramig@csr.nih.gov*.

Name of Committee: Integrative, Functional and Cognitive Neuroscience Integrated Review Group; Neurobiology of Motivated Behavior Study Section.

Date: June 23–24, 2022.

Time: 9:00 a.m. to 8:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Janita N. Turchi, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, (301) 402–4005, *turchij@mail.nih.gov*.

Name of Committee: Digestive, Kidney and Urological Systems Integrated Review Group; Hepatobiliary Pathophysiology Study Section.

Date: June 23–24, 2022.

Time: 9:00 a.m. to 8:30 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Jianxin Hu, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 2156, Bethesda, MD 20892, 301–827–4417, *jianxinh@csr.nih.gov*.

Name of Committee: Infectious Diseases and Immunology A Integrated Review Group; Cellular and Molecular Immunology—B Study Section.

Date: June 23–24, 2022.

Time: 9:00 a.m. to 8:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Liying Guo, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 4198, MSC 7812, Bethesda, MD 20892, (301) 827–7728, *lguo@mail.nih.gov*.

Name of Committee: Healthcare Delivery and Methodologies Integrated Review Group; Health Services: Quality and Effectiveness Study Section.

Date: June 23–24, 2022.

Time: 9:00 a.m. to 7:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Angela Denise Thrasher, Ph.D., Scientific Review Officer, Center for

Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 1000J, Bethesda, MD 20892, (301) 480–6894, *thrasherad@csr.nih.gov*.

Name of Committee: Biology of Development and Aging Integrated Review Group; Drug Discovery and Molecular Pharmacology Study Section.

Date: June 23–24, 2022.

Time: 9:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Jeffrey Smiley, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 6194, MSC 7804, Bethesda, MD 20892, 301–594–7945, *smileyja@csr.nih.gov*.

Name of Committee: Oncology 2—Translational Clinical Integrated Review Group; Cancer Immunopathology and Immunotherapy Study Section.

Date: June 23–24, 2022.

Time: 9:00 a.m. to 8:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Shahana Majid, Ph.D., Scientific Review Officer, Center for Scientific Review, 6701 Rockledge Drive, Bethesda, MD 20892, (301) 867–5309, *shahana.majid@nih.gov*.

Name of Committee: Surgical Sciences, Biomedical Imaging and Bioengineering Integrated Review Group; Emerging Imaging Technologies and Applications Study Section.

Date: June 23–24, 2022.

Time: 9:00 a.m. to 8:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Lawrence Edward Kagemann, Ph.D., Scientific Review Officer, Center for Scientific Review, 6701 Rockledge Drive, Bethesda, MD 20892, (301) 480–6849, *larry.kagemann@nih.gov*.

Name of Committee: Infectious Diseases and Immunology B Integrated Review Group; Immunity and Host Defense Study Section.

Date: June 23–24, 2022.

Time: 9:30 a.m. to 8:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Alok Mulky, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 4203, Bethesda, MD 20892, (301) 435–3566, *mulkya@mail.nih.gov*.

Name of Committee: Oncology 1—Basic Translational Integrated Review Group; Cancer Molecular Pathobiology Study Section.

Date: June 23–24, 2022.

Time: 10:00 a.m. to 8:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Manzoor Zarger, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 6208, MSC 7804, Bethesda, MD 20892, (301) 435–2477, *zargerma@csr.nih.gov*.

Name of Committee: Endocrinology, Metabolism, Nutrition and Reproductive Sciences Integrated Review Group; Pregnancy and Neonatology Study Section.

Date: June 23–24, 2022.

Time: 10:00 a.m. to 9:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Andrew Maxwell Wolfe, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Dr., Room 6214, Bethesda, MD 20892, 301.402.3019, *andrew.wolfe@nih.gov*.

Name of Committee: Population Sciences and Epidemiology Integrated Review Group; Social Sciences and Population Studies B Study Section.

Date: June 23–24, 2022.

Time: 10:00 a.m. to 8:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Kate Fothergill, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 3142, Bethesda, MD 20892, 301–435–2309, *fothergillke@mail.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: May 13, 2022.

Tyeshia M. Roberson-Curtis,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2022–10757 Filed 5–18–22; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Special Topics: Noninvasive Neuromodulation and Neuroimaging Technologies.

Date: June 8–9, 2022.

Time: 9:00 a.m. to 8:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Pablo M. Blazquez Gamez, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, (301) 435–1042, *pablo.blazquezgamez@nih.gov.*

Name of Committee: Emerging Technologies and Training Neurosciences Integrated Review; Group Molecular Neurogenetics Study Section.

Date: June 9–10, 2022.

Time: 9:00 a.m. to 8:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Mary G. Schueler, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 5214, MSC 7846, Bethesda, MD 20892, 301–915–6301, *marygs@csr.nih.gov.*

Name of Committee: Biology of Development and Aging Integrated Review; Group Mechanisms of Cancer Therapeutics—1 Study Section.

Date: June 9–10, 2022.

Time: 9:00 a.m. to 8:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Maria Dolores Arjona Mayor, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 806D, Bethesda, MD 20892, (301) 827–8578, *dolores.arjonamayor@nih.gov.*

Name of Committee: Brain Disorders and Clinical Neuroscience Integrated Review Group; Clinical Neuroimmunology and Brain Tumors Study Section.

Date: June 9–10, 2022.

Time: 9:00 a.m. to 7:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Aleksey Gregory Kazantsev, Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 5201, Bethesda, MD 20817, 301–435–1042, *aleksey.kazantsev@nih.gov.*

Name of Committee: Brain Disorders and Clinical Neuroscience Integrated Review Group; Aging Systems and Geriatrics Study Section.

Date: June 9–10, 2022.

Time: 9:30 a.m. to 7:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Roger Alan Bannister, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 1010–D, Bethesda, MD 20892, (301) 435–1042, *bannisterra@csr.nih.gov.*

Name of Committee: Molecular, Cellular and Developmental Neuroscience Integrated Review Group; Neurogenesis and Cell Fate Study Section.

Date: June 9, 2022.

Time: 10:00 a.m. to 8:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Adem Can, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 4190, MSC 7850, Bethesda, MD 20892, (301) 435–1042, *cana2@csr.nih.gov.*

Name of Committee: Oncology 1—Basic Translational Integrated Review Group; Tumor Cell Biology Study Section.

Date: June 9–10, 2022.

Time: 10:00 a.m. to 8:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Charles Morrow, MD, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 6202, MSC 7804, Bethesda, MD 20892, 301–408–9850, *morrowcs@csr.nih.gov.*

Name of Committee: Biobehavioral and Behavioral Processes Integrated Review Group; Child Psychopathology and Developmental Disabilities Study Section.

Date: June 13–14, 2022.

Time: 10:00 a.m. to 8:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Karen Elizabeth Seymour, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 1000–E, Bethesda, MD 20892, (301) 443–9485, *karen.seymour@nih.gov.*

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: May 12, 2022.

Victoria E. Townsend,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2022–10787 Filed 5–18–22; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; PAR 20–103: Collaborative Program Grant for Multidisciplinary Teams (RM1).

Date: June 10, 2022.

Time: 10:00 a.m. to 8:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Sergei Ruvinov, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 4158, MSC 7806, Bethesda, MD 20892, 301–435–1180, *ruvinser@csr.nih.gov.*

Name of Committee: Brain Disorders and Clinical Neuroscience Integrated Review Group; Neural Basis of Psychopathology, Addictions and Sleep Disorders Study Section.

Date: June 16–17, 2022.

Time: 9:00 a.m. to 6:30 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Wei-Qin Zhao, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 5181, MSC 7846, Bethesda, MD 20892–7846, 301–827–7238, *zhaow@csr.nih.gov.*

Name of Committee: Brain Disorders and Clinical Neuroscience Integrated Review Group; Pathophysiology of Eye Disease—2 Study Section.

Date: June 16–17, 2022.

Time: 9:30 a.m. to 7:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Cibu Paul Thomas, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 1011–H, Bethesda, MD 20894, (301) 402–4341, *thomascp@mail.nih.gov.*

Name of Committee: Center for Scientific Review Special Emphasis Panel; RFA–RM–22–002: SPARC VNS Endpoints from Standardized Parameters (VESPA) (U54).

Date: June 16, 2022.

Time: 1:00 p.m. to 8:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Raj K Krishnaraju, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 6190, Bethesda, MD 20892, 301–435–1047, *kkrishna@csr.nih.gov.*

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: May 13, 2022.

Tyeshia M. Roberson-Curtis,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2022–10756 Filed 5–18–22; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

[Docket No. FR–6302–N–01]

Changes in Certain Office of Healthcare Programs Insurance Premiums

AGENCY: Office of the Assistant Secretary for Housing—Federal Housing Commissioner, HUD.

ACTION: Notice.

SUMMARY: The Office of Healthcare Programs (OHP) announces proposed mortgage insurance premium (MIP) changes to the October 2, 2015, notice, for certain commitments issued or reissued beginning October 1, 2022. Under this Notice, MIP rates for mortgage insurance under the Federal Housing Administration's (FHA) Multifamily Housing Insurance programs will not change (see the

January 28, 2016, **Federal Register**). The proposed MIP change under the Office of Healthcare Programs will promote the President's climate change initiatives. Lastly, this Notice will include the MIP rates for OHP's Office of Residential Care's (ORCF) Section 232, Fire Safety Equipment Loan program.

DATES: Comments are due on or before: June 21, 2022.

ADDRESSES: Interested persons are invited to submit comments regarding this Notice. All submissions must refer to the above docket number and title. There are two methods for submitting public comments:

1. Electronic Submission of Comments. Interested persons may submit comments electronically through the Federal eRulemaking Portal at *https://www.regulations.gov.* HUD strongly encourages commenters to submit comments electronically. Electronic submission of comments allows the author maximum time to prepare and submit a comment, ensures timely receipt by HUD, and enables HUD to make them immediately available to the public. Comments submitted electronically through the *https://www.regulations.gov* website can be viewed by other submitters and interested members of the public. Commenters should follow instructions provided on that site to submit comments electronically.

2. Submission of Comments by Mail. Members of the public may submit comments by mail to the Regulations Division, Office of General Counsel, Department of Housing and Urban Development, 451 7th Street SW, Room 10276, Washington, DC 20410–0500. Due to security measures at all federal agencies, however, submission of comments by standard mail often results in delayed delivery. To ensure timely receipt of comments, HUD recommends that comments submitted by standard mail be submitted at least two weeks in advance of the deadline. HUD will make all comments received by mail available to the public at *https://www.regulations.gov.*

Note: To receive consideration as public comments, comments must be submitted through one of the two methods specified above. Again, all submissions must refer to the docket number and title of the notice.

No Facsimile Comments. Facsimile (FAX) comments will not be accepted.

Public Inspection of Public Comments. All properly submitted comments and communications regarding this Notice submitted to HUD are available for public inspection and copying between 8 a.m. and 5 p.m. weekdays at the above address. Due to security measures at the HUD Headquarters Building, an advance appointment to review the public comments must be scheduled by calling the Regulations Division at 202–708–3055 (this is not a toll-free number). Copies of all comments submitted are available for inspection and downloading at *http://www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT: John Hartung, Director, Policy, Risk Analysis & Lender Relations Division, Office of Residential Care Facilities, Office of Healthcare Programs, Office of Housing, Department of Housing and Urban Development, 1222 Spruce Street, St. Louis, MO 63103–2836; telephone: 314–418–5238 (this is not a toll-free number).

SUPPLEMENTARY INFORMATION:

I. Background

Section 203(c)(1) of the National Housing Act authorizes the Secretary to set the premium charge for insurance of mortgages under the various programs in Title II of the National Housing Act. The range within which the Secretary may set such charges must be between one-fourth of one percent per annum and one percent per annum of the amount of the principal obligation of the mortgage outstanding at any time. (See 12 U.S.C. 1709(c)(1)).

On October 2, 2015, HUD published a Notice in the **Federal Register** (80 FR 59809) announcing the MIP rates for FHA Multifamily, Health Care Facilities, and Hospital mortgage insurance programs that had commitments issued or reissued in FY 2016. Subsequently, on January 28, 2016, HUD Multifamily published a Notice in the **Federal Register** (81 FR 4926) announcing MIP rate reductions to promote affordable and green energy-efficient housing. HUD is now proposing rate reductions for certain Office of Healthcare Programs to achieve green and energy-efficiency buildings for the Office of Residential Care Facilities (ORCF), Section 232 program. A February 2017 article from Science Direct that studied energy consumption costs for healthcare facilities states that ''Healthcare facilities are considered major energy consumers due to their need for reliable electricity and thermal energy supplies for heating, ventilation, lighting, air conditioning and the use of medical and non-medical equipment.'' In response to the President's climate initiative, and global initiatives to combat climate change, and in-line with the Department's and Administration's goals to reduce energy consumption and utility costs throughout the building sector, rate reductions are proposed to promote healthy, green, and energy-efficient healthcare facilities.

HUD's Multifamily Housing Mortgage Insurance regulation at *24 CFR 207.254* provides as follows:

Notice of future premium changes will be published in the **Federal Register**. The Department will propose MIP changes for multifamily mortgage insurance programs and provide a 30-day public comment period for the purpose of accepting comments on whether the proposed changes are appropriate.

This provision also applies to mortgages insured under the Section 232 Program (See 24 CFR 232.251).

Pursuant to the 30-day comment procedure, this Notice announces MIP changes for FY 2023, for certain programs authorized under the National Housing Act (the Act) (12 U.S.C. 1709(c)(1)), and specifically for the Section 232 program. These changes will become effective October 1, 2022.

II. This Notice

This Notice announces that HUD is changing MIPs for FHA-insured loans on properties under specific Office of Healthcare insurance programs. In FY 2013, FHA increased MIPs to compensate for increased risk to the FHA-insurance fund after the housing market crisis. Over the past eight years since the MIP rate was adjusted, HUD has continued to improve underwriting standards to further mitigate risk to the FHA portfolio, including improved reviews of appraised values, heightened examination of quality of care history, and strengthened requirements for borrower and parent entity experience/capacity.

The proposed MIP changes reflect HUD's commitment to supporting the long-term viability and efficiency of its insured portfolio, in line with the President's climate agenda. They are also prudent in light of the financial health of the Section 232 portfolio and the favorable impact that the analogous MIP changes to the FHA Multifamily programs have had over the past five years.

A. Green and Energy-Efficient Healthcare Facilities

Annual MIP will change from current rates generally between 45 and 77 basis points, to 25 basis points for certain Section 232, Office of Residential Care Facilities' FHA-insured loan types. This policy intends to encourage owners to adopt higher standards for construction, rehabilitation, repairs, maintenance, and property operations that are more energy efficient and sustainable than

traditional approaches to such activities. Those measures will result in projects with greater energy and water efficiency, reduced operating costs, improved indoor air quality and resident comfort, and reduced overall impact on the environment. To facilitate this, mortgage proceeds will be used to retrofit properties to meet the stringent efficiency standards required to access this lower MIP premium.

To qualify:

Upon application for FHA mortgage insurance, the owner must evidence that the project will achieve, an industry-recognized standard for green building certification. For properties that have already achieved a green building standard certification and that are refinancing with this lower MIP premium, proceeds must be used to complete further efficiency upgrades and thereby achieve the next-level green certification standards.[1] Acceptable, independently verified standards include the Enterprise Green Communities Criteria, U.S. Green Building Council's LEED-Home, LEED-Highrise, LEED-Midrise, LEED-Lowrise, LEED–NC, LEED-Healthcare Facilities, EarthCraft Multifamily, Earth Advantage Multifamily, the National Green Building Standard (NGBS), Passive Building Certification or EnerPHit Retrofits certification from the Passive House Institute US (PHIUS), International Passive House Association, or the Passive House Institute, and Living Building Challenge Certification from the International Living Future Institute, or other industry-recognized green building standards in the sole discretion of HUD's Office of Residential Care Facilities.

Further, the owner must certify that it has achieved, or will pursue, achieve, and maintain a score of 75 or better on the 1–100 ENERGY STAR score, using EPA's Portfolio Manager for the Senior Care Community building type. The reasonableness of achieving and maintaining the specified, independent green building standard, and the score of 75 or better in Portfolio Manager, must be verified by the independent conclusion of the qualified assessor preparing the physical condition assessment, and supported by the physical condition assessment report and recommendations, the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) level II energy audit (required for existing structures only), and plans for new construction, or rehabilitation, repairs, and operations and maintenance. The physical condition assessment report submitted with the mortgage insurance application must include a certification from the architect, engineer, or certified energy auditor that the planned scope of work is reasonably sufficient to achieve and maintain the specified certification. Additionally, the owner must submit to HUD evidence that the specified, independent green building standard has been achieved, and provide a copy of the Portfolio Manager report showing building performance at or above 75, at the time those standards were achieved, and no more than 24 months after completion of new construction, substantial rehabilitation or renovations, or 24 months after break-even occupancy. The owner must submit the Portfolio Manager report annually to HUD showing that the property has maintained its efficiency performance at or above 75. HUD anticipates issuing implementation guidance via Mortgagee Letter or supplemental Notice. Additionally, the Borrower's obligations with respect to the reduced MIP will be set forth in the Borrower Regulatory Agreement, the non-compliance with which may result in HUD's pursuit of all available rights and remedies.

To ensure that the benefits of these MIP rates directly benefit the residential care properties and residents, lenders submitting applications for loans using this MIP rate are limited in the total loan fees they may charge on any loan greater than $2 million, to no more than 5 percent of the insured loan amount. Loan fees include (a) origination and placement fees as permitted by the MAP Guide, *plus* (b) trade profit, trade premium or marketing gain earned on the sale of the GNMA security at a value above par, even if the security sale is delayed until after endorsement, *minus* (c) loan fees applied by the Mortgagee to its legal expenses incurred in connection with loan closing. This 5 percent limitation on loan fees shall further apply to a later Interest Rate Reduction, if any, of the loan.

III. MIPs for FHA's Office of Healthcare Programs Mortgage Insurance Programs Effective on October 1, 2022

HUD is changing MIPs for FHA-insured loans for specific properties under The Office of Residential Care Facilities, Section 232 Mortgage Insurance program. The chart below details the MIP rates for each rate category, and each type of FHA mortgage insurance covered under this Notice.

This Notice also includes the upfront and annual MIP rates for the Office of Residential Care Facilities Section 232/223(i) Fire Equipment Safety Loan program. The MIP rates for that program are encompassed in *24 CFR 232.805* but were not specifically referenced in the most recent Notice addressing Section 232 MIP rates, so those 232/223(i) rates are being included here simply for clarity purposes.

FHA Office of Health Care Facilities Insurance Premiums by Rate & Category

Category	Current upfront capitalized MIP* basis points	Green and energy efficient: upfront capitalized MIP* basis points, effective 10–01–22	Current annual MIP basis points	Green and energy efficient: annual MIP basis points, effective 10–01–22
Section 232 Healthcare Facilities (SNF, ALF, B&C):				
232 NC/SR Healthcare Facilities w/o LIHTC	100	25	77	25
232 NC/SR—Assisted Living Facilities with LIHTC	100	25	45	25
232/223(f) Refi for Healthcare Facilities w/o LIHTC	100	25	65	25
232/223(f) Refi for Healthcare Facilities with LIHTC	100	25	45	25
232/223(a)(7) Refi of Healthcare Facilities w/o LIHTC	50	25	55	25
232/223(a)(7) Refi of Healthcare Facilities with LIHTC	50	25	45	25
223(d) Operating Loss Loan for Healthcare Facilities	100	n/a	95	n/a

[1] HUD recognizes that the owners of projects that become insured with this newly announced Green MIP rate may, in later years, seek refinancing of that loan. Subsequent program guidance will address procedures for continuing that Green MIP rate in the new loan.

FHA OFFICE OF HEALTH CARE FACILITIES INSURANCE PREMIUMS BY RATE & CATEGORY—Continued

Category	Current upfront capitalized MIP* basis points	Green and energy efficient: upfront capitalized MIP* basis points, effective 10–01–22	Current annual MIP basis points	Green and energy efficient: annual MIP basis points, effective 10–01–22
241(a) Supp. Loan for Healthcare Facilities w/o LIHTC	100	25	72	25
241(a) Supp. Loan for Healthcare Facilities with LIHTC	100	25	45	25
223(i) Fire Safety Equipment Loan	100	n/a	100	n/a
Section 242 FHA Hospital Insurance Program:				
242 Hospitals	100	n/a	70	n/a
223(a)(7) Refinance of Existing FHA-Insured Hospital	50	n/a	55	n/a
223(f) Refinance or Purchase of Existing Non-FHA-Insured Hospital	100	n/a	65	n/a
241(a) Supplemental Loans for Hospitals	100	n/a	65	n/a

* Upfront premiums for the Office of Health Care Programs are capitalized and based on the first year's annual MIP for the applicable rate category and remain at 100 basis (one percent) as specified in *24 CFR 232.805,* except for 223(a)(7) loans where the upfront rate remains at 50 bps as published in the 2015 FR Notice for FY16 MIP Rates. Up front and annual premiums for the Green/Energy program are noted above. MIP premiums are separate and apart from (and in addition to) the application fees.

The MIP rates will become effective for FHA firm commitments issued or reissued on or after October 1, 2022. MIP rates will not be modified for any loans that close or reach initial endorsement prior to October 1, 2022. MIP rates will not be modified on FHA-insured loans initially or finally endorsed, in conjunction with Interest Rate Reductions, or in conjunction with Loan Modifications.

IV. Finding of No Significant Impact

A Finding of No Significant Impact (FONSI) with respect to the environment has been made in accordance with HUD regulations at 24 CFR part 50, which implement section 102(2)(C) of NEPA (42 U.S.C. 4332(2)(C)).

The FONSI is available for public inspection between 8 a.m. and 5 p.m. weekdays in the Regulations Division, Office of General Counsel, Department of Housing and Urban Development, 451 7th Street SW, Room 10276, Washington, DC 20410–0500. Due to security measures at the HUD Headquarters building, an advance appointment to review the docket file must be scheduled by calling the Regulations Division at 202–708–3055 (this is not a toll-free number). Hearing or speech-impaired individuals may access this number through TTY by calling the Federal Relay Service at 800–877–8339 (this is a toll-free number).

Lopa P. Kolluri,

Principal Deputy Assistant Secretary, Office of Housing—Federal Housing Administration.

[FR Doc. 2022–10539 Filed 5–18–22; 8:45 am]

BILLING CODE 4210–67–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[FWS–R8–ES–2022–0038; FXES11140800000–223–FF08EVEN00]

Habitat Conservation Plan for Three Species in Los Alamos, California; Categorical Exclusion for the Legacy Homes Development Project; Santa Barbara County, California

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of availability; request for public comments.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce the availability of a draft habitat conservation plan (HCP) and draft categorical exclusion (CatEx) for activities associated with an application for an incidental take permit (ITP) under the Endangered Species Act of 1973, as amended. The ITP would authorize take of the federally threatened California red-legged frog, endangered California tiger salamander (Santa Barbara County distinct population segment), and non-listed western spadefoot toad, incidental to activities associated with the Legacy Homes Tract No. 14608 Development Project. The applicant developed the draft HCP as part of their application for an ITP. The Service prepared a draft low-effect screening form and environmental action statement in accordance with the National Environmental Policy Act to evaluate the potential effects to the natural and human environment resulting from issuing an ITP to the applicant. We invite public comment on these documents.

DATES: Written comments should be received on or before June 21, 2022.

ADDRESSES: *To obtain documents:* You may obtain copies of the documents online in Docket No. FWS–R8–ES–2022–0038 at *https://www.regulations.gov,* or you may request copies of the documents by U.S. mail (below) or by email (see **FOR FURTHER INFORMATION CONTACT**).

To submit comments: If you wish to submit comments on any of the documents, you may do so in writing by any of the following methods:

- *Online: https://www.regulations.gov.* Follow the instructions for submitting comments on Docket No. FWS–R8–ES–2022–0038.
- *U.S. mail:* Public Comments Processing, Attn: Docket No. FWS–R8–ES–2022–0038; U.S. Fish and Wildlife Service, MS: PRB/3W, 5275 Leesburg Pike, Falls Church, VA 22041–3803.

FOR FURTHER INFORMATION CONTACT: Amy Hughes, Fish and Wildlife Biologist, *amy_hughes@fws.gov* (by email), or at the Ventura Fish and Wildlife office (by telephone at 805–644–1766, or by mail; see **ADDRESSES**). Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States.

SUPPLEMENTARY INFORMATION: We, the U.S. Fish and Wildlife Service (Service), announce the availability of a draft habitat conservation plan (HCP) and draft low-effect screening form and environmental action statement for activities associated with an application

for an incidental take permit (ITP) under section 10(a)(1)(B) of the Endangered Species Act of 1973, as amended (ESA; 16 U.S.C. 1531 *et seq.*). The applicant has developed a draft habitat conservation plan (HCP) that includes measures to minimize, avoid, and mitigate impacts to the federally threatened California red-legged frog (*Rana draytonii*), the federally endangered California tiger salamander (*Ambystoma californiense*), and the non-listed western spadefoot toad (*Spea hammondii*). The permit would authorize take of any of the three species incidental to otherwise lawful activities associated with the draft HCP for the Legacy Homes Tract No. 14608 Development Project. The Service prepared a draft low-effect screening form and environmental action statement in accordance with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq.*) to evaluate the potential effects to the natural and human environment resulting from issuing an ITP to the applicant. We invite public comment on these documents.

Background

The Service listed the California red-legged frog as threatened on May 23, 1996 (61 FR 25813), and the California tiger salamander as endangered on September 21, 2000 (65 FR 57242). The western spadefoot toad is currently under the Service's review for listing pursuant to the ESA (80 FR 37568). Section 9 of the ESA (16 U.S.C. 1538) prohibits the ''take'' of fish or wildlife species listed as endangered; by regulation, the Service may extend the take prohibition to fish or wildlife species listed as threatened. ''Take'' is defined under the ESA to include the following activities: ''[T]o harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct'' (16 U.S.C. 1532); however, under section 10(a)(1)(B) of the ESA (16 U.S.C. 1539(a)(1)(B)), we may issue permits to authorize incidental take of listed wildlife species. Incidental take is take that is incidental to, and not the purpose of, carrying out an otherwise lawful activity. Regulations governing incidental take permits for endangered and threatened wildlife are in the Code of Federal Regulations (CFR) at 50 CFR 17.22 and 17.32, respectively. Issuance of an incidental take permit also must not jeopardize the existence of federally listed fish, wildlife, or plant species.

Proposed Project Activities

Legacy Homes has applied for a permit for incidental take of the California red-legged frog, California tiger salamander, and western spadefoot toad. The take would occur in association with activities including the conversion of agricultural land to a 59-lot residential development prepared for future home construction, within a 16.67-acre project area. The project area does not contain suitable aquatic habitat for any of the three species, but individuals may use the area as dispersal or upland habitat, as there are aquatic features within the dispersal distances of all species from the project site. The HCP includes avoidance and minimization measures for the California red-legged frog, California tiger salamander, and western spadefoot toad as well as mitigation for unavoidable loss of suitable habitat through the purchase of conservation credits at a Service-approved conservation bank and species account.

Public Comments

If you wish to comment on the draft HCP and categorical exclusion screening form, you may submit comments by one of the methods in **ADDRESSES**.

Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment, including your personal identifying information, may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public view, we cannot guarantee that we will be able to do so.

Authority

We provide this notice under section 10 of the ESA (16 U.S.C. 1531 *et seq.*) and NEPA regulations (40 CFR 1506.6).

Stephen P. Henry,

Field Supervisor, Ventura Fish and Wildlife Office, Ventura, California.

[FR Doc. 2022–10716 Filed 5–18–22; 8:45 am]

BILLING CODE 4333–15–P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[223.LLIDB00000.L18200000.XZ0000. 241A00.4500160754]

Notice of Mailing/Street Address Change for the BLM-Owyhee Field Office and Ware Yard

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice.

SUMMARY: This notice announces changes to the mailing and street address for the Bureau of Land Management (BLM) Owyhee Field Office and Ware Yard.

DATES: The date for the changes will be on or about June 6, 2022.

FOR FURTHER INFORMATION CONTACT: Mike Williamson, Public Affairs Specialist, BLM Boise District; 208–384–3393; *mwilliamson@blm.gov.* Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 7–1–1 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States.

SUPPLEMENTARY INFORMATION: The mailing and street address for the Bureau of Land Management (BLM) Owyhee Field Office and Ware Yard will be changed from 20 1st Ave. W, Marsing, Idaho 83639, to 101 South Bruneau Highway, Marsing, Idaho 83639.

Authority: Departmental Manual 382, Chapter 2.1.

Karen Kelleher,

BLM Idaho State Director.

[FR Doc. 2022–10781 Filed 5–18–22; 8:45 am]

BILLING CODE 4310–GG–P

DEPARTMENT OF THE INTERIOR

National Park Service

[NPS–WASO–NRNHL–DTS#–33908; PPWOCRADI0, PCU00RP14.R50000]

National Register of Historic Places; Notification of Pending Nominations and Related Actions

AGENCY: National Park Service, Interior.

ACTION: Notice.

SUMMARY: The National Park Service is soliciting electronic comments on the significance of properties nominated before May 7, 2022, for listing or related actions in the National Register of Historic Places.

DATES: Comments should be submitted electronically by June 3, 2022.

ADDRESSES: Comments are encouraged to be submitted electronically to *National_Register_Submissions@nps.gov* with the subject line ''Public Comment on <property or proposed district name, (County) State>.'' If you have no access to email you may send them via U.S. Postal Service and all other carriers to the National Register of Historic Places, National Park Service, 1849 C Street NW, MS 7228, Washington, DC 20240.

FOR FURTHER INFORMATION CONTACT: Sherry A. Frear, Chief, National Register of Historic Places/National Historic Landmarks Program, 1849 C Street NW, MS 7228, Washington, DC 20240, *sherry_frear@nps.gov,* 202–913–3763.

SUPPLEMENTARY INFORMATION: The properties listed in this notice are being considered for listing or related actions in the National Register of Historic Places. Nominations for their consideration were received by the National Park Service before May 7, 2022. Pursuant to Section 60.13 of 36 CFR part 60, comments are being accepted concerning the significance of the nominated properties under the National Register criteria for evaluation.

Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Nominations submitted by State or Tribal Historic Preservation Officers:

ALABAMA

Dallas County

Burwell-Dinkins-Anderson House (Civil Rights Movement in Selma, Alabama MPS), 700 L.L. Anderson Ave., Selma, MP100007801

Mobile County

Old Dauphin Way Historic District (Boundary Increase), 1200 Springhill Ave., Mobile, BC100007800

ALASKA

Kenai Peninsula Borough

Fort McGilvray Historic District, Caines Head State Recreation Area, Seward vicinity, SG100007802

CALIFORNIA

Los Angeles County

Hogan House, 8527 Brier Dr., Los Angeles, SG100007803

Old Farmdale School, 2839 North Eastern Ave., Los Angeles, SG100007804

KENTUCKY

Calloway County

Central Hazel Historic District, 200–700 Third, 200 blk. Barnettt, 300 blk. Calloway, 100–600 Main, 300 Dees, 301 Center, 215, 241, 306 Gilbert, and 500–600 Fourth Sts., 3581 US 641 South, Hazel, SG100007810

MAINE

Cumberland County

Dow Bridge, Dow Rd. at Josie's Brook, ⅓ mi. northwest of Cape Rd., Standish, SG100007807

Somerset County

Maine Spinning Company Mill, 7 Island Ave., Skowhegan, SG100007808

Washington County

Wass. David and Hadassah. House, 293 Water St., Addison, SG100007806

NEW YORK

Schenectady County

Wedgeway Building, 271–277 State St., Schenectady, SG100007805

SOUTH DAKOTA

Turner County

Stidworthy-Kemper House, 218 North Main St., Viborg, SG100007796

VIRGINIA

Loudoun County

Snickersville Turnpike, Snickersville Turnpike, VA 734, Bluemont vicinity, SG100007792

Richmond Independent City

Shockoe Hill Burying Ground Historic District, Bounded by 2nd St., northern limit of CSX right-of-way, historic property line and former stream courses, Richmond, SG100007793

Winchester Independent City

C.L. Robinson Ice and Cold Storage Corporation, 536–580 North Cameron St., Winchester, SG100007794

WISCONSIN

Sheboygan County

ABIAH (schooner) Shipwreck (Great Lakes Shipwreck Sites of Wisconsin MPS), 13.1 mi. northeast of the Sheboygan Harbor Lighthouse in L. Michigan, Haven vicinity, MP100007799

Nominations submitted by Federal Preservation Officer:

The State Historic Preservation Officer reviewed the following nominations and responded to the Federal Preservation Officer within 45 days of receipt of the nominations and supports listing the properties in the National Register of Historic Places.

FLORIDA

Wakulla County

Byrd Hammock (Boundary Decrease), Address Restricted, St. Marks vicinity, BC100007798

Byrd Hammock (Additional Documentation), Address Restricted, St. Marks vicinity, AD72000357

Authority: Section 60.13 of 36 CFR part 60.

Dated: May 10, 2022.

Sherry A. Frear,

Chief, National Register of Historic Places/National Historic Landmarks Program.

[FR Doc. 2022–10774 Filed 5–18–22; 8:45 am]

BILLING CODE 4312–52–P

DEPARTMENT OF LABOR

Agency Information Collection Activities; Submission for OMB Review; Comment Request; Pilot Study and Prospective Analysis of the Draft Revised Form 33, Safety and Health Program Assessment Worksheet

ACTION: Notice of availability; request for comments.

SUMMARY: The Department of Labor (DOL) is submitting this Occupational Safety & Health Administration (OSHA)-sponsored information collection request (ICR) to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995 (PRA). Public comments on the ICR are invited.

DATES: The OMB will consider all written comments that the agency receives on or before June 21, 2022.

ADDRESSES: Written comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice to *www.reginfo.gov/public/do/PRAMain.* Find this particular information collection by selecting ''Currently under 30-day Review—Open for Public Comments'' or by using the search function.

Comments are invited on: (1) Whether the collection of information is necessary for the proper performance of the functions of the Department, including whether the information will have practical utility; (2) the accuracy of the agency's estimates of the burden and cost of the collection of information, including the validity of the methodology and assumptions used; (3) ways to enhance the quality, utility and clarity of the information collection; and (4) ways to minimize the burden of the collection of information on those who are to respond, including the use of automated collection techniques or other forms of information technology.

FOR FURTHER INFORMATION CONTACT: Nicole Bouchet by telephone at 202–693–0213, or by email at *DOL_PRA_PUBLIC@dol.gov.*

SUPPLEMENTARY INFORMATION: The Occupational Safety and Health Act of 1970 (OSH Act) (29 U.S.C. 651 *et seq.*) authorizes information collection by employers as necessary or appropriate for enforcement of the OSH Act or for developing information regarding the causes and prevention of occupational injuries, illnesses, and accidents (29 U.S.C. 657). The OSH Act also requires OSHA to obtain such information with

minimum burden upon employers, especially those operating small businesses, and to reduce to the maximum extent feasible unnecessary duplication of efforts in obtaining information (29 U.S.C. 657). OSHA is requesting approval from OMB pursuant to the Paperwork Reduction Act (PRA), to conduct validity and reliability analyses of a safety and health program (SHP) assessment worksheet, the Draft Revised Form 33 (DRF33), that will replace the current SHP Assessment Worksheet, OSHA Form 33, used by the OSHA On-Site Consultation Program (OMB #1218–0110). The studies that will be conducted on the DRF33 will enable OSHA to ensure that a valid, reliable, and efficient tool is provided to On-Site Consultation programs in the 50 states, the District of Columbia, and several United States territories to replace the current OSHA Form 33, thereby, enhancing the quality of consultative services. The studies for which OSHA is requesting approval will comprise a pretest, Pilot Study (consultation visits to assess the validity and reliability of the DRF33), a follow-up study (consultation visits to assess any updates to the DRF33 resulting from Pilot Study findings), and a Prospective Analysis (conducted after the Pilot Study to assess any impact of the DRF33 at workplaces that received consultation visits during the Pilot Study). After completing the Pilot Study OSHA will request OMB approval before implementing the DRF33 for use by state On-Site Consultation programs nationwide to replace the current Form 33. Similarly, OSHA will seek OMB approval if any additional updates are made to the approved worksheet, following the Prospective Analysis. For additional substantive information, see the submission at *https://www.reginfo.gov,* ICR Reference Number=202202–1218–002.

This information collection is subject to the PRA. A Federal agency generally cannot conduct or sponsor a collection of information, and the public is generally not required to respond to an information collection, unless the OMB approves it and displays a currently valid OMB Control Number. In addition, notwithstanding any other provisions of law, no person shall generally be subject to penalty for failing to comply with a collection of information that does not display a valid OMB Control Number. *See* 5 CFR 1320.5(a) and 1320.6.

DOL seeks PRA authorization for this information collection for three (3) years. OMB authorization for an ICR cannot be for more than three (3) years without renewal. The DOL notes that information collection requirements submitted to the OMB for existing ICRs receive a month-to-month extension while they undergo review.

Agency: DOL–OSHA.

Title of Collection: Pilot Study and Prospective Analysis of the Draft Revised Form 33, Safety and Health Program Assessment Worksheet.

OMB Control Number: 1218–0NEW.

Affected Public: Private Sector—Businesses or other for-profits.

Total Estimated Number of Respondents: 550.

Total Estimated Number of Responses: 2,139.

Total Estimated Annual Time Burden: 4,974 hours.

Total Estimated Annual Other Costs Burden: $139,416.

(Authority: 44 U.S.C. 3507(a)(1)(D))

Nicole Bouchet,

Senior PRA Analyst.

[FR Doc. 2022–10751 Filed 5–18–22; 8:45 am]

BILLING CODE 4510–26–P

NATIONAL SCIENCE FOUNDATION

Agency Information Collection Activities: Comment Request

AGENCY: National Science Foundation.

ACTION: Submission for OMB review; comment request.

SUMMARY: The National Science Foundation (NSF) has submitted the following information collection requirement to OMB for review and clearance under the Paperwork Reduction Act of 1995. This is the second notice for public comment; the first was published in the **Federal Register**, and no comments were received. NSF is forwarding the proposed submission to the Office of Management and Budget (OMB) for clearance simultaneously with the publication of this second notice. The full submission may be found at: *http://www.reginfo.gov/public/do/PRAMain.*

DATES: Comments regarding this information collection are best assured of having their full effect if received by June 21, 2022.

FOR FURTHER INFORMATION CONTACT: Office of Information and Regulatory Affairs of OMB, Attention: Desk Officer for National Science Foundation, 725 17th Street NW, Room 10235, Washington, DC 20503, and Suzanne H. Plimpton, Reports Clearance Officer, National Science Foundation, 2415 Eisenhower Avenue, Alexandria, VA 22314, or send email to *splimpto@nsf.gov.* Individuals who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339, which is accessible 24 hours a day, 7 days a week, 365 days a year (including federal holidays).

Copies of the submission(s) may be obtained by calling 703–292–7556.

SUPPLEMENTARY INFORMATION: NSF may not conduct or sponsor a collection of information unless the collection of information displays a currently valid OMB control number and the agency informs potential persons who are to respond to the collection of information that such persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.

Comments regarding (a) whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (b) the accuracy of the agency's estimate of burden including the validity of the methodology and assumptions used; (c) ways to enhance the quality, utility and clarity of the information to be collected; (d) ways to minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology should be addressed to the points of contact in the **FOR FURTHER INFORMATION CONTACT** section.

Title of Collection: Grantee Reporting Requirements for Partnerships for Research and Education in Materials (PREM).

OMB Number: 3145–0232.

Type of Request: Intent to seek approval to renew an information collection.

Overview of this Information Collection: The Partnerships for Research and Education in Materials (PREM) aims to enhance diversity in materials research and education by stimulating the development of formal, long-term, collaborative research and education relationships between minority-serving colleges and universities and centers, institutes and facilities supported by the NSF Division of Materials Research (DMR). With this collaborative model PREMs build intellectual and physical infrastructure within and between disciplines, weaving together knowledge creation, knowledge integration, and knowledge transfer. PREMs conduct world-class research through partnerships of academic institutions, national laboratories, industrial organizations, and/or other public/private entities.

New knowledge thus created is meaningfully linked to society, with an emphasis on enhancing diversity.

PREMs enable and foster excellent education, integrate research and education, and create bonds between learning and inquiry so that discovery and creativity more fully support the learning process. PREMs capitalize on diversity through participation and collaboration in center activities and demonstrate leadership in the involvement of groups underrepresented in science and engineering.

PREMs will be required to submit annual reports on progress and plans, which will be used as a basis for performance review and determining the level of continued funding. To support this review and the management of the award PREMs will be required to develop a set of management and performance indicators for submission annually to NSF via the Research Performance Project Reporting module in Research.gov. These indicators are both quantitative and descriptive and may include, for example, the characteristics of personnel and students; sources of financial support and in-kind support; expenditures by operational component; research activities; education activities; patents, licenses; publications; degrees granted to students involved in PREM activities; descriptions of significant advances and other outcomes of the PREM effort.

Each PREM's annual report will include the following categories of activities: (1) Research, (2) education (3) outreach, (4) partnerships, (5) diversity, (6) management, and (7) budget issues.

For each of the categories the report will describe overall objectives for the year, problems the PREM has encountered in making progress towards goals, anticipated problems in the following year, and specific outputs and outcomes.

PREMs are required to file a final report through the RPPR and external technical assistance contractor. Final reports contain similar information and metrics as annual reports but are retrospective.

Use of the Information: NSF will use the information to continue funding of PREMs, and to evaluate the progress of the program.

Estimate of Burden: 50 hours per PREM for 32 PREMs for a total of 1,600 hours.

Respondents: Non-profit institutions.

Estimated Number of Responses per Report: One from each of the fifteen PREMs.

Dated: May 13, 2022.

Suzanne H. Plimpton,

Reports Clearance Officer, National Science Foundation.

[FR Doc. 2022–10717 Filed 5–18–22; 8:45 am]

BILLING CODE 7555–01–P

NUCLEAR REGULATORY COMMISSION

[NRC–2022–0116]

Spent Fuel Heat Generation in an Independent Spent Fuel Storage Installation

AGENCY: Nuclear Regulatory Commission.

ACTION: Regulatory guide; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is issuing Revision 3 to Regulatory Guide (RG) 3.54, ''Spent Fuel Heat Generation in an Independent Spent Fuel Storage Installation.'' This RG includes methods acceptable to the NRC staff for calculating spent nuclear fuel heat generation rates for use for an Independent Spent Fuel Storage Installation. Revision 3 incorporates corrections to Appendix A, Table A–1 that were erroneously recorded in the previous revision (Revision 2 to this RG). In general, this revision presents an up-to-date methodology for determining heat generation rates and it also allows loading of higher burnup fuel by using more accurate methods for decay heat calculations.

DATES: Revision 3 to RG 3.54 is available on May 19, 2022.

ADDRESSES: Please refer to Docket ID NRC–2022–0116 when contacting the NRC about the availability of information regarding this document. You may obtain publicly available information related to this document using any of the following methods:

- *Federal Rulemaking Website:* Go to *https://www.regulations.gov* and search for Docket ID NRC–2022–0116. Address questions about Docket IDs in *Regulations.gov* to Stacy Schumann; telephone: 301–415–0624; email: *Stacy.Schumann@nrc.gov.* For technical questions, contact the individuals listed in the **FOR FURTHER INFORMATION CONTACT** section of this document.
- *NRC's Agencywide Documents Access and Management System (ADAMS):* You may obtain publicly available documents online in the ADAMS Public Documents collection at *https://www.nrc.gov/reading-rm/adams.html.* To begin the search, select ''Begin Web-based ADAMS Search.'' For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1–800–397–4209, 301–415–4737, or by email to *PDR.Resource@nrc.gov.* The ADAMS accession number for each document referenced (if it is available in ADAMS) is provided the first time that it is mentioned in this document.
- *NRC's PDR:* You may examine and purchase copies of public documents, by appointment, at the NRC's PDR, Room P1 B35, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852. To make an appointment to visit the PDR, please send an email to *PDR.Resource@nrc.gov* or call 1–800–397–4209 or 301–415–4737, between 8:00 a.m. and 4:00 p.m. (ET), Monday through Friday, except Federal holidays.

Revision 3 to RG 3.54 may be found in ADAMS under Accession No. ML22066B275.

Regulatory guides are not copyrighted, and NRC approval is not required to reproduce them.

FOR FURTHER INFORMATION CONTACT: Alexis Sotomayor-Rivera, Office of Nuclear Material Safety and Safeguards, telephone: 301–415–7265; email: *Alexis.Sotomayor-Rivera@nrc.gov,* Harriet Karagiannis, telephone: 301–415–2493; email: *Harriet.Karagiannis@nrc.gov,* and Ramon Gascot Lozada telephone: 301–415–2004, email: *Ramon.GascotLozada@nrc.gov,* both staff of the Office of Nuclear Regulatory Research. All are staff at the U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001.

SUPPLEMENTARY INFORMATION:

I. Discussion

The NRC is issuing an administrative revision to an existing guide in the NRC's ''Regulatory Guide'' series. Regulatory guides were developed to describe and make available to the public information and methods that are acceptable to the NRC staff for implementing specific parts of the agency's regulations, techniques that the staff uses in evaluating specific issues or postulated events, and data that the staff needs in its review of applications for permits and licenses. The NRC typically seeks public comment on a draft version of a RG by announcing its availability for comment in the **Federal Register**. However, as explained in NRC's Management Directive (MD) 6.6 ''Regulatory Guides,'' (ADAMS Accession No. ML110330475) the NRC may directly issue a final RG without a draft version or public comment period if the changes to the RG are non-substantive.

The NRC is issuing Revision 3 of RG 3.54 directly as a final RG because the

changes between Revision 2 and Revision 3 are non-substantive. This revision (Revision 3) like Revision 2 presents an up-to-date methodology for determining heat generation rates for both pressurized-water reactor and boiling water reactor fuel and provides greater flexibility (fewer restrictions). It allows loading of higher burnup fuel by using more accurate methods for decay heat calculations by covering a wider range of fuel characteristics, including operating history. Appendix A provides an example that illustrates the use of the RG for calculating the decay heat generation rate for a spent fuel assembly. However, Appendix A to Revision 2 of RG 3.54 included erroneous data.

Revision 3 of RG 3.54 is issued to incorporate corrections for Appendix A, Table A–1 showing the correct irradiation data for an assembly C–64. These corrected data are as follows: (1) The last column of the Table A–1, the third row (operating (days)) is now recorded as 3.39E+02, (2) the fourth row (downtime (days)) is recorded as 1.633E+03, (3) the fifth row (cumulative burnup (MWd/KgU)) is recorded as 3.9384E+01, and (4) the sixth row (Power (W/KgU)) is recorded as 2.8378E+04.

II. Backfitting, Forward Fitting, and Issue Finality

The NRC staff may use this RG as a reference in its regulatory processes, such as licensing, inspection, or enforcement. However, the NRC staff does not intend to use the guidance in this RG to support NRC staff actions in a manner that would constitute backfitting as that term is defined in Section 50.109 of title 10 of the *Code of Federal Regulations* (10 CFR), ''Backfitting,'' and as described in NRC MD 8.4, ''Management of Backfitting, Forward Fitting, Issue Finality, and Information Requests'' (ADAMS Accession No. ML18093B087), nor does the NRC staff intend to use the guidance to affect the issue finality of an approval under 10 CFR part 52. The staff also does not intend to use the guidance to support NRC staff actions in a manner that constitutes forward fitting as that term is defined and described in MD 8.4. If a licensee believes that the NRC is using this RG in a manner inconsistent with the discussion in the Implementation section of RG 3.54, then the licensee may file a backfitting or forward fitting appeal with the NRC in accordance with the process in MD 8.4.

III. Congressional Review Act

This RG is a rule as defined in the Congressional Review Act (5 U.S.C. 801–808). However, the Office of Management and Budget has not found it to be a major rule as defined in the Congressional Review Act.

IV. Submitting Suggestions for Improvement of Regulatory Guides

Revision 3 of RG 3.54 is being issued without public comment. However, a member of the public may, at any time, submit suggestions to the NRC for improvement of existing RGs or for the development of new RGs to address new issues. Suggestions can be submitted on the NRC's public website at *https://www.nrc.gov/reading-rm/doc-collections/reg-guides/contactus.html.* Suggestions will be considered in future updates and enhancements to the ''Regulatory Guide'' series.

Dated: May 13, 2022.

For the Nuclear Regulatory Commission.

Meraj Rahimi,

Chief, Regulatory Guide and Programs Management Branch, Division of Engineering, Office of Nuclear Regulatory Research.

[FR Doc. 2022–10754 Filed 5–18–22; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

[NRC–2022–0040]

Information Collection: Equal Employment Opportunity Electronic Complaint System

AGENCY: Nuclear Regulatory Commission.

ACTION: Proposed information collection; request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) invites public comment on this proposed information collection. The information collection is entitled, ''Equal Employment Opportunity Electronic Complaint System.''

DATES: Submit comments by July 18, 2022. Comments received after this date will be considered if it is practical to do so, but the Commission is able to ensure consideration only for comments received on or before this date.

ADDRESSES: You may submit comments by any of the following methods; however, the NRC encourages electronic comment submission through the Federal rulemaking website:

- *Federal rulemaking website:* Go to *https://www.regulations.gov* and search for Docket ID NRC–2022–0040. Address questions about Docket IDs in *Regulations.gov* to Stacy Schumann; telephone: 301–415–0624; email: *Stacy.Schumann@nrc.gov*. For technical questions, contact the individual listed in the **FOR FURTHER INFORMATION CONTACT** section of this document.
- *Mail comments to:* David C. Cullison, Office of the Chief Information Officer, Mail Stop: T–6 A10M, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001.

For additional direction on obtaining information and submitting comments, see ''Obtaining Information and Submitting Comments'' in the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: David C. Cullison, Office of the Chief Information Officer, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; telephone: 301–415–2084; email: *Infocollects.Resource@nrc.gov*.

SUPPLEMENTARY INFORMATION:

I. Obtaining Information and Submitting Comments

A. Obtaining Information

Please refer to Docket ID NRC–2022–0040 when contacting the NRC about the availability of information for this action. You may obtain publicly available information related to this action by any of the following methods:

- *Federal Rulemaking Website:* Go to *https://www.regulations.gov* and search for Docket ID NRC–2022–0040. A copy of the collection of information and related instructions may be obtained without charge by accessing Docket ID NRC–2022–0040 on this website.
- *NRC's Agencywide Documents Access and Management System (ADAMS):* You may obtain publicly available documents online in the ADAMS Public Documents collection at *https://www.nrc.gov/reading-rm/adams.html*. To begin the search, select ''Begin Web-based ADAMS Search.'' For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1–800–397–4209, 301–415–4737, or by email to *PDR.Resource@nrc.gov*. A copy of the collection of information and related instructions may be obtained without charge by accessing ADAMS Accession ML22087A488. The draft supporting statement is available in ADAMS under Accession No. ML22082A242.
- *NRC's PDR:* You may examine and purchase copies of public documents, by appointment, at the NRC's PDR, Room P1 B35, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852. To make an appointment to visit the PDR, please send an email to *PDR.Resource@nrc.gov* or call 1–800–397–4209 or 301–415–4737, between 8:00 a.m. and 4:00 p.m.

(ET), Monday through Friday, except Federal holidays.

• *NRC's Clearance Officer:* A copy of the collection of information and related instructions may be obtained without charge by contacting the NRC's Clearance Officer, David C. Cullison, Office of the Chief Information Officer, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; telephone: 301–415–2084; email: *Infocollects.Resource@nrc.gov*.

B. Submitting Comments

The NRC encourages electronic comment submission through the Federal rulemaking website (*https://www.regulations.gov*). Please include Docket ID NRC–2022–0040 in your comment submission.

The NRC cautions you not to include identifying or contact information in comment submissions that you do not want to be publicly disclosed in your comment submission. All comment submissions are posted at *https://www.regulations.gov* and entered into ADAMS. Comment submissions are not routinely edited to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the OMB, then you should inform those persons not to include identifying or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that comment submissions are not routinely edited to remove such information before making the comment submissions available to the public or entering the comment into ADAMS.

II. Background

In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. chapter 35), the NRC is requesting public comment on its intention to request the OMB's approval for the information collection summarized below.

1. *The title of the information collection:* Equal Employment Opportunity Electronic Complaint System.

2. *OMB approval number:* An OMB control number has not yet been assigned to this proposed information collection.

3. *Type of submission:* New.

4. *The form number, if applicable:* Not applicable.

5. *How often the collection is required or requested:* Once.

6. *Who will be required or asked to respond:* Former NRC employees, applicants for employment, contractors.

7. *The estimated number of annual responses:* 20.

8. *The estimated number of annual respondents:* 10.

9. *The estimated number of hours needed annually to comply with the information collection requirement or request:* 5.33 hours.

10. *Abstract:* As set forth under oart 1614 of title 29 of the *Code of Federal Regulations,* the Equal Employment Opportunity (EEO) complaint process prescribes that when an aggrieved individual believes that they have been discriminated against on the basis of their race, color, religion, sex (including sexual orientation, gender identity and expressions, and pregnancy), national origin, age, disability, genetic information (including family medical history), marital status, parental status, political affiliation, military service, and reprisal, the aggrieved individual must consult a Counselor prior to filing a complaint in order to try to informally resolve the matter. NRC employees (current and former) and job applicants can use the NRC's EEO eFile portal to initiate a request for EEO counseling, submit information about their informal EEO complaint, and view the status of their EEO case(s). The information collected includes the aggrieved persons Personal Identifiable Information, claims of alleged discriminatory behavior, and documentation to support claims.

III. Specific Requests for Comments

The NRC is seeking comments that address the following questions:

1. Is the proposed collection of information necessary for the NRC to properly perform its functions? Does the information have practical utility?

2. Is the estimate of the burden of the information collection accurate?

3. Is there a way to enhance the quality, utility, and clarity of the information to be collected?

4. How can the burden of the information collection on respondents be minimized, including the use of automated collection techniques or other forms of information technology?

Dated: May 16, 2022.

For the Nuclear Regulatory Commission.

David C. Cullison,

NRC Clearance Officer, Office of the Chief Information Officer.

[FR Doc. 2022–10790 Filed 5–18–22; 8:45 am]

BILLING CODE 7590–01–P

PRIVACY AND CIVIL LIBERTIES OVERSIGHT BOARD

[Notice–PCLOB–2022–02; Docket No. 2022–0009; Sequence No. 2]

Notice of Public Forum

AGENCY: Privacy and Civil Liberties Oversight Board (PCLOB).

ACTION: Notice.

SUMMARY: The PCLOB, or Board, is issuing this notice to provide additional information relating to a notice published in the **Federal Register** on April 4, 2022, which announced a public forum regarding privacy and civil liberties issues concerning the government's efforts to counter domestic terrorism.

DATES: *Applicable:* May 19, 2022.

FOR FURTHER INFORMATION CONTACT: Alan Silverleib, Public and Legislative Affairs Officer at 202–997–7719; *pao@pclob.gov*.

SUPPLEMENTARY INFORMATION: The Board has been directed by Congress to submit a report assessing privacy and civil liberties impacts stemming from government efforts to counter significant threats to the United States associated with foreign racially motivated violent extremist organizations.

As part of its earlier request for public comments regarding its upcoming domestic terrorism forum *(https://www.regulations.gov/document/GSA-GSA-2022-0009-0001*), published in the **Federal Register** at 87 FR 19536, PCLOB also encourages comments relating to this congressional report requirement, which can be found in Section 824 at *https://www.congress.gov/bill/117th-congress/house-bill/2471/text.*

David Coscia,

Agency Liaison Officer, Office of Presidential & Congressional Agency Liaison Services, General Services Administration.

[FR Doc. 2022–10712 Filed 5–18–22; 8:45 am]

BILLING CODE 6820–B5–P

SECURITIES AND EXCHANGE COMMISSION

[SEC File No. 270–064, OMB Control No. 3235–0067]

Proposed Collection; Comment Request

Upon Written Request Copies Available From: Securities and Exchange Commission, Office of FOIA Services, 100 F Street NE, Washington, DC 20549–2736

Extension:
Form S–11

Notice is hereby given that, pursuant to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*), the Securities and Exchange Commission (''Commission'') is soliciting comments on the collection of information summarized below. The Commission plans to submit this existing collection of information to the Office of Management and Budget for extension and approval.

Form S–11 (17 CFR 239.18) is the registration statement form used to register securities issued in real estate investment trusts by issuers whose business is primarily that of acquiring and holding investment interest in real estate under the Securities Act of 1933 (15 U.S.C. 77a *et seq.*). The information filed with the Commission permits verifications of compliance with securities law requirements and assures public availability. We estimate that Form S–11 takes approximately 730.08 hours per response and is filed by approximately 67 issuers annually. In addition, we estimate that 25% of the 730.08 hours per response (182.52 hours) is prepared by the issuer for annual reporting burden of 12,229 hours (182.52 hours per response × 67 responses)

Written comments are invited on: (a) Whether this proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (b) the accuracy of the agency's estimate of the burden imposed by the collection of information; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology. Consideration will be given to comments and suggestions submitted in writing within 60 days of this publication by July 18, 2022.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid control number.

Please direct your written comment to David Bottom, Director/Chief Information Officer, Securities and Exchange Commission, c/o John Pezzullo, 100 F Street NE, Washington, DC 20549 or send an email to: *PRA_Mailbox@sec.gov.*

Dated: May 13, 2022.

J. Matthew DeLesDernier,

Assistant Secretary.

[FR Doc. 2022–10728 Filed 5–18–22; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–94911; File No. SR–CboeBZX–2022–030]

Self-Regulatory Organizations; Cboe BZX Exchange, Inc.; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Amend Its Fees Schedule Relating to the Sale of Open-Close Volume Data

May 13, 2022.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the ''Act''),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on May 2, 2022, Cboe BZX Exchange, Inc. (the ''Exchange'' or ''BZX'') filed with the Securities and Exchange Commission (the ''Commission'') the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the Exchange. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

Cboe BZX Exchange, Inc. (the ''Exchange'' or ''BZX Options'') proposes to amend its Fees Schedule relating to the sale of Open-Close volume data. The text of the proposed rule change is provided in Exhibit 5.

The text of the proposed rule change is also available on the Exchange's website (*http://markets.cboe.com/us/equities/regulation/rule_filings/bzx/*), at the Exchange's Office of the Secretary, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to update its Fee Schedule for its equity options platform (''BZX Options'') to (i) offer a free trial during the months of May, June and July 2022 for an ad-hoc request of three (3) historical months of Intraday Open-Close historical data to all BZX Options Members and non-Members who have never before subscribed to the Intraday Open-Close historical files and (ii) adopt fees for the external distribution of products derived from Open-Close Data, effective May 2, 2022.

By way of background, the Exchange currently offers End-of-Day (''EOD'') and Intraday Open-Close Data (collectively, ''Open-Close Data''). EOD Open-Close Data is an end-of-day volume summary of trading activity on the Exchange at the option level by origin (customer, professional customer, broker-dealer, and market maker), side of the market (buy or sell), price, and transaction type (opening or closing). The customer and professional customer volume is further broken down into trade size buckets (less than 100 contracts, 100–199 contracts, greater than 199 contracts). The Open-Close Data is proprietary BZX Options trade data and does not include trade data from any other exchange. It is also a historical data product and not a real-time data feed. The Exchange also offers Intraday Open-Close Data, which provides similar information to that of Open-Close Data but is produced and updated every 10 minutes during the trading day. Data is captured in ''snapshots'' taken every 10 minutes throughout the trading day and is available to subscribers within five minutes of the conclusion of each 10-minute period.[3] The Intraday Open-Close Data provides a volume summary of trading activity on the Exchange at the option level by origin (customer, professional customer, broker-dealer, and market maker), side of the market (buy or sell), and transaction type (opening or closing). The customer and professional customer volume are further broken down into trade size buckets (less than 100 contracts, 100–199 contracts, greater than 199

[3] For example, subscribers to the intraday product will receive the first calculation of intraday data by approximately 9:42 a.m. ET, which represents data captured from 9:30 a.m. to 9:40 a.m. Subscribers will receive the next update at 9:52 a.m., representing the data previously provided together with data captured from 9:40 a.m. through 9:50 a.m., and so forth. Each update will represent the aggregate data captured from the current ''snapshot'' and all previous ''snapshots.''

contracts). The Intraday Open-Close Data is also proprietary BZX Options trade data and does not include trade data from any other exchange.

Cboe LiveVol, LLC (''LiveVol''), a wholly owned subsidiary of the Exchange's parent company, Cboe Global Markets, Inc., makes the Open-Close Data available for purchase to Members and non-Members on the LiveVol DataShop website (*datashop.cboe.com*). Customers may currently purchase Open-Close Data on a subscription basis (monthly or annually) or by ad hoc request for a specified month (*e.g.,* request for Intraday Open-Close Data for month of January 2022).

Open-Close Data is subject to direct competition from similar end-of-day and intraday options trading summaries offered by several other options exchanges.[4] All of these exchanges offer essentially the same end-of-day and intraday options trading summary information.

Free Trial

The Exchange first seeks to adopt a free trial for historical ad hoc requests for Intraday Open-Close Data for new purchasers. Currently, ad hoc requests for historical Intraday Open-Close Data are available to all customers at the same price and in the same manner. The current charge for this historical Intraday Open-Close Data covering all of the Exchange's securities (Equities, Indexes & ETF's) is $750 per month. The Exchange now proposes to adopt a free trial available during the months of May, June and July 2022 to provide a total up to three (3) historical months of Intraday Open-Close Data to any Member or non-Member that has not previously subscribed to this offering.[5] The Exchange notes that it previously offered this free trial period last year for the months of June and July 2021.[6] The Exchange believes bringing back the proposed trial will again serve as an incentive for new users who have never purchased Intraday Open-Close historical data to start purchasing Intraday Open-Close historical data. Particularly, the Exchange believes it will give potential subscribers the ability to use and test the data offering before signing up for additional months. The Exchange also notes another exchange offers a free trial for new subscribers of a similar data product.[7] Lastly, the purchase of Intraday Open-Close historical data is discretionary and not compulsory.

External Distribution of Derived Data

The external distribution of Open-Close Data or any product derived from such data is not currently permitted. The Exchange proposes to remove that prohibition and allow vendors to distribute ''Derived Data'' based on Open-Close Data. ''Derived Data'' is pricing data or other data that (i) is created in whole or in part from Exchange Data, (ii) is not an index or financial product, and (iii) cannot be readily reverse-engineered to recreate Exchange Data or used to create other data that is a reasonable facsimile or substitute for Exchange Data.[8] Derived Data may be created by Distributors for a number of different purposes, as determined by the Distributor. The Exchange believes allowing market data vendors to identify, develop, and sell derived market data products, enables them to harness the power of the competitive marketplace to promote innovation.

The Exchange proposes to adopt a fee of $5,000 per month to allow the unlimited external distribution of Derived Data from Open-Close Data.[9] The fee charged to distribute the Derived Data will be constrained by potential competition, as any exchange with an options trading product would be able to submit an immediately effective fee filing to allow redistribution, most likely without needing to modify the underlying product in any way, thereby subjecting the proposed fee to market competition. Moreover, the Exchange notes at least one other Exchange currently allows, and charges for, external distribution of derived data based on similar open-close data.[10]

2. Statutory Basis

The Exchange believes the proposed rule change is consistent with the Securities Exchange Act of 1934 (the ''Act'') and the rules and regulations thereunder applicable to the Exchange and, in particular, the requirements of Section 6(b) of the Act.[11] Specifically, the Exchange believes the proposed rule change is consistent with the Section 6(b)(5)[12] requirements that the rules of an exchange be designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest. Additionally, the Exchange believes the proposed rule change is consistent with the Section 6(b)(5)[13] requirement that the rules of an exchange not be designed to permit unfair discrimination between customers, issuers, brokers, or dealers.

In adopting Regulation NMS, the Commission granted self-regulatory organizations (''SROs'') and broker-dealers increased authority and flexibility to offer new and unique market data to the public. It was believed that this authority would expand the amount of data available to consumers, and also spur innovation and competition for the provision of market data. The Exchange believes the proposed fee changes will further broaden the availability of U.S. option market data to investors consistent with the principles of Regulation NMS. Open-Close Data is designed to help investors understand underlying market trends to improve the quality of investment decisions. Indeed, subscribers to the data may be able to enhance their ability to analyze option trade and volume data and create and test trading models and analytical strategies. The Exchange believes Open-Close Data provides a valuable tool that subscribers can use to gain comprehensive insight into the trading

[4] These substitute products are: Nasdaq PHLX Options Trade Outline, Nasdaq Options Trade Outline, ISE Trade Profile, GEMX Trade Profile data; open-close data from Cboe Options, C2, and EDGX; and Open Close Reports from MIAX Options, Pearl, and Emerald.

[5] For example, if a Member or non-Member that has never made an ad-hoc request for a specified month of Intraday Open-Close historical data wishes to purchase Intraday Open-Close Data for the months of January, February and March 2022 during the month of June 2022, the historical files for those months would be provided free of charge. If a new user wishes to purchase Intraday Open-Close historical data for the months of January, February, March and April 2022 during the month of June 2022, then the data for January, February and March 2022 would be provided free of charge, and the new user would be charged $750 for the April 2022 historical file.

[6] The Exchange notes it inadvertently never eliminated the obsolete rule text language from the Fees Schedule. The Exchange proposes to update the text to conform to the proposed fee change.

[7] *See* Nasdaq ISE, Options 7 Pricing Schedule, Section 10A., Nasdaq ISE Open/Close Trade Profile End of Day.

[8] ''Derived Data'' is not currently a defined term in the Cboe BZX Options Fees Schedule. The Exchange proposes to add the definition to the Notes section of the LiveVol Fees table for clarity.

[9] The External Distribution Fee for Derived Open-Close Data will be in addition to fees for the underlying data. For example, external distribution of data derived from the Intraday product will be $1,500 per month (the monthly subscription fee), plus the proposed $5,000 per month External Distribution fee.

[10] *See* Nasdaq PHLX, Options 7 Pricing Schedule, Photo Historical Data, External Distribution.

[11] 15 U.S.C. 78f(b).

[12] 15 U.S.C. 78f(b)(5).

[13] *Id.*

activity in a particular series, but also emphasizes such data is not necessary for trading and as noted above, is entirely optional. Moreover, several other exchanges offer a similar data product which offer same type of data content through end-of-day or intraday reports.[14]

The Exchange also operates in a highly competitive environment. Indeed, there are currently 16 registered options exchanges that trade options. Based on publicly available information, no single options exchange has more than 16% of the market share.[15] The Commission has repeatedly expressed its preference for competition over regulatory intervention in determining prices, products, and services in the securities markets. Particularly, in Regulation NMS, the Commission highlighted the importance of market forces in determining prices and SRO revenues and, also, recognized that current regulation of the market system ''has been remarkably successful in promoting market competition in its broader forms that are most important to investors and listed companies.'' [16] Making similar data products available to market participants fosters competition in the marketplace, and constrains the ability of exchanges to charge supracompetitive [sic] fees. In the event that a market participant views one exchange's data product as more or less attractive than the competition they can and do switch between similar products. The proposed fees are a result of the competitive environment, as the Exchange seeks to adopt fees to attract purchasers of historical Intraday Open-Close Data, as well as attract Distributors for derived data of its Open-Close Data.

The Exchange believes that the proposed free trial for any Member or non-Member who has not previously purchased Intraday Open-Close historical data is reasonable because such users would not be subject to fees for up to 3 months' worth of Intraday Open-Close historical data. The Exchange believes the proposed free trial is also reasonable as it will give potential subscribers the ability to use and test the Intraday Open-Close historical data prior to purchasing additional months and will therefore encourage and promote new users to purchase the Intraday Open-Close historical data. The Exchange believes that the proposed discount is equitable and not unfairly discriminatory because it will apply equally to all Members and non-Members who have not previously purchased Intraday Open-Close historical data. Also as noted above, another exchange offers a free trial to new users for a similar data product [17] and the Exchange itself previously offered a similar free trial.[18] Lastly, the purchase of this data product is discretionary and not compulsory.

Next, the Exchange notes that the proposal to allow the external distribution of derived data is subject to competition as discussed above, and also introduces a new category of market participant for Open-Close Data—market data vendors—into the equation. Currently, Open-Close data is not available for redistribution, in either native form or through Derived Data. This proposal will create a new market for the sale of Derived Data from the Exchange's Open-Close Data products to the general investing public. This is itself evidence of the competitive environment for Open-Close and its substitutes, as it is exactly the type of innovation one would expect to see in a competitive market. It will also spur further innovation by challenging market data vendors to create new and innovative Derived Data products. Any exchange that wishes to allow distribution of a Derived Data product based on options trading information would be able to do so with an immediately-effective fee filing similar to this proposal, most likely without requiring any technological enhancement to the underlying product. Indeed, as discussed, another Exchange already allows, and charges for, external distribution of derived data based on similar open-close data.[19]

Allowing the redistribution of Derived Data, but not the underlying information, to the general investing public is an equitable allocation of reasonable dues, fees and other charges because it is the most efficient mechanism for widespread delivery of market sentiment information. The proposal is designed to promote the dissemination of a variety of analytical insights—previously available only to investment banks, market makers, asset managers and other buy-side investors—to the general investing public by creating an incentive for market data vendors to identify, develop, and sell such indicators. Ordinarily, neither exchanges nor vendors allow redistribution of analytic products—such products are typically designed solely for the use of direct customers, not for redistribution to the customers of customers in the manner of a data feed. Allowing the redistribution of Derived Data provides an incentive for vendors to innovate with new compelling and varied analytic products for the general investing public that will provide broader access to market sentiment insights currently available only to sophisticated investors.

The Exchange believes that the proposed fee for the external distribution of Derived Data from Open-Close Data is reasonable because the rate is the same as the amount charged by another exchange that also allows, and charges for, external distribution of derived data from similar open-close products.[20] Furthermore, the proposed fee will only apply to Distributors that elect to distribute Derived Data from Open-Close Data and as discussed, Open-Close Data, and Derived Data therefrom, is purchased on a voluntary basis, in that neither the Exchange nor market data distributors are required by any rule or regulation to make this data available. Accordingly, Distributors can discontinue use at any time and for any reason, including due to an assessment of the reasonableness of fees charged. Firms have a wide variety of alternative market data products from which to choose, such as similar proprietary data products offered by other exchanges. Moreover, the Exchange is not required to make any proprietary data products available or to offer any specific pricing alternatives to any customers. While the Exchange has no way of predicting with certainty the impact of the proposed changes, it anticipates at least two Distributors will create Derived Data from Open-Close Data. Also, while the Exchange does not have a precise estimate of the number of individuals expected to benefit, which will ultimately depend on the usefulness of the Derived Data products that reach the market it expects this to be a popular product that may benefit thousands of investors.

The Exchange also believes it is reasonable, equitable and not unfairly discriminatory to charge an external distributor of Derived Data a $5,000 fee as vendors will ordinarily charge a fee to their downstream customers for this service, and, even if the vendor is not charging a specific fee for this particular

[14] *See* supra note 4.

[15] *See* Cboe Global Markets U.S. Options Market Month-to-Date Volume Summary (April 29, 2022), available at *https://markets.cboe.com/us/options/market_statistics/*.

[16] *See* Securities Exchange Act Release No. 51808 (June 9, 2005), 70 FR 37496, 37499 (June 29, 2005) (''Regulation NMS Adopting Release'').

[17] *See* Nasdaq ISE, Options 7 Pricing Schedule, Section 10A., Nasdaq ISE Open/Close Trade Profile End of Day.

[18] *See* Securities Exchange Act Release No. 92168 (June 14, 2021), 86 FR 33390 (June 24, 2021) (SR–CboeBZX–2021–043).

[19] *See* Nasdaq PHLX, Options 7 Pricing Schedule, Photo Historical Data, External Distribution.

[20] *Id.*

service, the Exchange expects Derived Data products from Open-Close Data to be part of a suite of offerings from distributors that generally promote sales. External distribution is also fundamentally different than internal use, in that the former generates revenue from external sales while the latter does not. Therefore, the Exchange believes it is reasonable, equitable and not unfairly discriminatory to charge a fee for a product that generates downstream revenue. Further, the proposed fee will apply equally to all distributors that choose to distribute Derived Data from Open-Close Data.

Additionally, the Exchange does not believe it is unfair discrimination to allow the redistribution of Derived Data, but not the underlying information, to the general investing public. As explained above, neither exchanges nor vendors ordinarily allow redistribution of analytic products—such products are typically designed solely for the use of direct customers, not for redistribution to the customers of customers in the manner of a data feed. Allowing the redistribution of Derived Data provides an incentive for vendors to innovate with new compelling and varied analytic products for the general investing public that will provide access to market sentiment insights currently available only to sophisticated investors. This proposal is therefore not unfair discrimination, but rather allows for more equitable access to market sentiment information to the general investing public.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act. The Exchange operates in a highly competitive environment in which the Exchange must continually adjust its fees to remain competitive. Because competitors are free to modify their own fees in response, the Exchange believes that the degree to which fee changes in this market may impose any burden on competition is extremely limited.

As discussed above, Open-Close Data is subject to direct competition from several other options exchanges that offer substitutes to Open-Close. Moreover, purchase of Open-Close is optional. It is designed to help investors understand underlying market trends to improve the quality of investment decisions, but is not necessary to execute a trade.

The proposed rule changes are grounded in the Exchange's efforts to compete more effectively. The Exchange is proposing to broaden distribution of Open-Close information beyond investment banks, market makers, asset managers and other buy-side investors to market data vendors and the general investing public, and to provide a free trial for market participants to test investment strategies and trading models, and develop market sentiment indicators. These changes will not cause any unnecessary or inappropriate burden on intermarket competition, but rather will promote competition by expanding the market for Open-Close data and encouraging new market participants to investigate the product. Other exchanges are, of course, free to match these changes or undertake other competitive responses, enhancing overall competition.

The proposed rule changes will not cause any unnecessary or inappropriate burden on intramarket competition. Particularly, the proposed fee applies uniformly to any Distributor, in that it does not differentiate between distributors that choose to distribute Derived Open-Close Data. Additionally, the Exchange believes it will foster competition by expanding dissemination of data to vendors and the general investing public, and by encouraging more market participants to use Open-Close data to help inform their investments strategies and analytic models. Lastly, the proposed fee will only apply to Distributors that elect to distribute Derived Data from Open-Close Data and as discussed, Open-Close Data, and Derived Data therefrom, is purchased on a voluntary basis.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

The Exchange neither solicited nor received comments on the proposed rule change.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change is effective upon filing pursuant to Section 19(b)(3)(A) [21] of the Act and subparagraph (f)(2) of Rule 19b–4 [22] thereunder, because it establishes a due, fee, or other charge imposed by the Exchange.

At any time within 60 days of the filing of such proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings under Section 19(b)(2)(B) [23] of the Act to determine whether the proposed rule change should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR–CboeBZX–2022–030 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549–1090.

All submissions should refer to File Number SR–CboeBZX–2022–030. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's internet website (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street NE, Washington, DC 20549 on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only

[21] 15 U.S.C. 78s(b)(3)(A).

[22] 17 CFR 240.19b–4(f)(2).

[23] 15 U.S.C. 78s(b)(2)(B).

information that you wish to make available publicly. All submissions should refer to File Number SR–CboeBZX–2022–030 and should be submitted on or before June 9, 2022.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[24]

J. Matthew DeLesDernier,

Assistant Secretary.

[FR Doc. 2022–10736 Filed 5–18–22; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–94908; File No. SR–NYSEArca–2022–28]

Self-Regulatory Organizations; NYSE Arca, Inc.; Notice of Filing and Immediate Effectiveness of Proposed Rule Change To List and Trade Shares of the Principal Real Estate Active Opportunities ETF Under NYSE Arca Rule 8.601 (Active Proxy Portfolio Shares)

May 13, 2022.

Pursuant to Section 19(b)(1)[1] of the Securities Exchange Act of 1934 (''Act'')[2] and Rule 19b–4 thereunder,[3] notice is hereby given that, on May 4, 2022, NYSE Arca, Inc. (''NYSE Arca'' or ''Exchange'') filed with the Securities and Exchange Commission (''Commission'') the proposed rule change as described in Items I and II below, which Items have been prepared by the Exchange. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange proposes to to list and trade shares of the Principal Real Estate Active Opportunities ETF under NYSE Arca Rule 8.601–E. The proposed rule change is available on the Exchange's website at *www.nyse.com,* at the principal office of the Exchange, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the self-regulatory organization included statements concerning the purpose of, and basis for, the proposed rule change and discussed any comments it received on the proposed rule change. The text of those statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant parts of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and the Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange has adopted NYSE Arca Rule 8.601–E for the purpose of permitting the listing and trading, or trading pursuant to unlisted trading privileges (''UTP''), of Active Proxy Portfolio Shares, which are securities issued by an actively managed open-end investment management company.[4] Commentary .01 to Rule 8.601–E requires the Exchange to file separate proposals under Section 19(b) of the Act before listing and trading any series of Active Proxy Portfolio Shares on the Exchange. Therefore, the Exchange is submitting this proposal in order to list and trade shares (''Shares'') as Active Proxy Portfolio Shares of the Principal Real Estate Active Opportunities ETF (the ''Fund'') under Rule 8.601–E.

Key Features of Active Proxy Portfolio Shares

While funds issuing Active Proxy Portfolio Shares will be actively-managed and, to that extent, will be similar to Managed Fund Shares, Active Proxy Portfolio Shares differ from Managed Fund Shares in the following important respects. First, in contrast to Managed Fund Shares, which are actively-managed funds listed and traded under NYSE Arca Rule 8.600–E[5] and for which a ''Disclosed Portfolio'' is required to be disseminated at least once daily,[6] the portfolio for an issue of Active Proxy Portfolio Shares will be publicly disclosed within at least 60 days following the end of every fiscal quarter in accordance with normal disclosure requirements otherwise applicable to open-end management investment companies registered under the Investment Company Act of 1940 (the ''1940 Act'').[7] The composition of

[24] 17 CFR 200.30–3(a)(12).

[1] 15 U.S.C. 78s(b)(1).

[2] 15 U.S.C. 78a.

[3] 17 CFR 240.19b–4.

[4] *See* Securities Exchange Act Release No. 89185 (June 29, 2020), 85 FR 40328 (July 6, 2020) (SR–NYSEArca–2019–95). Rule 8.601–E(c)(1) provides that ''[t]he term ''Active Proxy Portfolio Share'' means a security that (a) is issued by a investment company registered under the Investment Company Act of 1940 (''Investment Company'') organized as an open-end management investment company that invests in a portfolio of securities selected by the Investment Company's investment adviser consistent with the Investment Company's investment objectives and policies; (b) is issued in a specified minimum number of shares, or multiples thereof, in return for a deposit by the purchaser of the Proxy Portfolio or Custom Basket, as applicable, and/or cash with a value equal to the next determined net asset value (''NAV''); (c) when aggregated in the same specified minimum number of Active Proxy Portfolio Shares, or multiples thereof, may be redeemed at a holder's request in return for the Proxy Portfolio or Custom Basket, as applicable, and/or cash to the holder by the issuer with a value equal to the next determined NAV; and (d) the portfolio holdings for which are disclosed within at least 60 days following the end of every fiscal quarter.'' Rule 8.601–E(c)(2) provides that ''[t]he term ''Actual Portfolio'' means the identities and quantities of the securities and other assets held by the Investment Company that shall form the basis for the Investment Company's calculation of NAV at the end of the business day.'' Rule 8.601–E(c)(3) provides that ''[t]he term ''Proxy Portfolio'' means a specified portfolio of securities, other financial instruments and/or cash designed to track closely the daily performance of the Actual Portfolio of a series of Active Proxy Portfolio Shares as provided in the exemptive relief pursuant to the Investment Company Act of 1940 applicable to such series.'' Rule 8.601–E(c)(4) provides that the term ''Custom Basket'' means a portfolio of securities that is different from the Proxy Portfolio and is otherwise consistent with the exemptive relief issued pursuant to the Investment Company Act of 1940 applicable to a series of Active Proxy Portfolio Shares.

[5] The Commission has previously approved listing and trading on the Exchange of a number of issues of Managed Fund Shares under NYSE Arca Rule 8.600–E. *See, e.g.,* Securities Exchange Act Release Nos. 57801 (May 8, 2008), 73 FR 27878 (May 14, 2008) (SR–NYSEArca–2008–31) (order approving Exchange listing and trading of twelve actively-managed funds of the WisdomTree Trust); 60460 (August 7, 2009), 74 FR 41468 (August 17, 2009) (SR–NYSEArca–2009–55) (order approving listing of Dent Tactical ETF); 63076 (October 12, 2010), 75 FR 63874 (October 18, 2010) (SR–NYSEArca–2010–79) (order approving Exchange listing and trading of Cambria Global Tactical ETF); 63802 (January 31, 2011), 76 FR 6503 (February 4, 2011) (SR–NYSEArca–2010–118) (order approving Exchange listing and trading of the SiM Dynamic Allocation Diversified Income ETF and SiM Dynamic Allocation Growth Income ETF). The Commission also has approved a proposed rule change relating to generic listing standards for Managed Fund Shares. *See* Securities Exchange Act Release No. 78397 (July 22, 2016), 81 FR 49320 (July 27, 2016) (SR–NYSEArca–2015–110) (amending NYSE Arca Equities Rule 8.600 to adopt generic listing standards for Managed Fund Shares).

[6] NYSE Arca Rule 8.600–E(c)(2) defines the term ''Disclosed Portfolio'' as the identities and quantities of the securities and other assets held by the Investment Company that will form the basis for the Investment Company's calculation of net asset value at the end of the business day. NYSE Arca Rule 8.600–E(d)(2)(B)(i) requires that the Disclosed Portfolio will be disseminated at least once daily and will be made available to all market participants at the same time.

[7] A mutual fund is required to file with the Commission its complete portfolio schedules for the second and fourth fiscal quarters on Form N–CSR under the 1940 Act. Information reported on Form N–PORT for the third month of a fund's fiscal quarter will be made publicly available 60 days after the end of a fund's fiscal quarter. Form N–PORT requires reporting of a fund's complete portfolio holdings on a position-by-position basis on a quarterly basis within 60 days after fiscal quarter end. Investors can obtain a series of Active Proxy Portfolio Shares' Statement of Additional Information (''SAI''), its Shareholder Reports, its

the portfolio of an issue of Active Proxy Portfolio Shares would not be available at commencement of Exchange listing and trading. Second, in connection with the creation and redemption of Active Proxy Portfolio Shares, such creation or redemption may be exchanged for a Proxy Portfolio or Custom Basket, as applicable, and/or cash with a value equal to the next-determined NAV. A series of Active Proxy Portfolio Shares will disclose the Proxy Portfolio on a daily basis, which, as described above, is designed to track closely the daily performance of the Actual Portfolio of a series of Active Proxy Portfolio Shares, instead of the actual holdings of the Investment Company, as provided by a series of Managed Fund Shares. As set forth in NYSE Arca Rule 8.601–E(d)(2)(B)(ii), for Active Proxy Portfolio Shares using a Custom Basket, each Business Day,[8] before the opening of trading in the Core Trading Session (as defined in NYSE Arca Rule 7.34–E (a)), the Investment Company shall make publicly available on its website the composition of any Custom Basket transacted on the previous Business Day, except a Custom Basket that differs from the applicable Proxy Portfolio only with respect to cash.

The Commission has previously approved[9] and noticed for immediate effectiveness[10] the listing and trading on the Exchange of series of Active Proxy Portfolio Shares under NYSE Arca Rule 8.601–E.

The Shares of the Fund will be issued by the Principal Exchange-Traded Funds (the ''Trust''), which is organized as a statutory trust organized under the laws of Delaware and registered with the Commission as an open-end management investment company. Principal Global Investors, LLC will be the investment adviser to the Fund (the ''Adviser''). State Street Bank and Trust Company will serve as the Fund's transfer agent, custodian, and will conduct certain administrative functions. ALPS Distributors, Inc. will act as the distributor (the ''Distributor'') for the Fund.[11]

Commentary .04 to NYSE Arca Rule 8.601–E provides that, if the investment adviser to the Investment Company issuing Active Proxy Portfolio Shares is registered as a broker-dealer or is affiliated with a broker-dealer, such investment adviser will erect and maintain a ''fire wall'' between the investment adviser and personnel of the broker-dealer or broker-dealer affiliate, as applicable, with respect to access to information concerning the composition and/or changes to such Investment Company's Actual Portfolio, Proxy Portfolio, and/or Custom Basket, as applicable. Any person related to the investment adviser or Investment Company who makes decisions pertaining to the Investment Company's Actual Portfolio, Proxy Portfolio, and/or Custom Basket, as applicable, or has access to non-public information regarding the Investment Company's Actual Portfolio, Proxy Portfolio, and/or the Custom Basket, as applicable, or changes thereto must be subject to procedures reasonably designed to prevent the use and dissemination of material non-public information regarding the Actual Portfolio, Proxy Portfolio, and/or the Custom Basket, as applicable, or changes thereto. Commentary .04 is similar to Commentary .03(a)(i) and (iii) to NYSE Arca Rule 5.2–E(j)(3); however, Commentary .04, in connection with the establishment of a ''fire wall'' between the investment adviser and the broker-dealer, reflects the applicable open-end fund's portfolio, not an underlying benchmark index, as is the case with index-based funds.[12] Commentary .04 is also similar to Commentary .06 to Rule 8.600–E related to Managed Fund Shares, except that Commentary .04 relates to establishment and maintenance of a ''fire wall'' between the investment adviser and personnel of the broker-dealer or broker-dealer affiliate, as applicable, applicable to an Investment Company's Actual Portfolio, Proxy Portfolio, and/or Custom Basket, as applicable, or changes thereto, and not just to the underlying portfolio, as is the case with Managed Fund Shares.

In addition, Commentary .05 to Rule 8.601–E provides that any person or entity, including a custodian, Reporting

Form N–CSR, filed twice a year, and its Form N–CEN, filed annually. A series of Active Proxy Portfolio Shares' SAI and Shareholder Reports will be available free upon request from the Investment Company, and those documents and the Form N–PORT, Form N–CSR, and Form N–CEN may be viewed on-screen or downloaded from the Commission's website at *www.sec.gov*.

[8] ''Business Day'' is defined to mean any day that the Exchange is open, including any day when the Fund satisfies redemption requests as required by Section 22(e) of the 1940 Act.

[9] *See* Securities Exchange Act Release Nos. 89185 (June 29, 2020), 85 FR 40328 (July 6, 2020) (SR–NYSEArca–2019–95) (Notice of Filing of Amendment No. 6 and Order Granting Accelerated Approval of a Proposed Rule Change, as Modified by Amendment No. 6, to Adopt NYSE Arca Rule 8.601–E to Permit the Listing and Trading of Active Proxy Portfolio Shares and To List and Trade Shares of the Natixis U.S. Equity Opportunities ETF Under Proposed NYSE Arca Rule 8.601–E); 89192 (June 30, 2020), 85 FR 40699 (July 7, 2020) (SR–NYSEArca–2019–96) (Notice of Filing of Amendment No. 5 and Order Granting Accelerated Approval of a Proposed Rule Change, as Modified by Amendment No. 5, to List and Trade Two Series of Active Proxy Portfolio Shares Issued by the American Century ETF Trust under NYSE Arca Rule 8.601–E); 89191 (June 30, 2020), 85 FR 40358 (July 6, 2020) (SR–NYSEArca–2019–92) (Notice of Filing of Amendment No. 3 and Order Granting Accelerated Approval of a Proposed Rule Change, as Modified by Amendment No. 3, to List and Trade Four Series of Active Proxy Portfolio Shares Issued by T. Rowe Price Exchange-Traded Funds, Inc. under NYSE Arca Rule 8.601–E); 89438 (July 31, 2020), 85 FR 47821 (August 6, 2020) (SR–NYSEArca–2020–51) (Order Granting Approval of a Proposed Rule Change, as Modified by Amendment No. 2, to List and Trade Shares of Natixis Vaughan Nelson Select ETF and Natixis Vaughan Nelson MidCap ETF under NYSE Arca Rule 8.601–E).

[10] *See* Securities Exchange Act Release Nos. 92104 (June 3, 2021), 86 FR 30635 (June 9, 2021) (NYSEArca–2021–46) (Notice of Filing and Immediate Effectiveness of Proposed Rule Change to List and Trade Shares of the Nuveen Santa Barbara Dividend Growth ETF, Nuveen Small Cap Select ETF, and Nuveen Winslow Large-Cap Growth ESG ETF Under NYSE Arca Rule 8.601–E (Active Proxy Portfolio Shares); and 92958 (September 13, 2021), 86 FR 51933 (September 17, 2021) (NYSEArca–2021–77) (Notice of Filing and Immediate Effectiveness of Proposed Rule Change To List and Trade Shares of the Nuveen Growth Opportunities ETF Under NYSE Arca Rule 8.601–E (Active Proxy Portfolio Shares).

[11] The Trust is registered under the 1940 Act. On February 9, 2022, the Trust filed a post-effective amendment to its registration statement on Form N–1A under the 1940 Act relating to the Fund (File No. 333–201935) (the ''Registration Statement''). On February 9, 2022, the Trust, the Distributor, and the Adviser, filed an application for an order under Section 6(c) of the 1940 Act for exemptions from various provisions of the 1940 Act and rules thereunder (File No. 812–15308, dated February 9, 2022) (the ''Application''). *See* Investment Company Act Release No. 34345 (July 27, 2021). On April 26, 2022, the Commission issued an order (the ''Exemptive Order'') under the 1940 Act granting the exemptions requested in the Application (Investment Company Act Release No. 34571, April 26, 2022). Investments made by the Fund will comply with the conditions set forth in the Application and the Exemptive Order. *See, e.g.,* note 13, *infra*. The description of the operation of the Fund herein is based, in part, on the Registration Statement, the Application and the Exemptive Order. The Exchange will not commence trading in Shares of the Fund until the Registration Statement is effective.

[12] An investment adviser to an open-end fund is required to be registered under the Investment Advisers Act of 1940 (the ''Advisers Act''). As a result, the Adviser and its related personnel will be subject to the provisions of Rule 204A–1 under the Advisers Act relating to codes of ethics. This Rule requires investment advisers to adopt a code of ethics that reflects the fiduciary nature of the relationship to clients as well as compliance with other applicable securities laws. Accordingly, procedures designed to prevent the communication and misuse of non-public information by an investment adviser must be consistent with Rule 204A–1 under the Advisers Act. In addition, Rule 206(4)–7 under the Advisers Act makes it unlawful for an investment adviser to provide investment advice to clients unless such investment adviser has (i) adopted and implemented written policies and procedures reasonably designed to prevent violations, by the investment adviser and its supervised persons, of the Advisers Act and the Commission rules adopted thereunder; (ii) implemented, at a minimum, an annual review regarding the adequacy of the policies and procedures established pursuant to subparagraph (i) above and the effectiveness of their implementation; and (iii) designated an individual (who is a supervised person) responsible for administering the policies and procedures adopted under subparagraph (i) above.

Authority, distributor, or administrator, who has access to non-public information regarding the Investment Company's Actual Portfolio, the Proxy Portfolio, or the Custom Basket, as applicable, or changes thereto, must be subject to procedures reasonably designed to prevent the use and dissemination of material non-public information regarding the applicable Investment Company Actual Portfolio, the Proxy Portfolio, or the Custom Basket, as applicable, or changes thereto. Moreover, if any such person or entity is registered as a broker-dealer or affiliated with a broker-dealer, such person or entity will erect and maintain a ''fire wall'' between the person or entity and the broker-dealer with respect to access to information concerning the composition and/or changes to such Investment Company Actual Portfolio, Proxy Portfolio, or Custom Basket, as applicable.

The Adviser is not registered as a broker-dealer but is affiliated with broker-dealers. The Adviser has implemented and will maintain a ''fire wall'' with respect to such broker-dealer affiliates regarding access to information concerning the composition of and/or changes to the Fund's Actual Portfolio, Proxy Portfolio, and/or Custom Basket, as applicable.

In the event (a) the Adviser becomes registered as a broker-dealer or becomes newly affiliated with a broker-dealer, or (b) any new adviser or sub-adviser is a registered broker-dealer, or becomes affiliated with a broker-dealer, it will implement and maintain a ''fire wall'' with respect to its relevant personnel or its broker-dealer affiliate regarding access to information concerning the composition and/or changes to the Fund's Actual Portfolio, Proxy Portfolio, and/or Custom Basket, as applicable, and will be subject to procedures designed to prevent the use and dissemination of material non-public information regarding the Fund's Actual Portfolio, Proxy Portfolio, and/or Custom Basket, as applicable, or changes thereto. Any person related to the Adviser or the Fund who makes decisions pertaining to the Fund's Actual Portfolio, the Proxy Portfolio, or Custom Basket, as applicable, or has access to non-public information regarding the Fund's Actual Portfolio, the Proxy Portfolio, and/or the Custom Basket, as applicable, or changes thereto are subject to procedures reasonably designed to prevent the use and dissemination of material non-public information regarding the Fund's Actual Portfolio, the Proxy Portfolio, and/or the Custom Basket, as applicable, or changes thereto.

In addition, any person or entity, including any service provider for the Fund, who has access to non-public information regarding the Fund's Actual Portfolio, the Proxy Portfolio, and/or the Custom Basket, as applicable, or changes thereto, will be subject to procedures reasonably designed to prevent the use and dissemination of material non-public information regarding the Fund's Actual Portfolio, the Proxy Portfolio, and/or the Custom Basket, as applicable, or changes thereto. Moreover, if any such person or entity is registered as a broker-dealer or affiliated with a broker-dealer, such person or entity has erected and will maintain a ''fire wall'' between the person or entity and the broker-dealer with respect to access to information concerning the composition and/or changes to the Fund's Actual Portfolio, Proxy Portfolio, and/or Custom Basket, as applicable.

Description of the Fund

According to the Registration Statement, the Adviser will identify a ''Tracking Basket'' [13] for the Fund, which is designed to closely track the daily performance of the Fund but is not the Fund's Actual Portfolio. The Tracking Basket is comprised of (1) select recently disclosed portfolio holdings (''Strategy Components''); (2) liquid ETFs that convey information about the types of instruments (that are not otherwise fully represented by the Strategy Components) in which the fund invests (''Representative ETFs''); and (3) cash and cash equivalents.

Representative ETFs are selected for inclusion in the Tracking Basket such that, when aggregated with the other Tracking Basket components, the Tracking Basket corresponds to the Fund's overall holdings exposure.

The Fund will publish on its website a Tracking Basket before the commencement of trading of the Fund's Shares on each Business Day, and the Adviser will not make intra-day changes to the Tracking Basket except to correct errors in the published Tracking Basket. Disclosure of the Tracking Basket will be compliant with Rule 8.601–E(c)(3).

In addition, on each Business Day before the commencement of trading in Shares on the listing exchange, the Fund publishes Tracking Basket Weight Overlap on its website. The Tracking Basket Weight Overlap is the percentage weight overlap between the holdings of the prior Business Day's Tracking Basket compared to the holdings of the Fund that formed the basis for the Fund's calculation of NAV at the end of the prior Business Day. It is calculated by taking the lesser weight of each asset held in common between the Fund's Actual Portfolio and the Tracking Basket, and adding the totals. The Tracking Basket Weight Overlap is intended to provide investors with an understanding of the degree to which the Tracking Basket and the Fund's Actual Portfolio overlap and help investors evaluate the risk that the performance of the Tracking Basket may deviate from the performance of the portfolio holdings of the Fund.

The Fund's holdings will conform to the permissible investments as set forth in the Application and Exemptive Order, and the holdings will be consistent with all requirements in the Application and Exemptive Order.[14] Any foreign common stocks held by the Fund will be traded on an exchange that is a member of the Intermarket Surveillance Group (''ISG'') or with which the Exchange has in place a comprehensive surveillance sharing agreement.

According to the Registration Statement, the Fund's investment objective is to seek total return. Under normal market conditions, the Fund will invest at least 80% of its net assets (including the amount of any borrowings for investment purposes) in securities of companies principally engaged in the real estate industry at the time of purchase.[15]

[13] The ''Tracking Basket'' is the Proxy Portfolio for purposes of Rule 8.601–E(c)(3).

[14] Pursuant to the Application and Exemptive Order, the permissible investments for the Fund include only the following instruments: ETFs traded on a U.S. exchange; exchange-traded notes (''ETNs'') traded on a U.S. exchange; U.S. exchange-traded common stocks, common stocks listed on a foreign exchange that trade on such exchange contemporaneously with the Shares (''foreign common stocks'') in the Exchange's Core Trading Session (normally, 9:30 a.m. to 4:00 p.m. Eastern Time (''E.T.'')); U.S. exchange-traded preferred stocks, U.S. exchange-traded American Depositary Receipts (''ADRs''); U.S. exchange-traded real estate investment trusts; U.S. exchange-traded commodity pools; U.S. exchange-traded metals trusts; U.S. exchange-traded currency trusts; and U.S. exchange-traded futures that trade contemporaneously with the Shares. In addition, the Fund may hold cash and cash equivalents (short-term U.S. Treasury securities, government money market funds, and repurchase agreements). Pursuant to the Application and Exemptive Order, the Fund will not hold short positions or invest in derivatives other than U.S. exchange-traded futures, will not borrow for investment purposes, and will not purchase any securities that are illiquid investments at the time of purchase.

[15] Real estate companies include real estate investment trusts (''REITs'') and non-REITs. REITs are pooled investment vehicles that invest in income producing real estate, real estate related loans, or other types of real estate interests. REITs are corporations or business trusts that are permitted to eliminate corporate level federal income taxes by meeting certain requirements of the Internal Revenue Code.

The Fund seeks to minimize its investments in traditional real estate sectors (*e.g.,* conventional office, retail, apartments, and industrial) because of changing investor preferences and shifting economic and social factors. The Fund, instead, seeks to favor investments in growing non-traditional real estate sectors that are benefiting from these economic and societal shifts (*e.g.,* data centers, wireless towers, and single-family rentals).

Investment Restrictions

The Shares of the Fund will conform to the initial and continued listing criteria under Rule 8.601–E. The Fund's holdings will be limited to and consistent with permissible holdings as described in the Application and Exemptive Order and all requirements in the Application and Exemptive Order.[16] The Fund's investments, including derivatives, will be consistent with its investment objective and will not be used to enhance leverage (although certain derivatives and other investments may result in leverage). That is, the Fund's investments will not be used to seek performance that is the multiple or inverse multiple (*e.g.,* 2X or −3X) of the Fund's primary broad-based securities benchmark index (as defined in Form N–1A).[17]

Creations and Redemptions of Shares

According to the Registration Statement, the Trust will issue and sell Shares of the Fund only in specified minimum size ''Creation Units'' through the Distributor on a continuous basis at their NAV next determined after receipt of an order in proper form on any Business Day. The NAV of the Fund's Shares will be calculated each Business Day as of the close of regular trading on the Exchange, ordinarily 4:00 p.m. E.T. A Creation Unit will consist of at least 20,000 Shares.

According to the Registration Statement, Shares of the Fund will be purchased and redeemed in Creation Units. Creation Units generally can be purchased or redeemed in-kind in exchange for the Strategy Components included in the Fund's Tracking Basket, together with an amount of cash corresponding to the value of the Representative ETFs and cash and cash equivalents that form the remainder of the Tracking Basket.

Fund Shares may be redeemed only in Creation Units at their NAV next determined after receipt of a redemption request in proper form by the Distributor and only on a Business Day. The redemption proceeds for a Creation Unit will consist of the in-kind redemption basket (''In-Kind Redemption Basket'') and a cash redemption amount (''Cash Redemption Amount''), or an all cash payment (''Cash Value''), in all instances equal to the value of a Creation Unit.

The Cash Redemption Amount will typically include an amount, reflecting the difference, if any, between the NAV of a Creation Unit and the market value of the securities in the In-Kind Redemption Basket (the ''Balancing Amount''). If the NAV per Creation Unit exceeds the market value of the securities in the In-Kind Redemption Basket, the Fund pays the Balancing Amount to the redeeming investor. By contrast, if the NAV per Creation Unit is less than the market value of the securities in the In-Kind Redemption Basket, the redeeming investor pays the Balancing Amount to the Fund.

Each Business Day, prior to the opening of trading on the Exchange, the Fund will publish through the National Securities Clearing Corporation the names and the required number of shares of each security in the In-Kind Redemption Basket to be included in the current redemption proceeds for the Fund (based on information at the end of the previous Business Day) (subject to correction). If applicable, the Fund will also make available on each Business Day, the estimated cash component (''Cash Component'' or Cash Value, effective through and including the previous Business Day, per Creation Unit.

All orders to purchase or redeem Creation Units must be placed with the Distributor by or through an Authorized Participant. Orders to purchase or redeem Creation Units will be accepted until the ''Order Cut-Off Time,'' generally expected to be 4:00 p.m. E.T. for in-kind creation and redemption baskets (''In-Kind Creation and Redemption Baskets''), and 2:00 p.m. E.T. for Custom Baskets (which includes cash value) transactions. Accordingly, In-Kind Creation and Redemption Baskets are expected to be accepted until the close of regular trading on the Exchange on each Business Day, which is usually 4:00 p.m. E.T. On days when the Exchange or bond markets close earlier than normal (such as the day before a holiday), the Order Cut-Off Time is expected to track the Exchange or bond markets closing and be similarly earlier than normal.

Availability of Information

The Fund's website (*www.principalfunds.com*) will include a form of the prospectus for the Fund that may be downloaded. The Fund's website will include on a daily basis, per Share of the Fund, the prior Business Day's NAV, the prior Business Day's ''Closing Price'' or ''Bid/Ask Price,'' [18] and a calculation of the premium/discount of such Closing Price or Bid/Ask Price against such NAV.[19] The Adviser has represented that the Fund's website will also provide: (1) Any other information regarding premiums/discounts as may be required for other ETFs under Rule 6c–11 under the 1940 Act, as amended, and (2) any information regarding the bid/ask spread for the Fund as may be required for other ETFs under Rule 6c–11 under the 1940 Act, as amended. The Fund's website also will disclose the information required under Rule 8.601–E(c)(3).[20] The website and information will be publicly available at no charge.

The identity and quantity of investments in the Tracking Basket for the Fund will be publicly available on the Fund's website before the commencement of trading in Shares on each Business Day. The website will also include information relating to the Tracking Basket Weight Overlap, as discussed above. With respect to each Custom Basket utilized by a series of Active Proxy Portfolio shares, before the opening of trading in the Core Trading Session (as defined in NYSE Arca Rule 7.34–E(a)), the Investment Company shall make publicly available on its website the composition of any Custom Basket transacted on the previous Business Day, except a Custom Basket that differs from the applicable Proxy Portfolio only with respect to cash.

Typical mutual fund-style annual, semi-annual and quarterly disclosures contained in the Fund's Commission

[16] *See* note 14, *supra.*

[17] The Fund's performance is benchmarked against the FTSE NAREIT All Equity REITs Index.

[18] The records relating to Bid/Ask Prices will be retained by the Fund or its service providers. The ''Bid/Ask Price'' is the midpoint of the highest bid and lowest offer based upon the National Best Bid and Offer as of the time of calculation of the Fund's NAV. The ''National Best Bid and Offer'' is the current national best bid and national best offer as disseminated by the Consolidated Quotation System or UTP Plan Securities Information Processor. The ''Closing Price'' of Shares is the official closing price of the Shares on the Exchange.

[19] The ''premium/discount'' refers to the premium or discount to the NAV at the end of a trading day and will be calculated based on the last Bid/Ask Price or the Closing Price on such trading day.

[20] *See* note 4, *supra.* Rule 8.601–E(c)(3) provides that the website for each series of Active Proxy Portfolio Shares shall disclose the information regarding the Proxy Portfolio as provided in the exemptive relief pursuant to the 1940 Act applicable to such series, including the following, to the extent applicable: (i) Ticker symbol; (ii) CUSIP or other identifier; (iii) Description of holding; (iv) Quantity of each security or other asset held; and (v) Percentage weighting of the holding in the portfolio.

filings will be provided on the Fund's website on a current basis.[21] Thus, the Fund will publish the portfolio contents of its Actual Portfolio on a periodic basis, and no less than 60 days after the end of every fiscal quarter.

Investors can also obtain the Fund's SAI, Shareholder Reports, Form N–CSR, N–PORT, and Form N–CEN. The prospectus, SAI, and Shareholder Reports are available free upon request, and those documents and the Form N–CSR, N–PORT, and Form N–CEN may be viewed on-screen or downloaded from the Commission's website. The Exchange also notes that pursuant to the Application, the Fund must comply with Regulation Fair Disclosure, which prohibits selective disclosure of any material non-public information.

Information regarding the market price of Shares and trading volume in Shares, will be continually available on a real-time basis throughout the day on brokers' computer screens and other electronic services. The previous day's closing price and trading volume information for the Shares will be published daily in the financial section of newspapers.

Quotation and last sale information for the Shares and U.S. exchange-traded instruments (excluding futures contracts) will be available via the Consolidated Tape Association (''CTA'') high-speed line, from the exchanges on which such securities trade, or through major market data vendors or subscription services. Quotation and last sale information for futures contracts will be available from the exchanges on which they trade. Intraday price information for all exchange-traded instruments, which include all eligible instruments except cash and cash equivalents, will be available from the exchanges on which they trade, or through major market data vendors or subscription services. Intraday price information for cash equivalents is available through major market data vendors, subscription services and/or pricing services.

Trading Halts

With respect to trading halts, the Exchange may consider all relevant factors in exercising its discretion to halt or suspend trading in the Shares of the Fund.[22] Trading in Shares of the Fund will be halted if the circuit breaker parameters in NYSE Arca Rule 7.12–E have been reached. Trading also may be halted because of market conditions or for reasons that, in the view of the Exchange, make trading in the Shares inadvisable. Trading in the Shares will be subject to NYSE Arca Rule 8.601–E(d)(2)(D), which sets forth circumstances under which Shares of the Fund will be halted.

Specifically, Rule 8.601–E(d)(2)(D) provides that the Exchange may consider all relevant factors in exercising its discretion to halt trading in a series of Active Proxy Portfolio Shares. Trading may be halted because of market conditions or for reasons that, in the view of the Exchange, make trading in the series of Active Proxy Portfolio Shares inadvisable. These may include: (a) The extent to which trading is not occurring in the securities and/or the financial instruments composing the Proxy Portfolio and/or Actual Portfolio; or (b) whether other unusual conditions or circumstances detrimental to the maintenance of a fair and orderly market are present. If the Exchange becomes aware that the NAV, Proxy Portfolio, or Actual Portfolio with respect to a series of Active Proxy Portfolio Shares is not disseminated to all market participants at the same time, the Exchange shall halt trading in such series until such time as the NAV, Proxy Portfolio, or Actual Portfolio is available to all market participants at the same time.

Trading Rules

The Exchange deems the Shares to be equity securities, thus rendering trading in the Shares subject to the Exchange's existing rules governing the trading of equity securities. Shares will trade on the NYSE Arca Marketplace in all trading sessions in accordance with NYSE Arca Rule 7.34–E(a). As provided in NYSE Arca Rule 7.6–E, the minimum price variation (''MPV'') for quoting and entry of orders in equity securities traded on the NYSE Arca Marketplace is $0.01, with the exception of securities that are priced less than $1.00 for which the MPV for order entry is $0.0001.

The Shares will conform to the initial and continued listing criteria under NYSE Arca Rule 8.601–E. The Exchange has appropriate rules to facilitate trading in the Shares during all trading sessions.

A minimum of 100,000 Shares for the Fund will be outstanding at the commencement of trading on the Exchange. In addition, pursuant to Rule 8.601–E(d)(1)(B), the Exchange, prior to commencement of trading in the Shares, will obtain a representation from the Trust that the NAV per Share of the Fund will be calculated daily, that the NAV, Proxy Portfolio, and the Actual Portfolio for the Fund will be made publicly available to all market participants at the same time, and the Trust and any person acting on behalf of the Trust will comply with Regulation Fair Disclosure under the Securities Exchange Act of 1934, including with respect to any Custom Basket.

With respect to Active Proxy Portfolio Shares, all of the Exchange member obligations relating to product description and prospectus delivery requirements will continue to apply in accordance with Exchange rules and federal securities laws, and the Exchange and the Financial Industry Regulatory Authority, Inc. (''FINRA'') will continue to monitor Exchange members for compliance with such requirements.

Surveillance

The Exchange represents that trading in the Shares will be subject to the existing trading surveillances, administered by the Exchange, as well as cross-market surveillances administered by FINRA on behalf of the Exchange, which are designed to detect violations of Exchange rules and applicable federal securities laws.[23] The Exchange represents that these procedures are adequate to properly monitor Exchange trading of the Shares in all trading sessions and to deter and detect violations of Exchange rules and federal securities laws applicable to trading on the Exchange.

The surveillances referred to above generally focus on detecting securities trading outside their normal patterns, which could be indicative of manipulative or other violative activity. When such situations are detected, surveillance analysis follows and investigations are opened, where appropriate, to review the behavior of all relevant parties for all relevant trading violations.

The Exchange or FINRA, on behalf of the Exchange, or both, will communicate as needed regarding trading in the Shares and underlying exchange-traded instruments with other markets and other entities that are members of the ISG, and the Exchange or FINRA, on behalf of the Exchange, or both, may obtain trading information regarding trading such securities and underlying exchange-traded instruments from such markets and other entities. In addition, the Exchange may obtain information regarding trading in such securities and underlying exchange-traded instruments from markets and other entities that are members of ISG or

[21] *See* note 7, *supra.*

[22] *See* NYSE Arca Rule 7.12–E.

[23] FINRA conducts cross-market surveillances on behalf of the Exchange pursuant to a regulatory services agreement. The Exchange is responsible for FINRA's performance under this regulatory services agreement.

with which the Exchange has in place a comprehensive surveillance sharing agreement.[24]

The Adviser will make available daily to FINRA and the Exchange the Actual Portfolio of the Fund, upon request, in order to facilitate the performance of the surveillances referred to above.

In addition, the Exchange also has a general policy prohibiting the distribution of material, non-public information by its employees.

Commentary .03 to NYSE Arca Rule 8.601–E provides that the Exchange will implement and maintain written surveillance procedures for Active Proxy Portfolio Shares. As part of these surveillance procedures, the Investment Company's investment adviser will, upon request by the Exchange or FINRA, on behalf of the Exchange, make available to the Exchange or FINRA the daily Actual Portfolio holdings of each series of Active Proxy Portfolio Shares. The Exchange believes that the ability to access the information on an as needed basis will provide it with sufficient information to perform the necessary regulatory functions associated with listing and trading series of Active Proxy Portfolio Shares on the Exchange, including the ability to monitor compliance with the initial and continued listing requirements as well as the ability to surveil for manipulation of Active Proxy Portfolio Shares.

The Exchange will utilize its existing procedures to monitor issuer compliance with the requirements of Rule 8.601–E. For example, the Exchange will continue to use intraday alerts that will notify Exchange personnel of trading activity throughout the day that may indicate that unusual conditions or circumstances are present that could be detrimental to the maintenance of a fair and orderly market. The Exchange will require from the issuer of a series of Active Proxy Portfolio Shares, upon initial listing and periodically thereafter, a representation that it is in compliance with Rule 8.601–E. The Exchange notes that Commentary .01 to Rule 8.601–E requires an issuer of Active Proxy Portfolio Shares to notify the Exchange of any failure to comply with the continued listing requirements of Rule 8.601–E. In addition, the Exchange will require the issuer to represent that it will notify the Exchange of any failure to comply with the terms of applicable exemptive and no-action relief. As part of its surveillance procedures, the Exchange will rely on the foregoing procedures to become aware of any non-compliance with the requirements of Rule 8.601–E.

With respect to the Fund, all statements and representations made in this filing regarding (a) the description of the portfolio or reference asset, (b) limitations on portfolio holdings or reference assets, or (c) the applicability of Exchange listing rules specified in this rule filing shall constitute continued listing requirements for listing the Shares on the Exchange. The Exchange will obtain a representation from the Trust, prior to commencement of trading in the Shares of the Fund, that it will advise the Exchange of any failure by the Fund to comply with the continued listing requirements, and, pursuant to its obligations under Section 19(g)(1) of the Act, the Exchange will monitor for compliance with the continued listing requirements. If the Fund is not in compliance with the applicable listing requirements, the Exchange will commence delisting procedures under NYSE Arca Rule 5.5–E(m).

2. Statutory Basis

The Exchange believes that the proposed rule change is consistent with Section 6(b) of the Act,[25] in general, and furthers the objectives of Section 6(b)(5) of the Act,[26] in particular, in that it is designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest.[27]

With respect to the proposed listing and trading of Shares of the Fund, the Exchange believes that the proposed rule change is designed to prevent fraudulent and manipulative acts and practices in that the Shares will be listed and traded on the Exchange pursuant to the initial and continued listing criteria in NYSE Arca Rule 8.601–E.

The Fund's holdings will conform to the permissible investments as set forth in the Application and Exemptive Order, and the holdings will be consistent with all requirements in the Application and Exemptive Order.[28]

The Exchange or FINRA, on behalf of the Exchange, or both, will communicate as needed regarding trading in the Shares and underlying exchange-traded instruments with other markets and other entities that are members of the ISG, and the Exchange or FINRA, on behalf of the Exchange, or both, may obtain trading information regarding trading in the Shares and underlying exchange-traded instruments from such markets and other entities. In addition, the Exchange may obtain information regarding trading in the Shares and underlying exchange-traded instruments from markets and other entities that are members of ISG or with which the Exchange has in place a comprehensive surveillance sharing agreement. Any foreign common stocks held by the Fund will be traded on an exchange that is a member of the ISG or with which the Exchange has in place a comprehensive surveillance sharing agreement.

The daily dissemination of the identity and quantity of Tracking Basket component investments, together with the right of Authorized Participants to create and redeem each day at the NAV, will be sufficient for market participants to value and trade Shares in a manner that will not lead to significant deviations between the Shares' Bid/Ask Price and NAV.

The Fund's investments, including derivatives, will be consistent with its investment objective and will not be used to enhance leverage (although certain derivatives and other investments may result in leverage). That is, the Fund's investments will not be used to seek performance that is the multiple or inverse multiple (*e.g.,* 2X or −3X) of the Fund's primary broad-based securities benchmark index (as defined in Form N–1A).[29]

The proposed rule change is designed to promote just and equitable principles of trade and to protect investors and the public interest in that the Exchange will obtain a representation from the Trust that the NAV per Share of the Fund will be calculated daily and that the NAV, Tracking Basket, Actual Portfolio, and/or Custom Basket, as applicable, for the Fund will be made available to all market participants at the same time. Investors can obtain the Fund's SAI, shareholder reports, and its Form N–CSR, Form N–PORT, and Form N–CEN. The Fund's SAI and shareholder reports will be available free upon request from the Fund, and those documents and the Form N–CSR, Form N–PORT, and Form N–CEN may be viewed on-screen or downloaded from the Commission's website.

Commentary .03 to NYSE Arca Rule 8.601–E provides that the Exchange will

[24] For a list of the current members of ISG, *see www.isgportal.org.*

[25] 15 U.S.C. 78f(b).

[26] 15 U.S.C. 78f(b)(5).

[27] The Exchange represents that, for initial and continued listing, the Fund will be in compliance with Rule 10A–3 under the Act, as provided by NYSE Arca Rule 5.3–E.

[28] *See* note 14, *supra.*

[29] The Fund's performance is benchmarked against the FTSE NAREIT All Equity REITs Index.

implement and maintain written surveillance procedures for Active Proxy Portfolio Shares. As part of these surveillance procedures, the Investment Company's investment adviser will, upon request by the Exchange or FINRA, on behalf of the Exchange, make available to the Exchange or FINRA the daily portfolio holdings of each series of Active Proxy Portfolio Shares. The Exchange believes that the ability to access the information on an as needed basis will provide it with sufficient information to perform the necessary regulatory functions associated with listing and trading series of Active Proxy Portfolio Shares on the Exchange, including the ability to monitor compliance with the initial and continued listing requirements as well as the ability to surveil for manipulation of Active Proxy Portfolio Shares. With respect to the Fund, the Adviser will make available daily to FINRA and the Exchange the portfolio holdings of the Fund upon request in order to facilitate the performance of the surveillances referred to above.

The Exchange will utilize its existing procedures to monitor compliance with the requirements of Rule 8.601–E. For example, the Exchange will continue to use intraday alerts that will notify Exchange personnel of trading activity throughout the day that may indicate that unusual conditions or circumstances are present that could be detrimental to the maintenance of a fair and orderly market. The Exchange will require from the Trust, upon initial listing and periodically thereafter, a representation that it is in compliance with Rule 8.601–E. The Exchange notes that Commentary .01 to Rule 8.601–E requires the issuer of the Shares to notify the Exchange of any failure to comply with the continued listing requirements of Rule 8.601–E. In addition, the Exchange will require the issuer to represent that it will notify the Exchange of any failure to comply with the terms of applicable exemptive and no-action relief. The Exchange will rely on the foregoing procedures to become aware of any non-compliance with the requirements of Rule 8.601–E.

In addition, with respect to the Fund, a large amount of information will be publicly available regarding the Fund and the Shares, thereby promoting market transparency.

Quotation and last sale information for the Shares and U.S. exchange-traded instruments (excluding futures contracts) will be available via the CTA high-speed line, from the exchanges on which such securities trade, or through major market data vendors or subscription services. Quotation and last sale information for futures contracts will be available from the exchanges on which they trade. Intraday price information for all exchange-traded instruments, which include all eligible instruments except cash and cash equivalents, will be available from the exchanges on which they trade, or through major market data vendors or subscription services. Intraday price information for cash equivalents is available through major market data vendors, subscription services and/or pricing services.

The website for the Fund will include a form of the prospectus that may be downloaded, and additional data relating to NAV and other applicable quantitative information, updated on a daily basis. Trading in Shares of the Fund will be halted if the circuit breaker parameters in NYSE Arca Rule 7.12–E have been reached or because of market conditions or for reasons that, in the view of the Exchange, make trading in the Shares inadvisable. Trading in the Shares will be subject to NYSE Arca Rule 8.601–E(d)(2)(D), which sets forth circumstances under which Shares of the Fund will be halted. In addition, as noted above, investors will have ready access to the Tracking Basket and quotation and last sale information for the Shares. The identity and quantity of investments in the Tracking Basket will be publicly available on the Fund's website before the commencement of trading in Shares on each Business Day. The Shares will conform to the initial and continued listing criteria under Rule 8.601–E.[30]

The Fund's holdings will conform to the permissible investments as set forth in the Application and Exemptive Order, and the holdings will be consistent with all requirements in the Application and Exemptive Order.[31] Any foreign common stocks held by the Fund will be traded on an exchange that is a member of the ISG or with which the Exchange has in place a comprehensive surveillance sharing agreement.

The proposed rule change is designed to perfect the mechanism of a free and open market and, in general, to protect investors and the public interest in that it will facilitate the listing and trading of an additional type of actively-managed exchange-traded product that will enhance competition among market participants, to the benefit of investors and the marketplace. The Exchange will obtain a representation from the Adviser, prior to commencement of trading in the Shares of the Fund, that it will advise the Exchange of any failure by the Fund to comply with the continued listing requirements, and, pursuant to its obligations under Section 19(g)(1) of the Act, the Exchange will monitor for compliance with the continued listing requirements. If the Fund is not in compliance with the applicable listing requirements, the Exchange will commence delisting procedures under NYSE Arca Rule 5.5–E(m).

As noted above, the Exchange has in place surveillance procedures relating to trading in the Shares and may obtain information via ISG from other exchanges that are members of ISG or with which the Exchange has entered into a comprehensive surveillance sharing agreement. In addition, as noted above, investors will have ready access to information regarding quotation and last sale information for the Shares.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. The Exchange believes the proposed rule change would permit listing and trading of an additional actively-managed ETF that has characteristics different from existing actively-managed and index ETFs and would introduce additional competition among various ETF products to the benefit of investors.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

No written comments were solicited or received with respect to the proposed rule change.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Because the foregoing proposed rule change does not: (i) Significantly affect the protection of investors or the public interest; (ii) impose any significant burden on competition; and (iii) become operative for 30 days from the date on which it was filed, or such shorter time as the Commission may designate, it has become effective pursuant to Section 19(b)(3)(A) of the Act[32] and Rule 19b–4(f)(6) thereunder.[33]

[30] *See* note 4, *supra.*

[31] *See* note 14, *supra.*

[32] 15 U.S.C. 78s(b)(3)(A).

[33] 17 CFR 240.19b–4(f)(6). In addition, Rule 19b–4(f)(6)(iii) requires a self-regulatory organization to give the Commission written notice of its intent to file the proposed rule change, along with a brief description and text of the proposed rule change, at least five business days prior to the date of filing

A proposed rule change filed pursuant to Rule 19b–4(f)(6) under the Act normally does not become operative for 30 days after the date of its filing. However, Rule 19b–4(f)(6)(iii) [34] permits the Commission to designate a shorter time if such action is consistent with the protection of investors and the public interest. The Exchange has requested that the Commission waive the 30-day operative delay so that the proposal may become operative immediately upon filing. The Exchange notes that the Commission has approved and noticed for immediate effectiveness proposed rule changes to permit listing and trading on the Exchange of Active Proxy Portfolio Shares similar to the Fund.[35] The proposed listing rule for the Fund raises no novel legal or regulatory issues. Thus, the Commission believes that waiver of the 30-day operative delay is consistent with the protection of investors and the public interest. Accordingly, the Commission hereby waives the 30-day operative delay and designates the proposed rule change operative upon filing.[36]

At any time within 60 days of the filing of such proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR–NYSEArca–2022–28 on the subject line.

Paper Comments

- Send paper comments in triplicate to: Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549–1090.

All submissions should refer to File Number SR–NYSEArca–2022–28. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's internet website (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street NE, Washington, DC 20549 on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change. Persons submitting comments are cautioned that we do not redact or edit personal identifying information from comment submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–NYSEArca–2022–28 and should be submitted on or before June 9, 2022.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[37]

J. Matthew DeLesDernier,

Assistant Secretary.

[FR Doc. 2022–10734 Filed 5–18–22; 8:45 am]

BILLING CODE 8011–01–P

of the proposed rule change, or such shorter time as designated by the Commission. The Exchange has satisfied this requirement.

[34] 17 CFR 240.19b–4(f)(6)(iii).

[35] *See supra* notes 9 and 10.

[36] For purposes only of waiving the 30-day operative delay, the Commission has also considered the proposed rule's impact on efficiency, competition, and capital formation. *See* 15 U.S.C. 78c(f).

[37] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–94910; File No. SR–OCC–2022–003]

Self-Regulatory Organizations; The Options Clearing Corporation; Order Granting Approval of Proposed Rule Change by The Options Clearing Corporation Concerning Cash-Settled FLEX ETF Options

May 13, 2022.

I. Introduction

On March 16, 2022, the Options Clearing Corporation (''OCC'') filed with the Securities and Exchange Commission (''Commission'') the proposed rule change SR–OCC–2022–003 (''Proposed Rule Change'') pursuant to Section 19(b) of the Securities Exchange Act of 1934 (''Exchange Act'') [1] and Rule 19b–4 [2] thereunder to amend various provisions of the OCC By-Laws and Rules to accommodate the issuance, clearance and settlement of flexibly structured options on exchange-traded funds (''fund shares'' or ''ETFs'') that are cash-settled (''Cash-Settled Flex ETF Options'').[3] The Proposed Rule Change was published for public comment in the **Federal Register** on April 4, 2022.[4] The Commission received no comments regarding the substance of the Proposed Rule Change.[5] This order approves the Proposed Rule Change.

II. Background [6]

The NYSE American Exchange (''NYSE American'') received approval to list Cash-Settled Flex ETF Options as a variation of the currently-traded, physically-settled equity flex options.[7] Cash-Settled Flex ETF Options generally have the same characteristics as physically-settled equity flex options, except Cash-Settled Flex ETF Options are cash-settled, not physically-settled, with a settlement amount based on the difference between the price of the underlying security on the date of exercise and the strike price of the exercised option.

OCC submitted the Proposed Rule Change because its rules do not allow for the settlement of equity options in cash, except in two specific circumstances: (i) The underlying security undergoes a corporate action resulting in the conversion of the option deliverable to only cash,[8] or (ii) the underlying security is otherwise

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] *See* Notice of Filing *infra* note 4, 87 FR at 19566.

[4] Securities Exchange Act Release No. 94542 (Mar. 29, 2022), 87 FR 19566 (Apr. 4, 2022) (File No. SR–OCC–2022–003) (''Notice of Filing'').

[5] The Commission received one comment letter that addressed market conduct generally; however, additional discussion is unnecessary because the comment letter does not bear on the purpose or legal basis of the Proposed Rule Change. The comment on the Proposed Rule Change is available at *https://www.sec.gov/comments/sr-occ-2022-003/srocc2022003.htm.*

[6] Capitalized terms used but not defined herein have the meanings specified in OCC's Rules and By-Laws, available at *https://www.theocc.com/about/publications/bylaws.jsp.*

[7] Securities Exchange Act Release No. 88131 (Feb. 5, 2020), 85 FR 7806 (Feb. 11, 2020) (File No. SR–NYSEAmer–2019–038).

[8] *See* OCC By-Laws Article VI, Section 11A, Interpretations and Policies .05.

unavailable for delivery.[9] Within the By-Laws and Rules, certain provisions apply to physically-settled options and certain provisions apply to cash-settled options. To accommodate the Cash-Settled Flex ETF Option product, OCC proposes to revise its By-Laws and Rules to do the following: (i) Make distinctions between Cash-Settled Flex ETF Options and physically-settled options on the same underlying security; (ii) clarify that certain provisions that currently apply only to physically-settled options will also apply to Cash-Settled Flex ETF Options; and (iii) exclude application of certain provisions to Cash-Settled Flex ETF Options that otherwise would apply to all cash-settled options.

OCC proposes the following modifications to its By-Laws to distinguish physically-settled flexibly structured options from Cash-Settled Flex ETF Options:

- In Article I (Definitions), Section 1(F)(8), OCC proposes to revise the definition of ''Flexibly Structured Option'' to (i) allow such options to be physically-settled or cash-settled depending on the listing exchange's rules, and (ii) state that Cash-Settled Flex ETF Options would not be fungible with physically-settled flexibly structured options and would not be consolidated with standard options listed after a flexibly-structured option with the same strike, expiration date, and underlying security, as is the case with a physically-settled flexibly structured option that is fungible.
- In Article I (Definitions), Section 1(S)(12), OCC proposes to revise the definition of ''Series'' to state that the options of the same series have the same settlement method.
- In Article I (Definitions), Section 1(V)(1), OCC proposes to revise the definition of ''Variable Terms'' to recognize that in addition to the variable terms itemized in the definition, flexibly-structured options on fund shares may be either physically- or cash-settled.
- In Article XVII (Index Options and Certain Other Cash-Settled Options), Introduction, OCC proposes to revise the introduction to add flexibly-structured options that cash-settle to the list of options for which Article XVII of the By-Laws applies.
- In Article XVII (Index Options and Certain Other Cash-Settled Options), Section 1(C)(4), OCC proposes to revise the definition of ''Class of Options'' to state that flexibly-structured options that cash-settle shall constitute a different class of options from physically-settled options on the same underlying interest.

OCC also proposes the following modifications to its By-Laws and Rules to require the application of certain provisions to Cash-Settled Flex ETF Options that otherwise would apply only to physically-settled options, and to exclude Cash-Settled Flex ETF Options from certain provisions that otherwise would apply to all cash-settled options:

- In Article I (Definitions), Section 1(C)(15), OCC proposes to revise the definition of ''Clearing Member'' to state that a Clearing Member is not an ''Index Clearing Member'' solely by virtue of being approved to clear Cash-Settled Flex ETF Options.
- In Article I (Definitions), Section 1(R)(5), OCC currently defines ''Reporting Authority'' when used with respect of any cash-settled contract to mean the source that OCC uses as the official source for the current price or value of the underlying interest. OCC proposes to revise this definition to state that the reporting for Cash-Settled Flex ETF Options will be the same source used by OCC for physically-settled equity options with the same underlying interest. According to OCC, this change is designed to facilitate the use of the same closing price for automatic exercise determinations on both physically- and cash-settled options with the same underlying security, thereby ensuring that expiration processing for a Cash-Settled Flex ETF Option will align with expiration processing for a physically-settled product on the same underlying security.[10]
- In Article XVII (Index Options and Certain Other Cash-Settled Options), Section 1(R)(3), defines ''Reporting Authority'' specifically in the context of index options and certain other cash-settled options. OCC proposes to revise this definition to explicitly exclude Cash-Settled Flex ETF Options and to state that the reporting authority for Cash-Settled Flex ETF Options is the same source used by OCC for physically-settled equity options.
- Article XVII (Index Options and Certain Other Cash-Settled Options), Sections 3(a) and 3(h) currently state that the adjustment provisions of Article VI, Section 11A do not apply to cash-settled equity contracts. To ensure that adjustment decisions for Cash-Settled Flex ETF Options and physically-settled options on the same underlying are the same, OCC is proposing to add language to this section to state that Article VI, Section 11A of the By-Laws applies to Cash-Settled Flex ETF Options.
- Article XVII (Index Options and Certain Other Cash-Settled Options), Section 4(a)(2) states the method by which the exercise settlement amount for exercised contracts of an affected series is fixed for index options and certain other cash-settled options. OCC proposes to amend this provision to state that the exercise settlement amount for Cash-Settled Flex ETF Options shall be determined by using the last reported sale price for the underlying security during regular trading hours, which is consistent with the expiration closing price determination for physically-settled options under OCC's Rule 805(j).
- Chapter VI (Margins), Rule 610 (Deposits in Lieu of Margin) allows Clearing Members to use specific deposits of the underlying security as collateral to cover short customer positions on call options. Specific deposits fully cover a short call position because the Clearing Member pledges the security, in the appropriate amount, that must be delivered if the call option writer is assigned. OCC proposes to modify Rule 610 to disallow specific deposits for Cash-Settled Flex ETF Options because such options do not require delivery of the underlying security upon assignment.[11]
- Chapter VIII (Exercise and Assignment), Rule 805(j) (Expiration Exercise Procedure) states that the ''closing price'' used for any underlying security in Rule 805 is the last reported sale price for the underlying security during regular trading hours (as determined by OCC) on the trading day immediately preceding the expiration date, or on the expiration date if the expiration date is a trading day, on such national securities exchange or other domestic securities market as OCC shall determine. OCC proposes to revise Rule 805(j) to state explicitly that the same definition of ''closing price'' applies to underlying securities for Cash-Settled Flex ETF Options.
- Chapter XVIII (Index Options and Certain Other Cash Settled Options), Rule 1804(a) (Expiration Exercise Procedure for Cash-Settled Options) generally provides for the expiration exercise procedure for cash-settled options. OCC is proposing to add an interpretation and policy to Rule 1804 to clarify that, notwithstanding its general application to cash-settled options, the determination of the closing price for an underlying security of a flexibly-structured cash-settled equity

[9] *See* OCC By-Laws Article VI, Section 19(c).

[10] *See* Notice of Filing, *supra* note 4, at 19567.

[11] OCC would, however, allow escrow deposits to be made for Cash-Settled Flex ETF Options.

option is the same as the determination of the closing price per Rule 805(j).

• In Chapter XVIII (Index Options and Certain Other Cash Settled Options), Rule 1804 (Expiration Exercise Procedure for Cash Settled Options), OCC proposes to revise Rule 1804(a) and Rule 1804(b) to state that Cash-Settled Flex ETF Options will be deemed exercised on expiration if the strike price is $0.01 or more in-the-money in accordance with the provisions of Rule 805(d). The change would set the threshold for automatic exercise of Cash-Settled Flex ETF Options at the threshold established for physically-settled equity options rather than the $1.00 per contract threshold established in Rule 1804.

• In Chapter VIII (Exercise and Assignment), Rule 805 (Expiration Exercise Procedure), Interpretation and Policy .03 states that the exercise procedures set forth in Rule 805 apply to flexibly-structured equity options. OCC proposes to add language excepting from application of Rule 805(d) American-style Cash-Settled Flex ETF Options subject to delayed settlement for any deliverable component. Similarly, in Chapter XVIII (Index Options and Certain Other Cash Settled Options), Rule 1804 (Expiration Exercise Procedure for Cash Settled Options), OCC is proposing to add language to Rule 1804(a) to state explicitly that Rule 805(d) does not apply to American-style Cash-Settled Flex ETF Options that have a deliverable component subject to delayed settlement. OCC states that the changes are necessary because any such option with a pended delivery component on its expiration date should not be automatically exercised, as the total value of the option deliverable can only be estimated.[12] OCC anticipates this outcome would be rare, and likely the result of a contract adjustment that involves cash in lieu of fractional shares that have yet to be finalized on an option's expiration date.

III. Discussion and Commission Findings

Section 19(b)(2)(C) of the Exchange Act directs the Commission to approve a proposed rule change of a self-regulatory organization if it finds that such proposed rule change is consistent with the requirements of the Exchange Act and the rules and regulations thereunder applicable to such organization.[13] After carefully considering the Proposed Rule Change, the Commission finds that the proposal is consistent with the requirements of the Exchange Act and the rules and regulations thereunder applicable to OCC. More specifically, the Commission finds that the Proposed Rule Change is consistent with Section 17A(b)(3)(F) of the Exchange Act[14] as described in detail below.

Section 17A(b)(3)(F) of the Exchange Act requires, among other things, that a clearing agency's rules are designed to promote the prompt and accurate clearance and settlement of securities transactions and, to the extent applicable, derivative agreements, contracts, and transactions.[15] Based on its review of the record, and for the reasons described below, the Commission believes that the proposed changes to its By-Laws and Rules are reasonably designed to be consistent with the prompt and accurate clearance and settlement of securities transactions and derivative agreements, contracts, and transactions for which OCC is responsible.

The Proposed Rule Change would amend the By-Laws and Rules to maintain consistency between OCC's By-Laws and Rules and NYSE American's rules as applied to the clearance and settlement of Cash-Settled Flex ETF Options. To maintain consistency with NYSE American's rules, the Proposed Rule Change ensures that OCC is able to provide two different types of settlement methods for flexibly-structured ETF options, in order to accommodate the clearance and settlement of Cash-Settled Flex ETF Options in addition to physically-settled options. Maintaining this congruence between OCC and NYSE American's rules provides assurance to market participants that the two self-regulatory organizations are treating the clearance and settlement processes of the Cash-Settled Flex ETF Option product in the same manner. This is consistent with facilitating the prompt and accurate clearance and settlement of these products.

OCC proposes numerous By-Law and Rule changes to distinguish between physically-settled flexibly structured options and Cash-Settled Flex ETF Options. The Commission believes that these changes will make clear to market participants that, despite certain similarities, these two products are entirely distinct and should be treated as such for clearance and settlement purposes. In particular, the Proposed Rule Change states that Cash-Settled Flex ETF Options are not fungible with physically-settled flexibly structured options, and that the two products are not to be consolidated even if they have the same strike, expiration date, and underlying security. As such, the proposed changes provide unambiguous requirements for clearing and settling such transactions, and the Commission believes that the resulting clarity may facilitate prompt and accurate clearance and settlement by avoiding confusion or errors.

Additionally, OCC proposes numerous By-Law and Rule changes to state that certain provisions that currently apply only to physically-settled options will also apply to Cash-Settled Flex ETF Options, while other provisions that currently apply to all cash-settled options will not apply to Cash-Settled Flex ETF Options. The proposed changes are designed to treat the Cash-Settled Flex ETF Options like all other Flex ETF options instead of as cash-settled options generally, given the difference in the form of settlement and the lack of fungibility. Accordingly, the changes to OCC's By-Laws and Rules facilitate the prompt and accurate clearance and settlement of these transactions.

The Commission believes, therefore, that the proposal to revise OCC's By-Laws and Rules to accommodate the clearance and settlement of Cash-Settled Flex ETF Options is consistent with the requirements of Section 17A(b)(3)(F) under the Exchange Act.[16]

IV. Conclusion

On the basis of the foregoing, the Commission finds that the Proposed Rule Change is consistent with the requirements of the Exchange Act, and in particular, the requirements of Section 17A of the Exchange Act[17] and the rules and regulations thereunder.

It is therefore ordered, pursuant to Section 19(b)(2) of the Exchange Act,[18] that the Proposed Rule Change (SR–OCC–2022–003) be, and hereby is, approved.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[19]

J. Matthew DeLesDernier,

Assistant Secretary.

[FR Doc. 2022–10735 Filed 5–18–22; 8:45 am]

BILLING CODE 8011–01–P

[12] *See* Notice of Filing, *supra* note 4, at 19568.

[13] 15 U.S.C. 78s(b)(2)(C).

[14] 15 U.S.C. 78q–1(b)(3)(F).

[15] *Id.*

[16] 15 U.S.C. 78q–1(b)(3)(F).

[17] In approving this Proposed Rule Change, the Commission has considered the proposed rules' impact on efficiency, competition, and capital formation. *See* 15 U.S.C. 78c(f).

[18] 15 U.S.C. 78s(b)(2).

[19] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[SEC File No. 270–049, OMB Control No. 3235–0070]

Proposed Collection; Comment Request

Upon Written Request Copies Available From: Securities and Exchange Commission, Office of FOIA Services, 100 F Street NE, Washington, DC 20549–2736

Extension:
Form 10–Q

Notice is hereby given that, pursuant to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*), the Securities and Exchange Commission (''Commission'') is soliciting comments on the collection of information summarized below. The Commission plans to submit this existing collection of information to the office of Management and Budget for approval of extensions on the following:

Form 10–Q (17 CFR 249.308a) is filed by issuers of securities to satisfy their quarterly reporting obligations pursuant to Section 13 or 15(d) of the Exchange Act (''Exchange Act'') (15 U.S.C. 78m or 78o(d)). The information provided by Form 10–Q is intended to ensure the adequacy of information available to investors about an issuer. Form 10–Q takes approximately 187.43 hours per response to prepare and is filed by approximately 22,925 respondents. We estimated that 75% of the approximately 187.43 hours per response (138.81 hours) is prepared by the company for an annual reporting burden of 3,182,333 hours (138.81 hours per response × 22,925 responses).

Written comments are invited on: (a) Whether this proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (b) the accuracy of the agency's estimate of the burden imposed by the collection of information; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology. Consideration will be given to comments and suggestions submitted in writing within 60 days of this publication by July 18, 2022.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid control number.

Please direct your written comment to David Bottom, Director/Chief Information Officer, Securities and Exchange Commission, c/o John Pezzullo, 100 F Street NE, Washington, DC 20549 or send an email to: *PRA_Mailbox@sec.gov.*

Dated: May 13, 2022.

J. Matthew DeLesDernier,

Assistant Secretary.

[FR Doc. 2022–10724 Filed 5–18–22; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–94913; File No. SR–CBOE–2022–023]

Self-Regulatory Organizations; Cboe Exchange, Inc.; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Amend Its Fees Schedule Relating to the Sale of Open-Close Volume Data

May 13, 2022.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the ''Act''),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on May 2, 2022, Cboe Exchange, Inc. (the ''Exchange'' or ''Cboe Options'') filed with the Securities and Exchange Commission (the ''Commission'') the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the Exchange. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

Cboe Exchange, Inc. (the ''Exchange'' or ''Cboe Options'') proposes to amend its Fees Schedule relating to the sale of Open-Close volume data. The text of the proposed rule change is provided in Exhibit 5.

The text of the proposed rule change is also available on the Exchange's website (*http://www.cboe.com/AboutCBOE/CBOELegalRegulatoryHome.aspx*), at the Exchange's Office of the Secretary, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to amend its Fees Schedule to (i) offer a free trial during the months of May, June and July 2022 for an ad-hoc request of three (3) historical months of Intraday Open-Close historical data to all Cboe Options Trading Permit Holders (''TPHs'') and non-TPHs who have never before subscribed to the Intraday Open-Close historical files, (ii) allow Qualifying Academic Purchasers to purchase historical open-close data for each additional month over one year at a prorated rate based on the $1,500 per year rate, and (iii) adopt fees for the external distribution of products derived from Open-Close Data, effective May 2, 2022.

By way of background, the Exchange currently offers End-of-Day (''EOD'') and Intraday Open-Close Data (collectively, ''Open-Close Data''). EOD Open-Close Data is an end-of-day volume summary of trading activity on the Exchange at the option level by origin (customer, professional customer, broker-dealer, and market maker), side of the market (buy or sell), price, and transaction type (opening or closing). The customer and professional customer volume is further broken down into trade size buckets (less than 100 contracts, 100–199 contracts, greater than 199 contracts). The Open-Close Data is proprietary Cboe Options trade data and does not include trade data from any other exchange. It is also a historical data product and not a real-time data feed. The Exchange also offers Intraday Open-Close Data, which provides similar information to that of Open-Close Data but is produced and updated every 10 minutes during the trading day. Data is captured in ''snapshots'' taken every 10 minutes throughout the trading day and is available to subscribers within five minutes of the conclusion of each 10-minute period.[3] The Intraday Open-

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] For example, subscribers to the intraday product will receive the first calculation of intraday data by approximately 9:42 a.m. ET, which represents data captured from 9:30 a.m. to 9:40 a.m. Subscribers

Close Data provides a volume summary of trading activity on the Exchange at the option level by origin (customer, professional customer, broker-dealer, and market maker), side of the market (buy or sell), and transaction type (opening or closing). The customer and professional customer volume are further broken down into trade size buckets (less than 100 contracts, 100–199 contracts, greater than 199 contracts). The Intraday Open-Close Data is also proprietary Cboe Options trade data and does not include trade data from any other exchange.

Cboe LiveVol, LLC (''LiveVol''), a wholly owned subsidiary of the Exchange's parent company, Cboe Global Markets, Inc., makes the Open-Close Data available for purchase to TPHs and non-TPHs on the LiveVol DataShop website (*datashop.cboe.com*). Customers may currently purchase Open-Close Data on a subscription basis (monthly or annually) or by ad hoc request for a specified month (*e.g.,* request for Intraday Open-Close Data for month of January 2022).

Open-Close Data is subject to direct competition from similar end-of-day and intraday options trading summaries offered by several other options exchanges.[4] All of these exchanges offer essentially the same end-of-day and intraday options trading summary information.

Free Trial

The Exchange first seeks to adopt a free trial for historical ad hoc requests for Intraday Open-Close Data for new purchasers. Currently, ad hoc requests for historical Intraday Open-Close Data are available to all customers at the same price and in the same manner. The current charge for this historical Intraday Open-Close Data covering all of the Exchange's securities (Equities, Indexes & ETF's) is $1,000 per month. The Exchange now proposes to adopt a free trial available during the months of May, June and July 2022 to provide a total up to three (3) historical months of Intraday Open-Close Data to any TPH or non-TPH that has not previously subscribed to this offering.[5] The Exchange notes that it previously offered this free trial period last year for the months of June and July 2021.[6] The Exchange believes bringing back the proposed trial will again serve as an incentive for new users who have never purchased Intraday Open-Close historical data to start purchasing Intraday Open-Close historical data. Particularly, the Exchange believes it will give potential subscribers the ability to use and test the data offering before signing up for additional months. The Exchange also notes another exchange offers a free trial for new subscribers of a similar data product.[7] Lastly, the purchase of Intraday Open-Close historical data is discretionary and not compulsory.

Academic Discount

The Exchange next proposes to amend its current academic discount for ad-hoc requests of historical months of EOD Open-Close Data. Currently, the Exchange charges qualifying academic purchasers $1,500 per year for the first year (instead of $7,200 for each of the first four years of data and $3,600 for data the fifth year and on) for historical EOD Open-Close Data and $3,000 per year for the first year (instead of $12,000 per year) for historical Intraday Open-Close Data. With respect to historical Intraday Open-Close Data, additional months after the first year may be purchased separately and will be assessed $250 per month (which is the prorated amount based on the yearly $3,000 rate). Although the Exchange permits additional months after the first year to be purchased separately for Intraday Open-Close Data, EOD Open-Close Data may only be purchased by year. The Exchange proposes to adopt similar flexibility with respect to EOD Open-Close Data and allow qualifying academic purchasers to be charged $1,500 per year for the first year and $125 per month for each additional month thereafter (which is the prorated monthly amount based on the yearly $1,500 rate). The Exchange notes that its affiliated exchanges similarly allow qualifying academic purchasers to purchase additional months after the first year separately for both Intraday and EOD Open-Close.[8] The Exchange is not proposing any other changes to the Academic Discount program.

External Distribution of Derived Data

The external distribution of Open-Close Data or any product derived from such data is not currently permitted. The Exchange proposes to remove that prohibition and allow vendors to distribute ''Derived Data'' based on Open-Close Data. ''Derived Data'' is pricing data or other data that (i) is created in whole or in part from Exchange Data, (ii) is not an index or financial product, and (iii) cannot be readily reverse-engineered to recreate Exchange Data or used to create other data that is a reasonable facsimile or substitute for Exchange Data.[9] Derived Data may be created by Distributors for a number of different purposes, as determined by the Distributor. The Exchange believes allowing market data vendors to identify, develop, and sell derived market data products, enables them to harness the power of the competitive marketplace to promote innovation.

The Exchange proposes to adopt a fee of $5,000 per month to allow the unlimited external distribution of Derived Data from Open-Close Data.[10] The fee charged to distribute the Derived Data will be constrained by potential competition, as any exchange with an options trading product would be able to submit an immediately-effective fee filing to allow redistribution, most likely without needing to modify the underlying product in any way, thereby subjecting the proposed fee to market competition. Moreover, the Exchange notes at least one other Exchange currently allows, and charges for, external distribution of derived data based on similar open-close data.[11]

will receive the next update at 9:52 a.m., representing the data previously provided together with data captured from 9:40 a.m. through 9:50 a.m., and so forth. Each update will represent the aggregate data captured from the current ''snapshot'' and all previous ''snapshots.''

[4] These substitute products are: Nasdaq PHLX Options Trade Outline, Nasdaq Options Trade Outline, ISE Trade Profile, GEMX Trade Profile data; open-close data from C2, BZX, and EDGX; and Open Close Reports from MIAX Options, Pearl, and Emerald.

[5] For example, if a TPH or non-TPH that has never made an ad-hoc request for a specified month of Intraday Open-Close historical data wishes to purchase Intraday Open-Close Data for the months of January, February and March 2022 during the month of June 2022, the historical files for those months would be provided free of charge. If a new user wishes to purchase Intraday Open-Close historical data for the months of January, February, March and April 2022 during the month of June 2022, then the data for January, February and March 2022 would be provided free of charge, and the new user would be charged $1,000 for the April 2022 historical file.

[6] The Exchange notes it inadvertently never eliminated the obsolete rule text language from the Fees Schedule. The Exchange proposes to update the text to conform to the proposed fee change.

[7] *See* Nasdaq ISE, Options 7 Pricing Schedule, Section 10A., Nasdaq ISE Open/Close Trade Profile End of Day.

[8] *See* Cboe C2 Options Exchange Fees Schedule, Open-Close Data; Cboe EDGX options Exchange Fees Schedule, Open-Close Data; and Cboe BZX Options Exchange Fees Schedule, Open-Close Data.

[9] ''Derived Data'' is not currently a defined term in the Cboe Fees Schedule. The Exchange proposes to add the definition to the Notes section of the LiveVol Fees table for clarity.

[10] The External Distribution Fee for Derived Open-Close Data will be in addition to fees for the underlying data. For example, external distribution of data derived from the Intraday product will be $2,000 per month (the monthly subscription fee), plus the proposed $5,000 per month External Distribution fee.

[11] *See* Nasdaq PHLX, Options 7 Pricing Schedule, Photo Historical Data, External Distribution.

2. Statutory Basis

The Exchange believes the proposed rule change is consistent with the Securities Exchange Act of 1934 (the ''Act'') and the rules and regulations thereunder applicable to the Exchange and, in particular, the requirements of Section 6(b) of the Act.[12] Specifically, the Exchange believes the proposed rule change is consistent with the Section 6(b)(5) [13] requirements that the rules of an exchange be designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest. Additionally, the Exchange believes the proposed rule change is consistent with the Section 6(b)(5) [14] requirement that the rules of an exchange not be designed to permit unfair discrimination between customers, issuers, brokers, or dealers.

In adopting Regulation NMS, the Commission granted self-regulatory organizations (''SROs'') and broker-dealers increased authority and flexibility to offer new and unique market data to the public. It was believed that this authority would expand the amount of data available to consumers, and also spur innovation and competition for the provision of market data. The Exchange believes the proposed fee changes will further broaden the availability of U.S. option market data to investors consistent with the principles of Regulation NMS. Open-Close Data is designed to help investors understand underlying market trends to improve the quality of investment decisions. Indeed, subscribers to the data may be able to enhance their ability to analyze option trade and volume data and create and test trading models and analytical strategies. The Exchange believes Open-Close Data provides a valuable tool that subscribers can use to gain comprehensive insight into the trading activity in a particular series, but also emphasizes such data is not necessary for trading and as noted above, is entirely optional. Moreover, several other exchanges offer a similar data product which offer same type of data content through end-of-day or intraday reports.[15]

The Exchange also operates in a highly competitive environment. Indeed, there are currently 16 registered options exchanges that trade options. Based on publicly available information, no single options exchange has more than 16% of the market share.[16] The Commission has repeatedly expressed its preference for competition over regulatory intervention in determining prices, products, and services in the securities markets. Particularly, in Regulation NMS, the Commission highlighted the importance of market forces in determining prices and SRO revenues and, also, recognized that current regulation of the market system ''has been remarkably successful in promoting market competition in its broader forms that are most important to investors and listed companies.'' [17] Making similar data products available to market participants fosters competition in the marketplace, and constrains the ability of exchanges to charge supracompetitive [sic] fees. In the event that a market participant views one exchange's data product as more or less attractive than the competition they can and do switch between similar products. The proposed fees are a result of the competitive environment, as the Exchange seeks to adopt fees to attract purchasers of historical Intraday Open-Close Data, Academic purchasers of historical EOD Open-Close Data, as well as attract Distributors for derived data of its Open-Close Data.

The Exchange believes that the proposed free trial for any TPH or non-TPH who has not previously purchased Intraday Open-Close historical data is reasonable because such users would not be subject to fees for up to 3 months' worth of Intraday Open-Close historical data. The Exchange believes the proposed free trial is also reasonable as it will give potential subscribers the ability to use and test the Intraday Open-Close historical data prior to purchasing additional months and will therefore encourage and promote new users to purchase the Intraday Open-Close historical data. The Exchange believes that the proposed discount is equitable and not unfairly discriminatory because it will apply equally to all TPHs and non-TPHs who have not previously purchased Intraday Open-Close historical data. Also as noted above, another exchange offers a free trial to new users for a similar data product [18] and the Exchange itself previously offered a similar free trial.[19] Lastly, the purchase of this data product is discretionary and not compulsory.

The Exchange believes that the proposed change to the discount for qualifying academic purchasers of the ad hoc historical EOD Open-Close Data is also reasonable as it merely provides further flexibility to purchase additional months separately after the first year purchased at a prorated rate of the yearly rate. As noted above, qualifying academic purchasers can already purchase additional months separately for Intraday Open-Close Data. Additionally, the Exchange's affiliate exchanges also provide this flexibility for both their respective EOD and Intraday Open-Close Data products.[20]

Next, the Exchange notes that the proposal to allow the external distribution of derived data is subject to competition as discussed above, and also introduces a new category of market participant for Open-Close Data—market data vendors—into the equation. Currently, Open-Close data is not available for redistribution, in either native form or through Derived Data. This proposal will create a new market for the sale of Derived Data from the Exchange's Open-Close Data products to the general investing public. This is itself evidence of the competitive environment for Open-Close and its substitutes, as it is exactly the type of innovation one would expect to see in a competitive market. It will also spur further innovation by challenging market data vendors to create new and innovative Derived Data products. Any exchange that wishes to allow distribution of a Derived Data product based on options trading information would be able to do so with an immediately effective fee filing similar to this proposal, most likely without requiring any technological enhancement to the underlying product. Indeed, as discussed, another Exchange already allows, and charges for, external distribution of derived data based on similar open-close data.[21]

[12] 15 U.S.C. 78f(b).

[13] 15 U.S.C. 78f(b)(5).

[14] *Id.*

[15] *See* supra note 4.

[16] *See* Cboe Global Markets U.S. Options Market Month-to-Date Volume Summary (April 29, 2022), available at *https://markets.cboe.com/us/options/market_statistics/.*

[17] *See* Securities Exchange Act Release No. 51808 (June 9, 2005), 70 FR 37496, 37499 (June 29, 2005) (''Regulation NMS Adopting Release'').

[18] *See* Nasdaq ISE, Options 7 Pricing Schedule, Section 10A., Nasdaq ISE Open/Close Trade Profile End of Day.

[19] *See* Securities Exchange Act Release No. 92169 (June 14, 2021), 86 FR 33446 (June 24, 2021) (SR–CBOE–2021–038).

[20] *See* Cboe C2 Options Exchange Fees Schedule, Open-Close Data; Cboe EDGX options Exchange Fees Schedule, Open-Close Data; and Cboe BZX Options Exchange Fees Schedule, Open-Close Data.

[21] *See* Nasdaq PHLX, Options 7 Pricing Schedule, Photo Historical Data, External Distribution.

Allowing the redistribution of Derived Data, but not the underlying information, to the general investing public is an equitable allocation of reasonable dues, fees and other charges because it is the most efficient mechanism for widespread delivery of market sentiment information. The proposal is designed to promote the dissemination of a variety of analytical insights—previously available only to investment banks, market makers, asset managers and other buy-side investors—to the general investing public by creating an incentive for market data vendors to identify, develop, and sell such indicators. Ordinarily, neither exchanges nor vendors allow redistribution of analytic products—such products are typically designed solely for the use of direct customers, not for redistribution to the customers of customers in the manner of a data feed. Allowing the redistribution of Derived Data provides an incentive for vendors to innovate with new compelling and varied analytic products for the general investing public that will provide broader access to market sentiment insights currently available only to sophisticated investors.

The Exchange believes that the proposed fee for the external distribution of Derived Data from Open-Close Data is reasonable because the rate is the same as the amount charged by another exchange that also allows, and charges for, external distribution of derived data from similar open-close products.[22] Furthermore, the proposed fee will only apply to Distributors that elect to distribute Derived Data from Open-Close Data and as discussed, Open-Close Data, and Derived Data therefrom, is purchased on a voluntary basis, in that neither the Exchange nor market data distributors are required by any rule or regulation to make this data available. Accordingly, Distributors can discontinue use at any time and for any reason, including due to an assessment of the reasonableness of fees charged. Firms have a wide variety of alternative market data products from which to choose, such as similar proprietary data products offered by other exchanges. Moreover, the Exchange is not required to make any proprietary data products available or to offer any specific pricing alternatives to any customers. While the Exchange has no way of predicting with certainty the impact of the proposed changes, it anticipates at least two Distributors will create Derived Data from Open-Close Data. Also, while the Exchange does not have a precise estimate of the number of individuals expected to benefit, which will ultimately depend on the usefulness of the Derived Data products that reach the market it expects this to be a popular product that may benefit thousands of investors.

The Exchange also believes it is reasonable, equitable and not unfairly discriminatory to charge an external distributor of Derived Data a $5,000 fee as vendors will ordinarily charge a fee to their downstream customers for this service, and, even if the vendor is not charging a specific fee for this particular service, the Exchange expects Derived Data products from Open-Close Data to be part of a suite of offerings from distributors that generally promote sales. External distribution is also fundamentally different than internal use, in that the former generates revenue from external sales while the latter does not. Therefore, the Exchange believes it is reasonable, equitable and not unfairly discriminatory to charge a fee for a product that generates downstream revenue. Further, the proposed fee will apply equally to all distributors that choose to distribute Derived Data from Open-Close Data.

Additionally, the Exchange does not believe it is unfair discrimination to allow the redistribution of Derived Data, but not the underlying information, to the general investing public. As explained above, neither exchanges nor vendors ordinarily allow redistribution of analytic products—such products are typically designed solely for the use of direct customers, not for redistribution to the customers of customers in the manner of a data feed. Allowing the redistribution of Derived Data provides an incentive for vendors to innovate with new compelling and varied analytic products for the general investing public that will provide access to market sentiment insights currently available only to sophisticated investors. This proposal is therefore not unfair discrimination, but rather allows for more equitable access to market sentiment information to the general investing public.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act. The Exchange operates in a highly competitive environment in which the Exchange must continually adjust its fees to remain competitive. Because competitors are free to modify their own fees in response, the Exchange believes that the degree to which fee changes in this market may impose any burden on competition is extremely limited.

As discussed above, Open-Close Data is subject to direct competition from several other options exchanges that offer substitutes to Open-Close. Moreover, purchase of Open-Close is optional. It is designed to help investors understand underlying market trends to improve the quality of investment decisions, but is not necessary to execute a trade.

The proposed rule changes are grounded in the Exchange's efforts to compete more effectively. The Exchange is proposing to broaden distribution of Open-Close information beyond investment banks, market makers, asset managers and other buy-side investors to market data vendors and the general investing public, and to provide a free trial for market participants to test investment strategies and trading models, and develop market sentiment indicators. These changes will not cause any unnecessary or inappropriate burden on intermarket competition, but rather will promote competition by expanding the market for Open-Close data and encouraging new market participants to investigate the product. Other exchanges are, of course, free to match these changes or undertake other competitive responses, enhancing overall competition.

The proposed rule changes will not cause any unnecessary or inappropriate burden on intramarket competition. Particularly, the proposed fee applies uniformly to any Distributor, in that it does not differentiate between distributors that choose to distribute Derived Open-Close Data. Additionally, the Exchange believes it will foster competition by expanding dissemination of data to vendors and the general investing public, and by encouraging more market participants to use Open-Close data to help inform their investments strategies and analytic models. Lastly, the proposed fee will only apply to Distributors that elect to distribute Derived Data from Open-Close Data and as discussed, Open-Close Data, and Derived Data therefrom, is purchased on a voluntary basis.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

The Exchange neither solicited nor received comments on the proposed rule change.

[22] *Id.*

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change is effective upon filing pursuant to Section 19(b)(3)(A)[23] of the Act and subparagraph (f)(2) of Rule 19b–4[24] thereunder, because it establishes a due, fee, or other charge imposed by the Exchange.

At any time within 60 days of the filing of such proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings under Section 19(b)(2)(B)[25] of the Act to determine whether the proposed rule change should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR–CBOE–2022–023 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549–1090.

All submissions should refer to File Number SR–CBOE–2022–023. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's internet website (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street NE, Washington, DC 20549 on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–CBOE–2022–023 and should be submitted on or before June 9, 2022.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[26]

J. Matthew DeLesDernier,

Assistant Secretary.

[FR Doc. 2022–10738 Filed 5–18–22; 8:45 am]

BILLING CODE 8011–01–P

[23] 15 U.S.C. 78s(b)(3)(A).

[24] 17 CFR 240.19b–4(f)(2).

[25] 15 U.S.C. 78s(b)(2)(B).

[26] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–94914; File No. SR–CboeEDGX–2022–028]

Self-Regulatory Organizations; Cboe EDGX Exchange, Inc.; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Amend Its Fees Schedule Relating to the Sale of Open-Close Volume Data

May 13, 2022.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the ''Act''),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on May 3, 2022, Cboe EDGX Exchange, Inc. (the ''Exchange'' or ''EDGX'') filed with the Securities and Exchange Commission (the ''Commission'') the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the Exchange. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

Cboe EDGX Exchange, Inc. (the ''Exchange'' or ''EDGX Options'') proposes to amend its Fees Schedule relating to the sale of Open-Close volume data. The text of the proposed rule change is provided in Exhibit 5.

The text of the proposed rule change is also available on the Exchange's website (*http://markets.cboe.com/us/options/regulation/rule_filings/edgx/*), at the Exchange's Office of the Secretary, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to update its Fee Schedule for its equity options platform (''EDGX Options'') to (i) offer a free trial during the months of May, June and July 2022 for an ad-hoc request of three (3) historical months of Intraday Open-Close historical data to all EDGX Options Members and non-Members who have never before subscribed to the Intraday Open-Close historical files and (ii) adopt fees for the external distribution of products derived from Open-Close Data, effective May 2, 2022.[3]

By way of background, the Exchange currently offers End-of-Day (''EOD'') and Intraday Open-Close Data (collectively, ''Open-Close Data''). EOD Open-Close Data is an end-of-day volume summary of trading activity on the Exchange at the option level by origin (customer, professional customer, broker-dealer, and market maker), side of the market (buy or sell), price, and transaction type (opening or closing). The customer and professional customer volume is further broken down into trade size buckets (less than 100 contracts, 100–199 contracts, greater than 199 contracts). The Open-Close Data is proprietary EDGX Options trade data and does not

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] The Exchange initially filed the proposed fee changes on May 2, 2022 (SR–CboeEDGX–2022–027). On May 3, 2022, the Exchange withdrew that filing and submitted this filing.

include trade data from any other exchange. It is also a historical data product and not a real-time data feed. The Exchange also offers Intraday Open-Close Data, which provides similar information to that of Open-Close Data but is produced and updated every 10 minutes during the trading day. Data is captured in ''snapshots'' taken every 10 minutes throughout the trading day and is available to subscribers within five minutes of the conclusion of each 10-minute period.[4] The Intraday Open-Close Data provides a volume summary of trading activity on the Exchange at the option level by origin (customer, professional customer, broker-dealer, and market maker), side of the market (buy or sell), and transaction type (opening or closing). The customer and professional customer volume are further broken down into trade size buckets (less than 100 contracts, 100–199 contracts, greater than 199 contracts). The Intraday Open-Close Data is also proprietary EDGX Options trade data and does not include trade data from any other exchange.

Cboe LiveVol, LLC (''LiveVol''), a wholly owned subsidiary of the Exchange's parent company, Cboe Global Markets, Inc., makes the Open-Close Data available for purchase to Members and non-Members on the LiveVol DataShop website (*datashop.cboe.com*). Customers may currently purchase Open-Close Data on a subscription basis (monthly or annually) or by ad hoc request for a specified month (*e.g.,* request for Intraday Open-Close Data for month of January 2022).

Open-Close Data is subject to direct competition from similar end-of-day and intraday options trading summaries offered by several other options exchanges.[5] All of these exchanges offer essentially the same end-of-day and intraday options trading summary information.

Free Trial

The Exchange first seeks to adopt a free trial for historical ad hoc requests for Intraday Open-Close Data for new purchasers. Currently, ad hoc requests for historical Intraday Open-Close Data are available to all customers at the same price and in the same manner. The current charge for this historical Intraday Open-Close Data covering all of the Exchange's securities (Equities, Indexes & ETF's) is $500 per month. The Exchange now proposes to adopt a free trial available during the months of May, June and July 2022 to provide a total up to three (3) historical months of Intraday Open-Close Data to any Member or non-Member that has not previously subscribed to this offering.[6] The Exchange notes that it previously offered this free trial period last year for the months of June and July 2021.[7] The Exchange believes bringing back the proposed trial will again serve as an incentive for new users who have never purchased Intraday Open-Close historical data to start purchasing Intraday Open-Close historical data. Particularly, the Exchange believes it will give potential subscribers the ability to use and test the data offering before signing up for additional months. The Exchange also notes another exchange offers a free trial for new subscribers of a similar data product.[8] Lastly, the purchase of Intraday Open-Close historical data is discretionary and not compulsory.

External Distribution of Derived Data

The external distribution of Open-Close Data or any product derived from such data is not currently permitted. The Exchange proposes to remove that prohibition and allow vendors to distribute ''Derived Data'' based on Open-Close Data. ''Derived Data'' is pricing data or other data that (i) is created in whole or in part from Exchange Data, (ii) is not an index or financial product, and (iii) cannot be readily reverse-engineered to recreate Exchange Data or used to create other data that is a reasonable facsimile or substitute for Exchange Data.[9] Derived Data may be created by Distributors for a number of different purposes, as determined by the Distributor. The Exchange believes allowing market data vendors to identify, develop, and sell derived market data products, enables them to harness the power of the competitive marketplace to promote innovation.

The Exchange proposes to adopt a fee of $5,000 per month to allow the unlimited external distribution of Derived Data from Open-Close Data.[10] The fee charged to distribute the Derived Data will be constrained by potential competition, as any exchange with an options trading product would be able to submit an immediately-effective fee filing to allow redistribution, most likely without needing to modify the underlying product in any way, thereby subjecting the proposed fee to market competition. Moreover, the Exchange notes at least one other Exchange currently allows, and charges for, external distribution of derived data based on similar open-close data.[11]

2. Statutory Basis

The Exchange believes the proposed rule change is consistent with the Securities Exchange Act of 1934 (the ''Act'') and the rules and regulations thereunder applicable to the Exchange and, in particular, the requirements of Section 6(b) of the Act.[12] Specifically, the Exchange believes the proposed rule change is consistent with the Section 6(b)(5)[13] requirements that the rules of an exchange be designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest. Additionally, the Exchange believes the

[4] For example, subscribers to the intraday product will receive the first calculation of intraday data by approximately 9:42 a.m. ET, which represents data captured from 9:30 a.m. to 9:40 a.m. Subscribers will receive the next update at 9:52 a.m., representing the data previously provided together with data captured from 9:40 a.m. through 9:50 a.m., and so forth. Each update will represent the aggregate data captured from the current ''snapshot'' and all previous ''snapshots.''

[5] These substitute products are: Nasdaq PHLX Options Trade Outline, Nasdaq Options Trade Outline, ISE Trade Profile, GEMX Trade Profile data; open-close data from Cboe Options, C2, and BZX; and Open Close Reports from MIAX Options, Pearl, and Emerald.

[6] For example, if a Member or non-Member that has never made an ad-hoc request for a specified month of Intraday Open-Close historical data wishes to purchase Intraday Open-Close Data for the months of January, February and March 2022 during the month of June 2022, the historical files for those months would be provided free of charge. If a new user wishes to purchase Intraday Open-Close historical data for the months of January, February, March and April 2022 during the month of June 2022, then the data for January, February and March 2022 would be provided free of charge, and the new user would be charged $500 for the April 2022 historical file.

[7] The Exchange notes it inadvertently never eliminated the obsolete rule text language from the Fees Schedule. The Exchange proposes to update the text to conform to the proposed fee change.

[8] *See* Nasdaq ISE, Options 7 Pricing Schedule, Section 10A., Nasdaq ISE Open/Close Trade Profile End of Day.

[9] ''Derived Data'' is not currently a defined term in the Cboe EDGX Options Fees Schedule. The Exchange proposes to add the definition to the Notes section of the LiveVol Fees table for clarity.

[10] The External Distribution Fee for Derived Open-Close Data will be in addition to fees for the underlying data. For example, external distribution of data derived from the Intraday product will be $1,000 per month (the monthly subscription fee), plus the proposed $5,000 per month External Distribution fee.

[11] *See* Nasdaq PHLX, Options 7 Pricing Schedule, Photo Historical Data, External Distribution.

[12] 15 U.S.C. 78f(b).

[13] 15 U.S.C. 78f(b)(5).

proposed rule change is consistent with the Section 6(b)(5) [14] requirement that the rules of an exchange not be designed to permit unfair discrimination between customers, issuers, brokers, or dealers.

In adopting Regulation NMS, the Commission granted self-regulatory organizations (''SROs'') and broker-dealers increased authority and flexibility to offer new and unique market data to the public. It was believed that this authority would expand the amount of data available to consumers, and also spur innovation and competition for the provision of market data. The Exchange believes the proposed fee changes will further broaden the availability of U.S. option market data to investors consistent with the principles of Regulation NMS. Open-Close Data is designed to help investors understand underlying market trends to improve the quality of investment decisions. Indeed, subscribers to the data may be able to enhance their ability to analyze option trade and volume data and create and test trading models and analytical strategies. The Exchange believes Open-Close Data provides a valuable tool that subscribers can use to gain comprehensive insight into the trading activity in a particular series, but also emphasizes such data is not necessary for trading and as noted above, is entirely optional. Moreover, several other exchanges offer a similar data product which offer same type of data content through end-of-day or intraday reports.[15]

The Exchange also operates in a highly competitive environment. Indeed, there are currently 16 registered options exchanges that trade options. Based on publicly available information, no single options exchange has more than 16% of the market share.[16] The Commission has repeatedly expressed its preference for competition over regulatory intervention in determining prices, products, and services in the securities markets. Particularly, in Regulation NMS, the Commission highlighted the importance of market forces in determining prices and SRO revenues and, also, recognized that current regulation of the market system ''has been remarkably successful in promoting market competition in its broader forms that are most important to investors and listed companies.'' [17] Making similar data products available to market participants fosters competition in the marketplace, and constrains the ability of exchanges to charge supracompetitive [sic] fees. In the event that a market participant views one exchange's data product as more or less attractive than the competition they can and do switch between similar products. The proposed fees are a result of the competitive environment, as the Exchange seeks to adopt fees to attract purchasers of historical Intraday Open-Close Data, as well as attract Distributors for derived data of its Open-Close Data.

The Exchange believes that the proposed free trial for any Member or non-Member who has not previously purchased Intraday Open-Close historical data is reasonable because such users would not be subject to fees for up to 3 months' worth of Intraday Open-Close historical data. The Exchange believes the proposed free trial is also reasonable as it will give potential subscribers the ability to use and test the Intraday Open-Close historical data prior to purchasing additional months and will therefore encourage and promote new users to purchase the Intraday Open-Close historical data. The Exchange believes that the proposed discount is equitable and not unfairly discriminatory because it will apply equally to all Members and non-Members who have not previously purchased Intraday Open-Close historical data. Also as noted above, another exchange offers a free trial to new users for a similar data product [18] and the Exchange itself previously offered a similar free trial.[19] Lastly, the purchase of this data product is discretionary and not compulsory.

Next, the Exchange notes that the proposal to allow the external distribution of derived data is subject to competition as discussed above, and also introduces a new category of market participant for Open-Close Data—market data vendors—into the equation. Currently, Open-Close data is not available for redistribution, in either native form or through Derived Data. This proposal will create a new market for the sale of Derived Data from the Exchange's Open-Close Data products to the general investing public. This is itself evidence of the competitive environment for Open-Close and its substitutes, as it is exactly the type of innovation one would expect to see in a competitive market. It will also spur further innovation by challenging market data vendors to create new and innovative Derived Data products. Any exchange that wishes to allow distribution of a Derived Data product based on options trading information would be able to do so with an immediately effective fee filing similar to this proposal, most likely without requiring any technological enhancement to the underlying product. Indeed, as discussed, another Exchange already allows, and charges for, external distribution of derived data based on similar open-close data.[20]

Allowing the redistribution of Derived Data, but not the underlying information, to the general investing public is an equitable allocation of reasonable dues, fees and other charges because it is the most efficient mechanism for widespread delivery of market sentiment information. The proposal is designed to promote the dissemination of a variety of analytical insights—previously available only to investment banks, market makers, asset managers and other buy-side investors—to the general investing public by creating an incentive for market data vendors to identify, develop, and sell such indicators. Ordinarily, neither exchanges nor vendors allow redistribution of analytic products—such products are typically designed solely for the use of direct customers, not for redistribution to the customers of customers in the manner of a data feed. Allowing the redistribution of Derived Data provides an incentive for vendors to innovate with new compelling and varied analytic products for the general investing public that will provide broader access to market sentiment insights currently available only to sophisticated investors.

The Exchange believes that the proposed fee for the external distribution of Derived Data from Open-Close Data is reasonable because the rate is the same as the amount charged by another exchange that also allows, and charges for, external distribution of derived data from similar open-close products.[21] Furthermore, the proposed fee will only apply to Distributors that elect to distribute Derived Data from Open-Close Data and as discussed, Open-Close Data, and Derived Data therefrom, is purchased on a voluntary

[14] *Id.*

[15] *See* supra note 4.

[16] *See* Cboe Global Markets U.S. Options Market Month-to-Date Volume Summary (April 29, 2022), available at *https://markets.cboe.com/us/options/market_statistics/*.

[17] *See* Securities Exchange Act Release No. 51808 (June 9, 2005), 70 FR 37496, 37499 (June 29, 2005) (''Regulation NMS Adopting Release'').

[18] *See* Nasdaq ISE, Options 7 Pricing Schedule, Section 10A., Nasdaq ISE Open/Close Trade Profile End of Day.

[19] *See* Securities Exchange Act Release No. 92167 (June 14, 2021), 86 FR 33439 (June 24, 2021) (SR–CboeEDGX–2021–028).

[20] *See* Nasdaq PHLX, Options 7 Pricing Schedule, Photo Historical Data, External Distribution.

[21] *Id.*

basis, in that neither the Exchange nor market data distributors are required by any rule or regulation to make this data available. Accordingly, Distributors can discontinue use at any time and for any reason, including due to an assessment of the reasonableness of fees charged. Firms have a wide variety of alternative market data products from which to choose, such as similar proprietary data products offered by other exchanges. Moreover, the Exchange is not required to make any proprietary data products available or to offer any specific pricing alternatives to any customers. While the Exchange has no way of predicting with certainty the impact of the proposed changes, it anticipates at least two Distributors will create Derived Data from Open-Close Data. Also, while the Exchange does not have a precise estimate of the number of individuals expected to benefit, which will ultimately depend on the usefulness of the Derived Data products that reach the market it expects this to be a popular product that may benefit thousands of investors.

The Exchange also believes it is reasonable, equitable and not unfairly discriminatory to charge an external distributor of Derived Data a $5,000 fee as vendors will ordinarily charge a fee to their downstream customers for this service, and, even if the vendor is not charging a specific fee for this particular service, the Exchange expects Derived Data products from Open-Close Data to be part of a suite of offerings from distributors that generally promote sales. External distribution is also fundamentally different than internal use, in that the former generates revenue from external sales while the latter does not. Therefore, the Exchange believes it is reasonable, equitable and not unfairly discriminatory to charge a fee for a product that generates downstream revenue. Further, the proposed fee will apply equally to all distributors that choose to distribute Derived Data from Open-Close Data.

Additionally, the Exchange does not believe it is unfair discrimination to allow the redistribution of Derived Data, but not the underlying information, to the general investing public. As explained above, neither exchanges nor vendors ordinarily allow redistribution of analytic products—such products are typically designed solely for the use of direct customers, not for redistribution to the customers of customers in the manner of a data feed. Allowing the redistribution of Derived Data provides an incentive for vendors to innovate with new compelling and varied analytic products for the general investing public that will provide access to market sentiment insights currently available only to sophisticated investors. This proposal is therefore not unfair discrimination, but rather allows for more equitable access to market sentiment information to the general investing public.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act. The Exchange operates in a highly competitive environment in which the Exchange must continually adjust its fees to remain competitive. Because competitors are free to modify their own fees in response, the Exchange believes that the degree to which fee changes in this market may impose any burden on competition is extremely limited.

As discussed above, Open-Close Data is subject to direct competition from several other options exchanges that offer substitutes to Open-Close. Moreover, purchase of Open-Close is optional. It is designed to help investors understand underlying market trends to improve the quality of investment decisions, but is not necessary to execute a trade.

The proposed rule changes are grounded in the Exchange's efforts to compete more effectively. The Exchange is proposing to broaden distribution of Open-Close information beyond investment banks, market makers, asset managers and other buy-side investors to market data vendors and the general investing public, and to provide a free trial for market participants to test investment strategies and trading models, and develop market sentiment indicators. These changes will not cause any unnecessary or inappropriate burden on intermarket competition, but rather will promote competition by expanding the market for Open-Close data and encouraging new market participants to investigate the product. Other exchanges are, of course, free to match these changes or undertake other competitive responses, enhancing overall competition.

The proposed rule changes will not cause any unnecessary or inappropriate burden on intramarket competition. Particularly, the proposed fee applies uniformly to any Distributor, in that it does not differentiate between distributors that choose to distribute Derived Open-Close Data. Additionally, the Exchange believes it will foster competition by expanding dissemination of data to vendors and the general investing public, and by encouraging more market participants to use Open-Close data to help inform their investments strategies and analytic models. Lastly, the proposed fee will only apply to Distributors that elect to distribute Derived Data from Open-Close Data and as discussed, Open-Close Data, and Derived Data therefrom, is purchased on a voluntary basis.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

The Exchange neither solicited nor received comments on the proposed rule change.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change is effective upon filing pursuant to Section 19(b)(3)(A) [22] of the Act and subparagraph (f)(2) of Rule 19b–4 [23] thereunder, because it establishes a due, fee, or other charge imposed by the Exchange.

At any time within 60 days of the filing of such proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings under Section 19(b)(2)(B) [24] of the Act to determine whether the proposed rule change should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR–CboeEDGX–2022–028 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange

[22] 15 U.S.C. 78s(b)(3)(A).
[23] 17 CFR 240.19b–4(f)(2).
[24] 15 U.S.C. 78s(b)(2)(B).

Commission, 100 F Street NE, Washington, DC 20549–1090.

All submissions should refer to File Number SR–CboeEDGX–2022–028. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's internet website (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street NE, Washington, DC 20549 on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–CboeEDGX–2022–028 and should be submitted on or before June 9, 2022.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[25]

J. Matthew DeLesDernier,

Assistant Secretary.

[FR Doc. 2022–10739 Filed 5–18–22; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[SEC File No. 270–124, OMB Control No. 3235–0107]

Proposed Collection; Comment Request; Extension: Form T–4

Upon Written Request Copies Available From: Securities and Exchange Commission, Office of FOIA Services, 100 F Street NE, Washington, DC 20549–2736

Notice is hereby given that, pursuant to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*), the Securities and Exchange Commission (''Commission'') is soliciting comments on the collection of information summarized below. The Commission plans to submit this existing collection of information to the Office of Management and Budget for approval.

Form T–4 (17 CFR 269.4) is a form used by an issuer to apply for an exemption under Section 304(c) (15 U.S.C. 77ddd (c)) of the Trust Indenture Act of 1939 (77 U.S.C. 77aaa *et seq.*). Form T–4 takes approximately 5 hours per response to prepare and is filed by approximately 3 respondents. We estimate that 25% of the 5 burden hours (1 hour per response) is prepared by the filer for a total reporting burden of 3 hours (1 hour per response × 3 responses).

Written comments are invited on: (a) Whether this proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (b) the accuracy of the agency's estimate of the burden imposed by the collection of information; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology. Consideration will be given to comments and suggestions submitted in writing within 60 days of this publication by July 18, 2022.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid control number.

Please direct your written comment to David Bottom, Director/Chief Information Officer, Securities and Exchange Commission, c/o John Pezzullo, 100 F Street NE, Washington, DC 20549 or send an email to: *PRA_Mailbox@sec.gov.*

Dated: May 13, 2022.

J. Matthew DeLesDernier,

Assistant Secretary.

[FR Doc. 2022–10741 Filed 5–18–22; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–94912; File No. SR–C2–2022–011]

Self-Regulatory Organizations; Cboe C2 Exchange, Inc.; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Amend Its Fees Schedule Relating to the Sale of Open-Close Volume Data

May 13, 2022.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the ''Act''),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on May 2, 2022, Cboe C2 Exchange, Inc. (the ''Exchange'' or ''C2'') filed with the Securities and Exchange Commission (the ''Commission'') the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the Exchange. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

Cboe C2 Exchange, Inc. (the ''Exchange'' or ''C2 Options'') proposes to amend its Fees Schedule relating to the sale of Open-Close volume data. The text of the proposed rule change is provided in Exhibit 5.

The text of the proposed rule change is also available on the Exchange's website (*http://markets.cboe.com/us/options/regulation/rule_filings/ctwo/*), at the Exchange's Office of the Secretary, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

[25] 17 CFR 200.30–3(a)(12).

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to amend its Fees Schedule to (i) offer a free trial during the months of May, June and July 2022 for an ad-hoc request of three (3) historical months of Intraday Open-Close historical data to all C2 Trading Permit Holders (''TPHs'') and non-TPHs who have never before subscribed to the Intraday Open-Close historical files and (ii) adopt fees for the external distribution of products derived from Open-Close Data, effective May 2, 2022.

By way of background, the Exchange currently offers End-of-Day (''EOD'') and Intraday Open-Close Data (collectively, ''Open-Close Data''). EOD Open-Close Data is an end-of-day volume summary of trading activity on the Exchange at the option level by origin (customer, professional customer, broker-dealer, and market maker), side of the market (buy or sell), price, and transaction type (opening or closing). The customer and professional customer volume is further broken down into trade size buckets (less than 100 contracts, 100–199 contracts, greater than 199 contracts). The Open-Close Data is proprietary C2 Options trade data and does not include trade data from any other exchange. It is also a historical data product and not a real-time data feed. The Exchange also offers Intraday Open-Close Data, which provides similar information to that of Open-Close Data but is produced and updated every 10 minutes during the trading day. Data is captured in ''snapshots'' taken every 10 minutes throughout the trading day and is available to subscribers within five minutes of the conclusion of each 10-minute period.[3] The Intraday Open-Close Data provides a volume summary of trading activity on the Exchange at the option level by origin (customer, professional customer, broker-dealer, and market maker), side of the market (buy or sell), and transaction type (opening or closing). The customer and professional customer volume are further broken down into trade size buckets (less than 100 contracts, 100–199 contracts, greater than 199 contracts). The Intraday Open-Close Data is also proprietary C2 Options trade data and does not include trade data from any other exchange.

Cboe LiveVol, LLC (''LiveVol''), a wholly owned subsidiary of the Exchange's parent company, Cboe Global Markets, Inc., makes the Open-Close Data available for purchase to TPHs and non-TPHs on the LiveVol DataShop website (*datashop.cboe.com*). Customers may currently purchase Open-Close Data on a subscription basis (monthly or annually) or by ad hoc request for a specified month (*e.g.,* request for Intraday Open-Close Data for month of January 2022).

Open-Close Data is subject to direct competition from similar end-of-day and intraday options trading summaries offered by several other options exchanges.[4] All of these exchanges offer essentially the same end-of-day and intraday options trading summary information.

Free Trial

The Exchange first seeks to adopt a free trial for historical ad hoc requests for Intraday Open-Close Data for new purchasers. Currently, ad hoc requests for historical Intraday Open-Close Data are available to all customers at the same price and in the same manner. The current charge for this historical Intraday Open-Close Data covering all of the Exchange's securities (Equities, Indexes & ETF's) is $500 per month. The Exchange now proposes to adopt a free trial available during the months of May, June and July 2022 to provide a total up to three (3) historical months of Intraday Open-Close Data to any TPH or non-TPH that has not previously subscribed to this offering.[5] The Exchange notes that it previously offered this free trial period last year for the months of June and July 2021.[6] The Exchange believes bringing back the proposed trial will again serve as an incentive for new users who have never purchased Intraday Open-Close historical data to start purchasing Intraday Open-Close historical data. Particularly, the Exchange believes it will give potential subscribers the ability to use and test the data offering before signing up for additional months. The Exchange also notes another exchange offers a free trial for new subscribers of a similar data product.[7] Lastly, the purchase of Intraday Open-Close historical data is discretionary and not compulsory.

External Distribution of Derived Data

The external distribution of Open-Close Data or any product derived from such data is not currently permitted. The Exchange proposes to remove that prohibition and allow vendors to distribute ''Derived Data'' based on Open-Close Data. ''Derived Data'' is pricing data or other data that (i) is created in whole or in part from Exchange Data, (ii) is not an index or financial product, and (iii) cannot be readily reverse-engineered to recreate Exchange Data or used to create other data that is a reasonable facsimile or substitute for Exchange Data.[8] Derived Data may be created by Distributors for a number of different purposes, as determined by the Distributor. The Exchange believes allowing market data vendors to identify, develop, and sell derived market data products, enables them to harness the power of the competitive marketplace to promote innovation.

The Exchange proposes to adopt a fee of $5,000 per month to allow the unlimited external distribution of Derived Data from Open-Close Data.[9] The fee charged to distribute the Derived Data will be constrained by potential competition, as any exchange with an options trading product would be able to submit an immediately-effective fee filing to allow redistribution, most likely without needing to modify the underlying product in any way, thereby subjecting the proposed fee to market competition. Moreover, the Exchange notes at least

[3] For example, subscribers to the intraday product will receive the first calculation of intraday data by approximately 9:42 a.m. ET, which represents data captured from 9:30 a.m. to 9:40 a.m. Subscribers will receive the next update at 9:52 a.m., representing the data previously provided together with data captured from 9:40 a.m. through 9:50 a.m., and so forth. Each update will represent the aggregate data captured from the current ''snapshot'' and all previous ''snapshots.''

[4] These substitute products are: Nasdaq PHLX Options Trade Outline, Nasdaq Options Trade Outline, ISE Trade Profile, GEMX Trade Profile data; open-close data from Cboe Options, BZX, and EDGX; and Open Close Reports from MIAX Options, Pearl, and Emerald.

[5] For example, if a TPH or non-TPH that has never made an ad-hoc request for a specified month of Intraday Open-Close historical data wishes to purchase Intraday Open-Close Data for the months of January, February and March 2022 during the month of June 2022, the historical files for those months would be provided free of charge. If a new user wishes to purchase Intraday Open-Close historical data for the months of January, February, March and April 2022 during the month of June 2022, then the data for January, February and March 2022 would be provided free of charge, and the new user would be charged $500 for the April 2022 historical file.

[6] The Exchange notes it inadvertently never eliminated the obsolete rule text language from the Fees Schedule. The Exchange proposes to update the text to conform to the proposed fee change.

[7] *See* Nasdaq ISE, Options 7 Pricing Schedule, Section 10A., Nasdaq ISE Open/Close Trade Profile End of Day.

[8] ''Derived Data'' is not currently a defined term in the C2 Options Fees Schedule. The Exchange proposes to add the definition to the Notes section of the LiveVol Fees table for clarity.

[9] The External Distribution Fee for Derived Open-Close Data will be in addition to fees for the underlying data. For example, external distribution of data derived from the Intraday product will be $1,000 per month (the monthly subscription fee), plus the proposed $5,000 per month External Distribution fee.

one other Exchange currently allows, and charges for, external distribution of derived data based on similar open-close data.[10]

2. Statutory Basis

The Exchange believes the proposed rule change is consistent with the Securities Exchange Act of 1934 (the ''Act'') and the rules and regulations thereunder applicable to the Exchange and, in particular, the requirements of Section 6(b) of the Act.[11] Specifically, the Exchange believes the proposed rule change is consistent with the Section 6(b)(5) [12] requirements that the rules of an exchange be designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest. Additionally, the Exchange believes the proposed rule change is consistent with the Section 6(b)(5) [13] requirement that the rules of an exchange not be designed to permit unfair discrimination between customers, issuers, brokers, or dealers.

In adopting Regulation NMS, the Commission granted self-regulatory organizations (''SROs'') and broker-dealers increased authority and flexibility to offer new and unique market data to the public. It was believed that this authority would expand the amount of data available to consumers, and also spur innovation and competition for the provision of market data. The Exchange believes the proposed fee changes will further broaden the availability of U.S. option market data to investors consistent with the principles of Regulation NMS. Open-Close Data is designed to help investors understand underlying market trends to improve the quality of investment decisions. Indeed, subscribers to the data may be able to enhance their ability to analyze option trade and volume data and create and test trading models and analytical strategies. The Exchange believes Open-Close Data provides a valuable tool that subscribers can use to gain comprehensive insight into the trading activity in a particular series, but also emphasizes such data is not necessary for trading and as noted above, is entirely optional. Moreover, several other exchanges offer a similar data product which offer same type of data content through end-of-day or intraday reports.[14]

The Exchange also operates in a highly competitive environment. Indeed, there are currently 16 registered options exchanges that trade options. Based on publicly available information, no single options exchange has more than 16% of the market share.[15] The Commission has repeatedly expressed its preference for competition over regulatory intervention in determining prices, products, and services in the securities markets. Particularly, in Regulation NMS, the Commission highlighted the importance of market forces in determining prices and SRO revenues and, also, recognized that current regulation of the market system ''has been remarkably successful in promoting market competition in its broader forms that are most important to investors and listed companies.'' [16] Making similar data products available to market participants fosters competition in the marketplace, and constrains the ability of exchanges to charge supracompetitive [sic] fees. In the event that a market participant views one exchange's data product as more or less attractive than the competition they can and do switch between similar products. The proposed fees are a result of the competitive environment, as the Exchange seeks to adopt fees to attract purchasers of historical Intraday Open-Close Data, as well as attract Distributors for derived data of its Open-Close Data.

The Exchange believes that the proposed free trial for any TPH or non-TPH who has not previously purchased Intraday Open-Close historical data is reasonable because such users would not be subject to fees for up to 3 months' worth of Intraday Open-Close historical data. The Exchange believes the proposed free trial is also reasonable as it will give potential subscribers the ability to use and test the Intraday Open-Close historical data prior to purchasing additional months and will therefore encourage and promote new users to purchase the Intraday Open-Close historical data. The Exchange believes that the proposed discount is equitable and not unfairly discriminatory because it will apply equally to all TPHs and non-TPHs who have not previously purchased Intraday Open-Close historical data. Also as noted above, another exchange offers a free trial to new users for a similar data product [17] and the Exchange itself previously offered a similar free trial.[18] Lastly, the purchase of this data product is discretionary and not compulsory.

Next, the Exchange notes that the proposal to allow the external distribution of derived data is subject to competition as discussed above, and also introduces a new category of market participant for Open-Close Data—market data vendors—into the equation. Currently, Open-Close data is not available for redistribution, in either native form or through Derived Data. This proposal will create a new market for the sale of Derived Data from the Exchange's Open-Close Data products to the general investing public. This is itself evidence of the competitive environment for Open-Close and its substitutes, as it is exactly the type of innovation one would expect to see in a competitive market. It will also spur further innovation by challenging market data vendors to create new and innovative Derived Data products. Any exchange that wishes to allow distribution of a Derived Data product based on options trading information would be able to do so with an immediately effective fee filing similar to this proposal, most likely without requiring any technological enhancement to the underlying product. Indeed, as discussed, another Exchange already allows, and charges for, external distribution of derived data based on similar open-close data.[19]

Allowing the redistribution of Derived Data, but not the underlying information, to the general investing public is an equitable allocation of reasonable dues, fees and other charges because it is the most efficient mechanism for widespread delivery of market sentiment information. The proposal is designed to promote the dissemination of a variety of analytical insights—previously available only to investment banks, market makers, asset managers and other buy-side investors—to the general investing public by creating an incentive for market data vendors to identify, develop, and sell

[10] *See* Nasdaq PHLX, Options 7 Pricing Schedule, Photo Historical Data, External Distribution.

[11] 15 U.S.C. 78f(b).

[12] 15 U.S.C. 78f(b)(5).

[13] *Id.*

[14] *See* supra note 4.

[15] *See* Cboe Global Markets U.S. Options Market Month-to-Date Volume Summary (April 29, 2022), available at *https://markets.cboe.com/us/options/market_statistics/.*

[16] *See* Securities Exchange Act Release No. 51808 (June 9, 2005), 70 FR 37496, 37499 (June 29, 2005) (''Regulation NMS Adopting Release'').

[17] *See* Nasdaq ISE, Options 7 Pricing Schedule, Section 10A., Nasdaq ISE Open/Close Trade Profile End of Day.

[18] *See* Securities Exchange Act Release No. 92173 (June 14, 2021), 86 FR 33399 (June 24, 2021) (SR–C2–2021–010).

[19] *See* Nasdaq PHLX, Options 7 Pricing Schedule, Photo Historical Data, External Distribution.

such indicators. Ordinarily, neither exchanges nor vendors allow redistribution of analytic products—such products are typically designed solely for the use of direct customers, not for redistribution to the customers of customers in the manner of a data feed. Allowing the redistribution of Derived Data provides an incentive for vendors to innovate with new compelling and varied analytic products for the general investing public that will provide broader access to market sentiment insights currently available only to sophisticated investors.

The Exchange believes that the proposed fee for the external distribution of Derived Data from Open-Close Data is reasonable because the rate is the same as the amount charged by another exchange that also allows, and charges for, external distribution of derived data from similar open-close products.[20] Furthermore, the proposed fee will only apply to Distributors that elect to distribute Derived Data from Open-Close Data and as discussed, Open-Close Data, and Derived Data therefrom, is purchased on a voluntary basis, in that neither the Exchange nor market data distributors are required by any rule or regulation to make this data available. Accordingly, Distributors can discontinue use at any time and for any reason, including due to an assessment of the reasonableness of fees charged. Firms have a wide variety of alternative market data products from which to choose, such as similar proprietary data products offered by other exchanges. Moreover, the Exchange is not required to make any proprietary data products available or to offer any specific pricing alternatives to any customers. While the Exchange has no way of predicting with certainty the impact of the proposed changes, it anticipates at least two Distributors will create Derived Data from Open-Close Data. Also, while the Exchange does not have a precise estimate of the number of individuals expected to benefit, which will ultimately depend on the usefulness of the Derived Data products that reach the market it expects this to be a popular product that may benefit thousands of investors.

The Exchange also believes it is reasonable, equitable and not unfairly discriminatory to charge an external distributor of Derived Data a $5,000 fee as vendors will ordinarily charge a fee to their downstream customers for this service, and, even if the vendor is not charging a specific fee for this particular service, the Exchange expects Derived Data products from Open-Close Data to be part of a suite of offerings from distributors that generally promote sales. External distribution is also fundamentally different than internal use, in that the former generates revenue from external sales while the latter does not. Therefore, the Exchange believes it is reasonable, equitable and not unfairly discriminatory to charge a fee for a product that generates downstream revenue. Further, the proposed fee will apply equally to all distributors that choose to distribute Derived Data from Open-Close Data.

Additionally, the Exchange does not believe it is unfair discrimination to allow the redistribution of Derived Data, but not the underlying information, to the general investing public. As explained above, neither exchanges nor vendors ordinarily allow redistribution of analytic products—such products are typically designed solely for the use of direct customers, not for redistribution to the customers of customers in the manner of a data feed. Allowing the redistribution of Derived Data provides an incentive for vendors to innovate with new compelling and varied analytic products for the general investing public that will provide access to market sentiment insights currently available only to sophisticated investors. This proposal is therefore not unfair discrimination, but rather allows for more equitable access to market sentiment information to the general investing public.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act. The Exchange operates in a highly competitive environment in which the Exchange must continually adjust its fees to remain competitive. Because competitors are free to modify their own fees in response, the Exchange believes that the degree to which fee changes in this market may impose any burden on competition is extremely limited.

As discussed above, Open-Close Data is subject to direct competition from several other options exchanges that offer substitutes to Open-Close. Moreover, purchase of Open-Close is optional. It is designed to help investors understand underlying market trends to improve the quality of investment decisions, but is not necessary to execute a trade.

The proposed rule changes are grounded in the Exchange's efforts to compete more effectively. The Exchange is proposing to broaden distribution of Open-Close information beyond investment banks, market makers, asset managers and other buy-side investors to market data vendors and the general investing public, and to provide a free trial for market participants to test investment strategies and trading models, and develop market sentiment indicators. These changes will not cause any unnecessary or inappropriate burden on intermarket competition, but rather will promote competition by expanding the market for Open-Close data and encouraging new market participants to investigate the product. Other exchanges are, of course, free to match these changes or undertake other competitive responses, enhancing overall competition.

The proposed rule changes will not cause any unnecessary or inappropriate burden on intramarket competition. Particularly, the proposed fee applies uniformly to any Distributor, in that it does not differentiate between distributors that choose to distribute Derived Open-Close Data. Additionally, the Exchange believes it will foster competition by expanding dissemination of data to vendors and the general investing public, and by encouraging more market participants to use Open-Close data to help inform their investments strategies and analytic models. Lastly, the proposed fee will only apply to Distributors that elect to distribute Derived Data from Open-Close Data and as discussed, Open-Close Data, and Derived Data therefrom, is purchased on a voluntary basis.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

The Exchange neither solicited nor received comments on the proposed rule change.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change is effective upon filing pursuant to Section 19(b)(3)(A)[21] of the Act and subparagraph (f)(2) of Rule 19b–4[22] thereunder, because it establishes a due, fee, or other charge imposed by the Exchange.

At any time within 60 days of the filing of such proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of

[20] *Id.*

[21] 15 U.S.C. 78s(b)(3)(A).

[22] 17 CFR 240.19b–4(f)(2).

investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings under Section 19(b)(2)(B)[23] of the Act to determine whether the proposed rule change should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR–C2–2022–011 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549–1090.

All submissions should refer to File Number SR–C2–2022–011. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's internet website (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street NE, Washington, DC 20549 on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–C2–2022–011 and should be submitted on or before June 9, 2022.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[24]

J. Matthew DeLesDernier,

Assistant Secretary.

[FR Doc. 2022–10737 Filed 5–18–22; 8:45 am]

BILLING CODE 8011–01–P

[23] 15 U.S.C. 78s(b)(2)(B).

[24] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–94907; File No. SR–CboeBZX–2022–006]

Self-Regulatory Organizations; Cboe BZX Exchange, Inc.; Order Instituting Proceedings To Determine Whether To Approve or Disapprove a Proposed Rule Change To List and Trade Shares of the WisdomTree Bitcoin Trust Under BZX Rule 14.11(e)(4), Commodity-Based Trust Shares

May 13, 2022.

On January 25, 2022, Cboe BZX Exchange, Inc. (''BZX'' or ''Exchange'') filed with the Securities and Exchange Commission (''Commission''), pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act'')[1] and Rule 19b–4 thereunder,[2] a proposed rule change to list and trade shares (''Shares'') of the WisdomTree Bitcoin Trust (''Trust'') under BZX Rule 14.11(e)(4), Commodity-Based Trust Shares. The proposed rule change was published for comment in the **Federal Register** on February 14, 2022.[3]

On March 18, 2022, pursuant to Section 19(b)(2) of the Act,[4] the Commission designated a longer period within which to approve the proposed rule change, disapprove the proposed rule change, or institute proceedings to determine whether to disapprove the proposed rule change.[5] This order institutes proceedings under Section 19(b)(2)(B) of the Act[6] to determine whether to approve or disapprove the proposed rule change.

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] *See* Securities Exchange Act Release No. 94184 (Feb. 8, 2022), 87 FR 8318 (''Notice''). The Commission has received no comments on the proposed rule change.

[4] 15 U.S.C. 78s(b)(2).

[5] *See* Securities Exchange Act Release No. 94476, 87 FR 16800 (Mar. 24, 2022). The Commission designated May 15, 2022, as the date by which it should approve, disapprove, or institute proceedings to determine whether to disapprove the proposed rule change.

[6] 15 U.S.C. 78s(b)(2)(B).

I. Summary of the Proposal

As described in more detail in the Notice,[7] the Exchange proposes to list and trade the Shares of the Trust under BZX Rule 14.11(e)(4), which governs the listing and trading of Commodity-Based Trust Shares on the Exchange.

The investment objective of the Trust would be to gain exposure to the price of bitcoin, less expenses and liabilities of the Trust's operation.[8] The Trust would hold bitcoin, and it would calculate the Trust's net asset value (''NAV'') daily based on the value of bitcoin as reflected by the CF Bitcoin US Settlement Price (''Reference Rate''). The Reference Rate was created, and is administered, by CF Benchmarks Ltd., an independent entity. The Reference Rate aggregates the trade flow of several bitcoin platforms. The current platform composition of the Reference Rate is Bitstamp, Coinbase, Gemini, itBit, and Kraken. In calculating the Reference Rate, the methodology creates a joint list of the trade prices and sizes from the constituent platforms between 3:00 p.m. E.T. and 4:00 p.m. E.T. The methodology then divides this list into 12 equally-sized time intervals of 5 minutes and calculates the volume-weighted median trade price for each of those time intervals. The Reference Rate is the arithmetic mean of these 12 volume-weighted median trade prices.[9]

Each Share would represent a fractional undivided beneficial interest in and ownership of the Trust. The Trust's assets would consist of bitcoin held by the Custodian on behalf of the Trust. The Trust generally does not intend to hold cash or cash equivalents. However, there may be situations where the Trust would unexpectedly hold cash on a temporary basis.[10]

The Administrator would determine the NAV and NAV per Share of the Trust, on each day that the Exchange is open for regular trading, after 4:00 p.m. E.T. (often by 5:30 p.m. E.T. and almost always by 8:00 p.m. E.T.). The NAV of the Trust is the aggregate value of the Trust's assets less total liabilities of the Trust, each determined on the basis of generally accepted accounting principles. In determining the Trust's

[7] *See* Notice, *supra* note 3.

[8] *See id.* at 8329. WisdomTree Digital Commodity Services, LLC (''Sponsor'') is the sponsor of the Trust, and Delaware Trust Company is the trustee. U.S. Bank, N.A. would serve as the custodian of the Trust (''Custodian''). U.S. Bancorp Fund Services, LLC dba U.S. Bank Global Fund Services would be the administrator and transfer agent (''Administrator'') of the Trust. Foreside Fund Services LLC would be the marketing agent in connection with the creation and redemption of Shares. *See id.* at 8318–19, 8329.

[9] *See id.* at 8329–30.

[10] *See id.* at 8329.

NAV, the Administrator values the bitcoin held by the Trust based on the price set by the Reference Rate as of 4:00 p.m. E.T.[11]

The Trust would provide information regarding the Trust's bitcoin holdings, as well as an Intraday Indicative Value (''IIV'') per Share updated every 15 seconds, as calculated by the Exchange or a third-party financial data provider during the Exchange's Regular Trading Hours (9:30 a.m. to 4:00 p.m. E.T.). The IIV would be calculated by using the prior day's closing NAV per Share as a base and updating that value during Regular Trading Hours to reflect changes in the value of the Trust's bitcoin holdings during the trading day.[12]

When the Trust sells or redeems its Shares, it would do so in ''in-kind'' transactions in blocks of 50,000 Shares at the Trust's NAV. Authorized participants would deliver, or facilitate the delivery of, bitcoin to the Trust's account with the Custodian in exchange for Shares when they purchase Shares, and the Trust, through the Custodian, would deliver bitcoin to such authorized participants when they redeem Shares with the Trust.[13]

Although the Trust would not be an investment company registered under the Investment Company Act of 1940, as amended (''1940 Act''), the Exchange represents that:

- The Trust would qualify as an investment company under Accounting Standards Update 2013–08 and, as such, the Sponsor would ensure that the Trust's financial statements would be audited at least annually by an independent registered public accounting firm and, as part of such audit, the auditor would be expected to perform procedures similar to those used for exchange-traded funds registered under the 1940 Act (''ETFs'');
- The Sponsor would facilitate the Trust's compliance with the financial record keeping and reporting requirements under the Sarbanes-Oxley Act of 2002;
- The Trust's Custodian would qualify as a ''custodian'' under the 1940 Act, and the Custodian would agree to exercise reasonable care, prudence, and diligence such as a person having responsibility for the safekeeping of property of the Trust would exercise;
- The Trust would be subject to the transparency requirements of Rule 6c–11 under the 1940 Act;
- The Sponsor would adopt procedures to ensure there are no transactions with affiliated persons that would be prohibited by Section 17 of 1940 Act and the applicable rules and regulations thereunder;
- The Trust would maintain a fidelity bond for the benefit of the Trust in the maximum amount required by Rule 17g–1 of the 1940 Act; and
- The Sponsor or applicable service provider of the Trust would maintain the books and records of the Trust in satisfaction of the requirements of Section 31 of the 1940 Act.[14]

II. Proceedings To Determine Whether To Approve or Disapprove SR–CboeBZX–2022–006 and Grounds for Disapproval Under Consideration

The Commission is instituting proceedings pursuant to Section 19(b)(2)(B) of the Act[15] to determine whether the proposed rule change should be approved or disapproved. Institution of proceedings is appropriate at this time in view of the legal and policy issues raised by the proposed rule change, as discussed below. Institution of proceedings does not indicate that the Commission has reached any conclusions with respect to any of the issues involved. Rather, as described below, the Commission seeks and encourages interested persons to provide comments on the proposed rule change.

Pursuant to Section 19(b)(2)(B) of the Act,[16] the Commission is providing notice of the grounds for disapproval under consideration. The Commission is instituting proceedings to allow for additional analysis of the proposed rule change's consistency with Section 6(b)(5) of the Act, which requires, among other things, that the rules of a national securities exchange be ''designed to prevent fraudulent and manipulative acts and practices'' and ''to protect investors and the public interest.''[17]

The Commission asks that commenters address the sufficiency of the Exchange's statements in support of the proposal, which are set forth in the Notice,[18] in addition to any other comments they may wish to submit about the proposed rule change. In particular, the Commission seeks comment on the following questions and asks commenters to submit data where appropriate to support their views:

1. What are commenters' views on whether the proposed Trust and Shares would be susceptible to manipulation? What are commenters' views generally on whether the Exchange's proposal is designed to prevent fraudulent and manipulative acts and practices? What are commenters' views generally with respect to the liquidity and transparency of the bitcoin markets, the bitcoin markets' susceptibility to manipulation, and thus the suitability of bitcoin as an underlying asset for an exchange-traded product?

2. What are commenters' views of the Exchange's assertion that regulatory and financial landscapes relating to bitcoin and other digital assets have changed significantly since 2016?[19] Are the changes that the Exchange identifies sufficient to support the determination that the proposed listing and trading of the Shares are consistent with the Act?

3. Based on data provided and the academic research cited by the Exchange,[20] do commenters agree with the Exchange that CME now represents a regulated market of significant size related to bitcoin?[21] What are commenters' views on whether there is a reasonable likelihood that a person attempting to manipulate the Shares would also have to trade on CME to manipulate the Shares? Do commenters agree with the Exchange's assertion that the combination of (a) CME Bitcoin Futures acting as the predominant influence on price discovery; (b) the overall size of the bitcoin market; and (c) the ability for market participants to buy or sell large amounts of bitcoin without significant market impact, helps to prevent the Shares from becoming the predominant force on pricing in either the bitcoin spot or CME Bitcoin Futures markets?[22]

4. The Exchange states that bitcoin is resistant to price manipulation and that other means to prevent fraudulent and manipulative acts and practices exist to justify dispensing with the requirement to enter into a surveillance sharing agreement with a regulated market of significant size related to bitcoin.[23] In support of its assertion, the Exchange states that ''the significant liquidity in the spot market and the impact of market orders on the overall price of bitcoin mean that attempting to move the price of bitcoin is costly.''[24] The Exchange further states that potential manipulation concerns are mitigated by ''the significant increase in trading volume in Bitcoin Futures[,] the

[11] *See id.* at 8330.
[12] *See id.* at 8334.
[13] *See id.* at 8329.
[14] *See id.* at 8323–24.
[15] 15 U.S.C. 78s(b)(2)(B).
[16] *Id.*
[17] 15 U.S.C. 78f(b)(5).
[18] *See* Notice, *supra* note 3.
[19] *See id.* at 8320–22.
[20] *See id.* at 8325–27, 8327 n.62.
[21] *See id.* at 8320.
[22] *See id.* at 8328.
[23] *See id.* at 8327 n.65.
[24] *See id.* at 8328.

growing body of evidence that the CME Bitcoin Futures market represents a regulated market of significant size . . . , the growth of liquidity at the inside in the spot market for bitcoin, and certain features of the Shares and the Reference Rate . . .'' [25] What are commenters' views regarding the Exchange's argument?

5. The Exchange states that ETFs that provide exposure to bitcoin through CME Bitcoin Futures (''Bitcoin Futures ETFs'') are ''a sub-optimal'' for U.S. investors looking for long-term exposure to bitcoin and that any proposal to list and trade a Spot Bitcoin ETP should be reviewed by the Commission with this in mind.[26] The Exchange further states that it would be inconsistent to allow the listing and trading of Bitcoin Futures ETFs while simultaneously disapproving Spot Bitcoin ETPs on the basis that the CME Bitcoin Futures market is not a regulated market of significant size. According to the Exchange, this would be ''particularly true for the Trust, which will use the [Reference Rate] as its price source to calculate its daily [NAV], with inputs from *the same* bitcoin trading platforms . . . and materially the same methodology as is used to price CME Bitcoin Futures.'' [27] Do commenters agree or disagree and why?

6. According to the Exchange, the Trust is structured ''to operate as if certain 1940 Act provisions apply, providing transparency and investor protections such that a distinction between Bitcoin Futures ETFs and Spot Bitcoin ETPs is unwarranted.'' [28] Does the representation that the Trust will ''operate as if certain 1940 Act provisions apply'' help mitigate the concerns the Commission previously expressed, including concerns pertaining to fraud and manipulation?

III. Procedure: Request for Written Comments

The Commission requests that interested persons provide written submissions of their views, data, and arguments with respect to the issues identified above, as well as any other concerns they may have with the proposal. In particular, the Commission invites the written views of interested persons concerning whether the proposal is consistent with Section 6(b)(5) or any other provision of the Act, and the rules and regulations thereunder. Although there do not appear to be any issues relevant to approval or disapproval that would be facilitated by an oral presentation of views, data, and arguments, the Commission will consider, pursuant to Rule 19b–4, any request for an opportunity to make an oral presentation.[29]

Interested persons are invited to submit written data, views, and arguments regarding whether the proposal should be approved or disapproved by June 9, 2022. Any person who wishes to file a rebuttal to any other person's submission must file that rebuttal by June 23, 2022.

Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov*. Please include File Number SR–CboeBZX–2022–006 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549–1090.

All submissions should refer to File Number SR–CboeBZX–2022–006. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's internet website (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street NE, Washington, DC 20549 on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change. Persons submitting comments are cautioned that we do not redact or edit personal identifying information from comment submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–CboeBZX–2022–006 and should be submitted by June 9, 2022. Rebuttal comments should be submitted by June 23, 2022.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[30]

J. Matthew DeLesDernier,

Assistant Secretary.

[FR Doc. 2022–10733 Filed 5–18–22; 8:45 am]

BILLING CODE 8011–01–P

[25] *See id.* at 8327; *see also id.* at 8332.

[26] *See id.* at 8323.

[27] *See id.*

[28] *See id.* at 8325.

[29] Section 19(b)(2) of the Act, as amended by the Securities Act Amendments of 1975, Public Law 94–29 (June 4, 1975), grants the Commission flexibility to determine what type of proceeding—either oral or notice and opportunity for written comments—is appropriate for consideration of a particular proposal by a self-regulatory organization. *See* Securities Act Amendments of 1975, Senate Comm. on Banking, Housing & Urban Affairs, S. Rep. No. 75, 94th Cong., 1st Sess. 30 (1975).

[30] 17 CFR 200.30–3(a)(57).

SECURITIES AND EXCHANGE COMMISSION

[SEC File No. 270–091, OMB Control No. 3235–0088]

Proposed Collection; Comment Request; Extension: Rule 15Ba2–5

Upon Written Request, Copies Available From: Securities and Exchange Commission, Office of FOIA Services, 100 F Street NE, Washington, DC 20549–2736

Notice is hereby given that pursuant to the Paperwork Reduction Act of 1995 (''PRA'') (44 U.S.C. 3501 *et seq.*), the Securities and Exchange Commission (''Commission'') is soliciting comments on the collection of information provided for in Rule 15Ba2–5 (17 CFR 240.15Ba2–5) under the Securities Exchange Act of 1934 (15 U.S.C. 78a *et seq.*) (''Exchange Act''). The Commission plans to submit this existing collection of information to the Office of Management and Budget (''OMB'') for extension and approval.

On July 7, 1976, effective July 16, 1976 (*see* 41 FR 28948, July 14, 1976), the Commission adopted Rule 15Ba2–5 under the Exchange Act to permit a duly-appointed fiduciary to assume immediate responsibility for the operation of a municipal securities dealer's business. Without the rule, the fiduciary would not be able to assume operation until it registered as a municipal securities dealer. Under the rule, the registration of a municipal securities dealer is deemed to be the registration of any executor, administrator, guardian, conservator, assignee for the benefit of creditors,

receiver, trustee in insolvency or bankruptcy, or other fiduciary, appointed or qualified by order, judgment, or decree of a court of competent jurisdiction to continue the business of such municipal securities dealer, provided that such fiduciary files with the Commission, within 30 days after entering upon the performance of his duties, a statement setting forth as to such fiduciary substantially the same information required by Form MSD or Form BD. The statement is necessary to ensure that the Commission and the public have adequate information about the fiduciary.

There is approximately one respondent per year that requires an aggregate total of four hours to comply with this rule. This respondent makes an estimated one annual response. Each response takes approximately four hours to complete. Thus, the total compliance burden per year is approximately four hours. The approximate internal compliance cost per hour is $25, resulting in a total internal cost of compliance of approximately $100 per year (*i.e.,* 4 hours × $25).

Written comments are invited on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's estimates of the burden of the proposed collection of information; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology. Consideration will be given to comments and suggestions submitted by July 18, 2022.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information under the PRA unless it displays a currently valid OMB control number.

Please direct your written comments to: David Bottom, Director/Chief Information Officer, Securities and Exchange Commission, c/o John Pezzullo, 100 F Street NE, Washington, DC 20549, or send an email to: *PRA_ Mailbox@sec.gov.*

Dated: May 13, 2022.

J. Matthew DeLesDernier,

Assistant Secretary.

[FR Doc. 2022–10742 Filed 5–18–22; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[SEC File No. 270–661, OMB Control No. 3235–0721]

Proposed Collection; Comment Request

Upon Written Request Copies Available From: Securities and Exchange Commission, Office of FOIA Services, 100 F Street NE, Washington, DC 20549–2736

Extension:
Form 1–SA

Notice is hereby given that, pursuant to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*), the Securities and Exchange Commission (''Commission'') is soliciting comments on the collection of information summarized below. The Commission plans to submit this existing collection of information to the Office of Management and Budget for extension and approval.

Form 1–SA (17 CFR 239.92) is used to file semiannual reports by Tier 2 issuers under Regulation A, an exemption from registration under the Securities Act of 1933 (15 U.S.C. 77a *et seq.*). Tier 2 issuers under Regulation A conducting offerings of up to $50 million within a 12-month period are required to file Form 1–SA. Form 1–SA provides semiannual, interim financial statements and information about the issuer's liquidity, capital resources and operations after the issuer's second fiscal quarter. The purpose of the Form 1–SA is to better inform the public about companies that have conducted Tier 2 offerings under Regulation A. We estimate that approximately 55 issuers file Form 1–SA annually. We estimate that Form 1–SA takes approximately 188.042 hours to prepare. We estimate that 85% of the 188.04 hours per response (159.836 hours) is prepared by the company for a total annual burden of 8,791 hours (159.836 hours per response × 55 responses).

Written comments are invited on: (a) Whether this proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (b) the accuracy of the agency's estimate of the burden imposed by the collection of information; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology. Consideration will be given to comments and suggestions submitted in writing within 60 days of this publication by July 18, 2022.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid control number.

Please direct your written comment to David Bottom, Director/Chief Information Officer, Securities and Exchange Commission, c/o John Pezzullo, 100 F Street NE, Washington, DC 20549 or send an email to: *PRA_ Mailbox@sec.gov.*

Dated: May 13, 2022.

J. Matthew DeLesDernier,

Assistant Secretary.

[FR Doc. 2022–10726 Filed 5–18–22; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[SEC File No. 270–338, OMB Control No. 3235–0376]

Proposed Collection; Comment Request; Extension: Schedule 14D–1F

Upon Written Request Copies Available From: Securities and Exchange Commission, Office of FOIA Services, 100 F Street NE, Washington, DC 20549–2736

Notice is hereby given that, pursuant to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*), the Securities and Exchange Commission (''Commission'') is soliciting comments on the collection of information summarized below. The Commission plans to submit this existing collection of information to the Office of Management and Budget for extension and approval.

Schedule 14D–1F (17 CFR 240.14d–102) is a form that may be used by any person (the ''bidder'') making a cash tender or exchange offer for securities of any issuer (the ''target'') incorporated or organized under the laws of Canada or any Canadian province or territory that is a foreign private issuer, where less than 40% of the outstanding class of the target's securities that is the subject of the offer is held by U.S. holders. Schedule 14D–1F is designed to facilitate cross-border transactions in the securities of Canadian issuers. The information required to be filed with the Commission provides security holders with material information regarding the bidder as well as the transaction so that they may make informed investment decisions. Schedule 14D–1F takes approximately 2 hours per response to prepare and is filed by approximately 2

respondents annually for a total reporting burden of 4 hours (2 hours per response × 2 responses).

Written comments are invited on: (a) Whether this proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (b) the accuracy of the agency's estimate of the burden imposed by the collection of information; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology. Consideration will be given to comments and suggestions submitted in writing within 60 days of this publication by July 18, 2022.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid control number.

Please direct your written comment to David Bottom, Director/Chief Information Officer, Securities and Exchange Commission, c/o John Pezzullo, 100 F Street NE, Washington, DC 20549 or send an email to: *PRA_Mailbox@sec.gov.*

Dated: May 13, 2022.

J. Matthew DeLesDernier,

Assistant Secretary.

[FR Doc. 2022–10744 Filed 5–18–22; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[SEC File No. 270–643, OMB Control No. 3235–0691

Proposed Collection; Comment Request

Upon Written Request, Copies Available From: Securities and Exchange Commission, Office of FOIA Services, 100 F Street NE, Washington, DC 20549–2736

Extension:
Form Custody

Notice is hereby given that pursuant to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*) (''PRA''), the Securities and Exchange Commission (''Commission'') is soliciting comments on the existing collection of information provided for in Form Custody (17 CFR 249.639) under the Securities Exchange Act of 1934 (15 U.S.C. 78a *et seq.*) (''Exchange Act''). The Commission plans to submit this existing collection of information to the Office of Management and Budget (''OMB'') for extension and approval.

Section 17(a)(1) of the Exchange Act provides that broker-dealers registered with the Commission must make and keep records, furnish copies of the records, and make and disseminate reports as the Commission, by rule, prescribes. Pursuant to this authority, the Commission adopted Rule 17a–5 (17 CFR 240.17a–5), which is one of the primary financial and operational reporting rules for broker-dealers.[1] Paragraph (a)(5) of Rule 17a–5 requires every broker-dealer registered with the Commission to file Form Custody (17 CFR 249.639) with its designated examining authority (''DEA'') within 17 business days after the end of each calendar quarter and within 17 business days after the broker-dealer's fiscal year end if that date is not the end of a calendar quarter. Form Custody is designed to elicit information about whether a broker-dealer maintains custody of customer and non-customer assets, and, if so, how such assets are maintained.

The Commission estimates that there are approximately 3,534 broker-dealers registered with the Commission. As noted above, all broker-dealers registered with the Commission are required to file Form Custody with their DEA once each calendar quarter. Based on staff experience, the Commission estimates that, on average, it would take a broker-dealer approximately 12 hours to complete and file Form Custody, for an annual industry-wide reporting burden of approximately 169,632 hours.[2] Assuming an average cost per hour of approximately $319 for a compliance manager, the total internal cost of compliance for the respondents is approximately $54,112,608 per year.[3]

Written comments are invited on: (a) Whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the Commission's estimate of the burden of the collection of information; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology. Consideration will be given to comments and suggestions submitted in writing by July 18, 2022.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information under the PRA unless it displays a currently valid OMB control number.

Please direct your written comments to: David Bottom, Director/Chief Information Officer, Securities and Exchange Commission, c/o John Pezzullo, 100 F Street NE, Washington, DC 20549, or send an email to: *PRA_Mailbox@sec.gov.*

Dated: May 13, 2022.

J. Matthew DeLesDernier,

Assistant Secretary.

[FR Doc. 2022–10725 Filed 5–18–22; 8:45 am]

BILLING CODE 8011–01–P

[1] Rule 17a–5 is subject to a separate PRA filing (OMB Control Number 3235–0123).

[2] 3,534 brokers-dealers × 4 times per year × 12 hours = 169,632 hours.

[3] 169,632 hours times $319 per hour = $54,112,608. $319 per hour for a compliance manager is from SIFMA's *Management & Professional Earnings in the Securities Industry 2013,* modified by Commission staff for an 1800-hour work-year, multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead, and adjusted for inflation.

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

[Docket No. FAA–2021–1024]

Agency Information Collection Activities: Requests for Comments; Clearance of Renewed Approval of Information Collection: Certification of Airports, Part 139

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice and request for comments.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995, FAA invites public comments about our intention to request the Office of Management and Budget (OMB) approval to renew an information collection. The **Federal Register** Notice with a 60-day comment period soliciting comments on the following collection of information was published on December 7, 2021.

DATES: Written comments should be submitted by June 21, 2022.

ADDRESSES: Written comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice to *www.reginfo.gov/public/do/PRAMain.* Find this particular information collection by selecting ''Currently under 30-day Review—Open for Public Comments'' or by using the search function.

By Electronic Docket: www.regulations.gov.

Enter docket number: FAA–2021–1024 into search field.

By email: chel.schweitzer@faa.gov.

FOR FURTHER INFORMATION CONTACT: Chel Schweitzer by email at: *chel.schweitzer@faa.gov;* phone: 202–679–2677.

SUPPLEMENTARY INFORMATION: Part 139 establishes certification requirements for airports serving scheduled passenger-carrying operations of an air carrier operating aircraft configured for more than 9 passenger seats, as determined by the regulations under which the operation is conducted or the aircraft type certificate issued by a competent civil aviation authority; and unscheduled passenger-carrying operations of an air carrier operating aircraft configured for at least 31 passenger seats, as determined by the regulations under which the operation is conducted or the aircraft type certificate issued by a competent civil aviation authority.

This part does not apply to: Airports serving scheduled air carrier operations only by reason of being designated as an alternate airport; airports operated by the United States; airports located in the State of Alaska that only serve scheduled operations of small air carrier aircraft and do not serve scheduled or unscheduled operations of large air carrier aircraft; airports located in the State of Alaska during periods of time when not serving operations of large air carrier aircraft; or heliports.

Public Comments Invited: You are asked to comment on any aspect of this information collection, including (a) Whether the proposed collection of information is necessary for FAA's performance; (b) the accuracy of the estimated burden; (c) ways for FAA to enhance the quality, utility and clarity of the information collection; and (d) ways that the burden could be minimized without reducing the quality of the collected information.

OMB Control Number: 2120–0675.

Title: Certification of Airports, Part 139.

Form Numbers: FAA Form 5280–1.

Type of Review: Renewal of an information collection.

Background: The **Federal Register** Notice with a 60-day comment period soliciting comments on the following collection of information was published on December 7, 2021 (86 FR 69350).

The statutory authority to issue airport operating certificates to airports serving certain air carriers and to establish minimum safety standards for the operation of those airports is currently found in Title 49, United States Code (U.S.C.) § 44706, Airport operation certificates. The FAA uses this authority to issue requirements for the certification and operation of certain airports that service commercial air carriers. These requirements are contained in Title 14, Code of Federal Regulation Part 139 (14 CFR part 139), Certification and Operations: Land Airports Serving Certain Air Carriers, as amended. Information collection requirements are used by the FAA to determine an airport operator's compliance with Part 139 safety and operational requirements, and to assist airport personnel to perform duties required under the regulation.

Operators of certificated airports are required to complete FAA Form 5280–1 and develop, and comply with, a written document, an Airport Certification Manual (ACM) that details how an airport will comply with the requirements of Part 139. The ACM shows the means and procedures whereby the airport will be operated in compliance with Part 139, plus other instructions and procedures to help personnel concerned with operation of the airport to perform their duties and responsibilities.

When an airport satisfactorily complies with such requirements, the FAA issues to that facility an airport operating certificate (AOC) that permits an airport to serve air carriers. The FAA periodically inspects these airports to ensure continued compliance with Part 139 safety requirements, including the maintenance of specified records. Both the application for an AOC and annual compliance inspections require operators of certificated airports to collect and report certain operational information. The AOC remains in effect as long as the need exists and the operator complies with the terms of the AOC and the ACM.

The likely respondents to new information requests are those civilian U.S. airport certificate holders who operate airports that serve scheduled and unscheduled operations of air carrier aircraft with more than 9 passenger seats (approximately 520 airports). These airport operators already hold an AOC and comply with all current information collection requirements.

Operators of certificated airports are permitted to choose the methodology to report information and can design their own recordkeeping system. As airports vary in size, operations and complexities, the FAA has determined this method of information collection allows airport operators greater flexibility and convenience to comply with reporting and recordkeeping requirements. 100% of the information may be submitted electronically.

The FAA has an automated system, the Certification and Compliance Management Information System (CCMIS), which allows FAA airport safety and certification inspectors to enter into a national database airport inspection information. This information is monitored to detect trends and developing safety issues, to allocate inspection resources, and generally, to be more responsive to the needs of regulated airports.

The FAA has developed an automated reporting tool, the Airport Crisis Response Reporting (ACRR) tool, which allows airport personnel to directly input status of their airports after an incident, or emergency event, impacts their airport or the surrounding area.

Respondents: Approximately 520 airports.

Frequency: Information collected on occasion.

Estimated Average Burden per Response: 291 hours.

Estimated Total Annual Burden: 130,464 hours.

Issued in Washington, DC, on this date, May 12, 2022.

Birkely M. Rhodes,

Manager, Airport Safety and Operations (AAS–300).

[FR Doc. 2022–10718 Filed 5–18–22; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Motor Carrier Safety Administration

[Docket No. FMCSA–2021–0140]

Entry-Level Driver Training: Application for Exemption; Oak Harbor Freight Lines, Inc.

AGENCY: Federal Motor Carrier Safety Administration (FMCSA), Department of Transportation.

ACTION: Notice of final disposition; grant of application for exemption.

SUMMARY: FMCSA announces its decision to grant an exemption from the qualification requirements pertaining to entry-level driver training (ELDT) theory instructors for Oak Harbor's safety supervisor, Mr. Jeff McLaughlin. The exemption will allow Mr. McLaughlin to conduct classroom (theory) training for entry-level drivers who intend to operate commercial motor vehicles (CMV) used in the transportation of hazardous materials (HM). The exemption excuses Mr. McLaughlin from the requirement to either possess a commercial driver's license (CDL) or

have previously held a CDL. The road portion of the training will be completed by behind-the-wheel (BTW) instructors that meet the ELDT qualification requirements. FMCSA concluded that granting the exemption is likely to achieve a level of safety equivalent to or greater than the level of safety that would be obtained in the absence of the exemption.

DATES: The exemption is effective May 19, 2022 and expires May 19, 2027.

Docket: For access to the docket to read background documents or comments, go to *www.regulations.gov* at any time or visit Room W12–140 on the ground level of the West Building, 1200 New Jersey Avenue SE, Washington, DC, between 9 a.m. and 5 p.m., ET, Monday through Friday, except Federal holidays. To be sure someone is there to help you, please call (202) 366–9317 or (202) 366–9826 before visiting Dockets Operations.

FOR FURTHER INFORMATION CONTACT: Mr. Richard Clemente, FMCSA Driver and Carrier Operations Division; Office of Carrier, Driver and Vehicle Safety Standards; (202–366–2722); *MCPSD@dot.gov.* If you have questions on viewing or submitting material to the docket, contact Dockets Operations, (202) 366–9826.

SUPPLEMENTARY INFORMATION:

I. Public Participation and Request for Comments

FMCSA encourages you to participate by submitting comments and related materials.

Viewing Comments and Documents

To view comments, go to *www.regulations.gov,* insert the docket number ''FMCSA–2021–0140'' in the keyword box, and click ''Search.'' Next, sort the results by ''Posted (Newer–Older),'' choose the first notice listed, click ''Browse Comments.''

To view documents mentioned in this notice as being available in the docket, go to *www.regulations.gov,* insert the docket number, ''FMCSA–2021–0140'' in the keyword box, click ''Search,'' and chose the document to review.

If you do not have access to the internet, you may view the docket online by visiting Dockets Operations in Room W12–140 on the ground floor of the DOT West Building, 1200 New Jersey Avenue SE, Washington, DC 20590, between 9 a.m. and 5 p.m., ET, Monday through Friday, except Federal holidays. To be sure someone is there to help you, please call (202) 366–9317 or (202) 366–9826 before visiting Dockets Operations.

II. Legal Basis

FMCSA has authority under 49 U.S.C. 31136(e) and 31315 to grant exemptions from certain parts of the Federal Motor Carrier Safety Regulations. FMCSA must publish a notice of each exemption request in the **Federal Register** (49 CFR 381.315(a)). The Agency must provide the public an opportunity to inspect the information relevant to the application, including any safety analyses that have been conducted. The Agency must also provide an opportunity for public comment on the request.

The Agency reviews safety analyses and public comments submitted and determines whether granting the exemption would likely achieve a level of safety equivalent to, or greater than, the level that would be achieved by the current regulation (49 CFR 381.305). The Agency's decision must be published in the **Federal Register** (49 CFR 381.315(b)) with the reasons for denying or granting the application and, if granted, the name of the person or class of persons receiving the exemption, and the regulatory provision from which the exemption is granted. The notice must also specify the effective period (up to 5 years) and explain the terms and conditions of the exemption. The exemption may be renewed (49 CFR 381.300(b)).

III. Background

Current Regulatory Requirements

The Agency's ELDT regulations, set forth in 49 CFR part 380, subparts F and G, establish theory and BTW training requirements for individuals seeking to obtain a Class A or Class B CDL or a passenger (P), school bus (S), or hazardous materials (H) endorsement for the first time. The regulations take effect on February 7, 2022. The regulations require that ELDT be conducted only by qualified training providers and training instructors; drivers must obtain ELDT from a training provider listed on FMCSA's Training Provider Registry.

As set forth in the definition of ''theory instructor'' in 49 CFR 380.605, theory instructors must meet one of these qualifications: (1) The instructor holds a CDL of the same (or higher) class and with all endorsements necessary to operate the CMV for which training is to be provided and has at least 2 years of experience driving a CMV requiring a CDL of the same (or higher) class and/or the same endorsement and meets all applicable State qualification requirements for CMV instructors; or (2) the instructor holds a CDL of the same (or higher) class and with all endorsements necessary to operate the CMV for which training is to be provided, and has at least 2 years of experience as a BTW CMV instructor and meets all applicable State qualification requirements for CMV instructors. The definition of ''theory instructor'' in 49 CFR 380.605 includes an exception from the requirement that the instructor currently hold a CDL and relevant endorsements, if the instructor previously held a CDL of the same or higher class and complies with the other requirements set forth in the definition.

Unlike the P and S endorsement training curricula, which include both theory and BTW portions, the required H endorsement training is theory only. The H endorsement theory curriculum, set forth in 49 CFR part 380, Appendix E, applies to driver-trainees who intend to use CMVs to transport hazardous materials as defined in 49 CFR 383.5.

Because applicants are not required to take an HM-specific skills test to obtain the H endorsement, the ELDT regulations do not contain a BTW curriculum requirement applicable to that endorsement. There are, however, BTW ELDT requirements for applicants seeking a Class A or Class B CDL or a P or S endorsement.

Applicant's Request

On behalf of its Pacific Northwest Safety Supervisor, Mr. Jeff McLaughlin, Oak Harbor seeks an exemption, from the ELDT theory instructor qualifications set forth in the definition of the term ''theory instructor'' in 49 CFR 380.605, as identified above. Oak Harbor requests the exemption so that Mr. McLaughlin will be able to provide ELDT theory instruction pertaining to the transportation of HM by CMV. Oak Harbor cites Mr. McLaughlin's extensive teaching experience and subject matter expertise as the basis for its exemption request. Oak Harbor further states that the road portion of the training would be completed by BTW instructors that meet the ELDT requirements. A copy of the exemption application is in the docket referenced at the beginning of this notice.[1]

[1] The Agency notes that Oak Harbor's written application requests an exemption from the specific requirement that theory instructors hold a CDL of the same (or higher) class and with all endorsements necessary to operate the CMV for which training is to be provided. On August 30, 2021, in a conversation with Oak Harbor's Safety Manager, Mr. Tom Mueller, FMCSA personnel confirmed that Oak Harbor is seeking exemption from all the theory instructor qualification requirements set forth in the definition of ''theory instructor'' in 49 CFR 380.605. A summary of that conversation can be found in the docket for this notice.

IV. Equivalent Level of Safety

Oak Harbor states that Mr. McLaughlin's experience and expertise in the HM field would supersede HM training offered by other theory and BTW training instructors and would enhance their HM materials and safety program. Oak Harbor provided the following list of Mr. McLaughlin's credentials:

- Over 20 years' experience as a certified truck inspector holding certifications in CVSA Part A and B, Hazardous Materials, Tank and other bulk packagings, Motor Coach and Multi Surface HM Transportation.
- 18 years' experience as a NTC Basic HM instructor
- Previous Region IV Cooperative Hazardous Materials Enforcement Development (COHMED) Program Vice Chairman
- Current COHMED Industry Liaison
- Former Training Lieutenant, Supervisory Lieutenant and District Captain in charge of CVSA and Hazardous Materials training and recertification programs for the Montana Motor Carrier Services
- Certified civilian CVSA Hazardous Materials Instructor
- Former Sergeant, Lieutenant and Captain overseeing CMV inspectors at the Montana/Alberta Joint Use Vehicle Inspection Station Coutts, AB regulating enforcement of FMCSA and Transport Canada regulations pertaining to vehicle safety and hazardous material/dangerous goods regulations

V. Public Comments

On September 8, 2021, FMCSA published notice of this application and requested public comment (86 FR 50426). The Agency received four comments. Two respondents, Railsback HazMat Safety Professionals, LLC (Railsback) and the Washington Trucking Associations (WTA) submitted comments favoring the exemption application. The other two respondents, J. Walker and an anonymous commenter, opposed or questioned the exemption application, respectively.

J. Walker stated the following: ''Oak Harbor Freight Lines should not be granted this exemption as the reason for so many accidents on the roads today is Large Carriers get exemptions on training drivers and the majority of new drivers on the road have no clue what they are doing. Two weeks of classroom training and they are turned lose on the highways with no clue about regulations or even how to drive a truck.''

An anonymous commenter said that it would be unwise for the FMCSA leadership to grant the exemption ''without conducting a comprehensive evaluation of the credentials and competencies possessed by Oak Harbor's safety supervisor Jeff McLaughlin.'' The commenter further stated: ''Having worked in a factory that was both a producer and a consumer of hazardous waste, I question how an individual acting as a safety supervisor could possess the competencies needed to train transportation workers how to safely engage in the commercial transportation of hazardous materials. Reflecting on my past experience, the rules and regulations pertaining to issues of this nature were constantly changing.''

Railsback submitted the following comment in favor of the exemption: ''Without a doubt, I believe that former FMCSA, NTC Associate Staff Instructors have a better understanding of the ELDT Theory requirements, than 50–75% of driver/trainers, with CDLs. Not only do former Associate Staff Instructors know the regulations, but also the application of said regulations to real life roadside situations. Additionally, former Associate Staff Instructors experience goes beyond that of a driver/trainer, who has only worked/trained in one or two particular areas of the motor carrier industry.''

WTA stated that it ''believes Mr. McLaughlin's credentials and significant hazardous materials experience should exceed FMCSA's threshold to maintain the current level of safety. Additionally, due to the current driver shortage and the nationwide labor shortage, denial of the exemption application would likely prevent Oak Harbor from implementing a more efficient and effective hazardous materials endorsement training program to support the company's operations. For those reasons, WTA strongly supports Oak Harbor's exemption application.''

VI. FMCSA Response to Comments and Decision

FMCSA has evaluated Oak Harbor's application for exemption and the public comments. The Agency conducted a comprehensive review of Oak Harbor's safety performance, which included a review of the Motor Carrier Management Information System safety records, and inspection and accident reports submitted to FMCSA by State agencies. Oak Harbor has an active USDOT registration, minimum levels of insurance as required by 49 CFR part 387 and is not subject to any imminent hazard or other out-of-service orders. FMCSA independently verified Mr. McLaughlin's professional credentials identified in the exemption application, as suggested by the anonymous respondent. While J. Walker opposed the application, they did not specifically challenge any of Mr. McLaughlin's credentials or HM training experience, focusing instead on the ability of newly trained drivers to safely operate a CMV. As Oak Harbor stated in its application, their entry level drivers will receive the required BTW training from instructors fully meeting the qualification requirements set forth in definition of ''BTW instructor'' in 49 CFR 380.605. Therefore, based on Mr. McLaughlin's extensive experience as both an HM instructor and inspector, and his stellar reputation in the HM training community, FMCSA has decided to grant the exemption. FMCSA believes that the exemption will likely achieve a level of safety that is equivalent to or greater than the level that will be achieved absent such exemption, in accordance with § 381.305(a).

Extent of the Exemption

This exemption is granted to Oak Harbor on behalf of their instructor Mr. Jeff McLaughlin. The exemption from the qualification requirements set forth in the definition of ''theory instructor'' in 49 CFR 380.605 will allow Mr. McLaughlin to provide ELDT theory instruction for the H endorsement curriculum in Appendix E of Part 380 without meeting these requirements. The exemption is effective May 19, 2022 and expires May 19, 2027.

Robin Hutcheson,

Deputy Administrator.

[FR Doc. 2022–10763 Filed 5–18–22; 8:45 am]

BILLING CODE 4910–EX–P

DEPARTMENT OF TRANSPORTATION

Federal Motor Carrier Safety Administration

[Docket No. FMCSA–2014–0352]

Commercial Driver's License Standards: Recreation Vehicle Industry Association Application for Exemption

AGENCY: Federal Motor Carrier Safety Administration (FMCSA), Department of Transportation (DOT).

ACTION: Notice of renewal of exemption; request for comments.

SUMMARY: FMCSA announces its decision to provisionally renew a 2017 exemption from the Federal commercial driver's license (CDL) requirements for drivers who deliver certain newly manufactured motorhomes and recreational vehicles (RVs) to dealers or

trade shows before retail sale (driveaway operations). The Recreation Vehicle Industry Association (RVIA) requested that the exemption be renewed because compliance with the CDL requirements prevents its members from implementing more efficient operations due to a shortage of CDL drivers. The exemption renewal is for 5 years and covers employees of all driveaway companies, RV manufacturers, and RV dealers transporting RVs between manufacturing sites and dealer locations and for movements prior to first retail sale. Drivers engaged in driveaway deliveries of RVs with gross vehicle weight ratings of 26,001 pounds or more will not be required to have a CDL as long as the RVs have actual gross vehicle weights or gross combination weights that do not meet or exceed 26,001 pounds, and any RV trailers towed by other vehicles weigh 10,000 pounds or less at the time of transportation. RVs that have a gross vehicle weight or gross combined weight exceeding 26,000 pounds are not covered by the exemption.

DATES: This renewed exemption is effective April 6, 2022 and expires on April 6, 2027. Comments must be received on or before June 21, 2022.

ADDRESSES: You may submit comments bearing the Federal Docket Management System (FDMS) Docket ID FMCSA–2014–0352 using any of the following methods:

- *Federal eRulemaking Portal: www.regulations.gov.* See the Public Participation and Request for Comments section below for further information.
- *Mail:* Docket Operations, U.S. Department of Transportation, 1200 New Jersey Avenue SE, West Building, Ground Floor, Room W12–140, Washington, DC 20590–0001.
- *Hand Delivery or Courier:* West Building, Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, between 9 a.m. and 5 p.m., ET, Monday through Friday, except Federal holidays.
- *Fax:* (202) 493–2251.

Each submission must include the Agency name and the docket number for this notice (FMCSA–2014–0352). Note that DOT posts all comments received without change to *www.regulations.gov,* including any personal information included in a comment. Please see the Privacy Act heading below.

Docket: For access to the docket to read background documents or comments, go to *www.regulations.gov* at any time or visit Room W12–140 on the ground level of the West Building, 1200 New Jersey Avenue SE, Washington, DC, between 9 a.m. and 5 p.m., ET, Monday through Friday, except Federal holidays. To be sure someone is there to help you, please call (202) 366–9317 or (202) 366–9826 before visiting Dockets Operations.

Privacy Act: In accordance with 49 U.S.C. 31315(b)(6), DOT solicits comments from the public to better inform its exemption process. DOT posts these comments, without edit, including any personal information the commenter provides, to *www.regulations.gov,* as described in the system of records notice (DOT/ALL–14 FDMS), which can be reviewed at *www.dot.gov/privacy.*

FOR FURTHER INFORMATION CONTACT: Ms. Pearlie Robinson, FMCSA Driver and Carrier Operations Division; Office of Carrier, Driver and Vehicle Safety Standards; Telephone: 202–366–4225. Email: *MCPSD@dot.gov.* If you have questions on viewing or submitting material to the docket, contact Docket Services, telephone (202) 366–9826.

SUPPLEMENTARY INFORMATION:

I. Public Participation and Request for Comments

FMCSA encourages you to participate by submitting comments and related materials.

Submitting Comments

If you submit a comment, please include the docket number for this notice (FMCSA–2014–0352), indicate the specific section of this document to which the comment applies, and provide a reason for suggestions or recommendations. You may submit your comments and material online or by fax, mail, or hand delivery, but please use only one of these means. FMCSA recommends that you include your name and a mailing address, an email address, or a phone number in the body of your document so the Agency can contact you if it has questions regarding your submission.

To submit your comment online, go to *www.regulations.gov* and put the docket number, ''FMCSA–2014–0352'' in the ''Keyword'' box, and click ''Search.'' When the new screen appears, click on the ''Comment Now!'' button and type your comment into the text box in the following screen. Choose whether you are submitting your comment as an individual or on behalf of a third party and then submit. If you submit your comments by mail or hand delivery, submit them in an unbound format, no larger than 8½ by 11 inches, suitable for copying and electronic filing. If you submit comments by mail and would like to know that they reached the facility, please enclose a stamped, self-addressed postcard or envelope. FMCSA will consider all comments and material received during the comment period.

II. Legal Basis

FMCSA has authority under 49 U.S.C. 31136(e) and 31315(b)(2) and 49 CFR 381.300(b) to renew an exemption from the Federal Motor Carrier Safety Regulations for a 5-year period if it finds ''such exemption would likely achieve a level of safety that is equivalent to, or greater than, the level that would be achieved absent such exemption.'' RVIA has requested a five-year extension of the current exemption in Docket No. FMCSA–2014–0352.

III. Background

Current Regulation(s) Requirements

The CDL regulations require drivers to hold a CDL when operating vehicles in Groups A and B (49 CFR 383.91(a)(1) and 383.91(a)(2)). Group A vehicles are any combination of vehicles with a gross combination weight rating (GCWR) of 26,001 pounds or more, provided the gross vehicle weight rating (GVWR) of the towed unit is over 10,000 pounds. Group B vehicles are any single vehicle with a GVWR of 26,001 pounds or more, or any such vehicle towing a vehicle not over 10,000 pounds. The GVWR is the value specified by the manufacturer as the loaded weight of the vehicle.

Application for Renewal of Exemption

FMCSA published notice of RVIA's initial application for exemption from 49 CFR 383.91(a)(1)–(2) to this docket on October 1, 2014 (79 FR 59343). That notice described the nature of the RV deliveries by commercial motor vehicle (CMV) drivers. FMCSA published a notice granting RVIA's exemption request on April 6, 2015, which was effective through April 6, 2017 (80 FR 18493). FMCSA found that RVIA would achieve a level of safety that was equivalent to, or greater than, the level of safety that would be obtained by complying with the CDL requirements. FMCSA published a notice granting RVIA's request to renew its exemption to this docket on April 12, 2017 (82 FR 17734). The exemption expires on April 6, 2022.

RVIA has now requested a second renewal of the exemption from the CDL requirement in 49 CFR 383.91(a)(1)–(2). The exemption allows drivers of RVs with GCWRs and GVWRs of 26,001 pounds or more to operate without a CDL as long as the RV has an actual vehicle weight of less than 26,001 pounds. A combination of RV trailer and tow vehicle must have a gross

combined weight of less than 26,001 pounds and the actual weight of the towed unit must not exceed 10,000 pounds.

IV. Equivalent Level of Safety Analysis

FMCSA determined in 2015 and again in 2017 that the level of safety associated with the transportation of RVs from manufacturers to dealers would likely be equivalent to, or greater than, the level of safety obtained by complying with the CDL requirements. FMCSA noted in its April 12, 2017 notice that RVIA asserted that drivers who deliver RVs have substantially more experience than a typical driver operating an RV for recreational purposes. RVIA also stated that RV driveaway-towaway companies have a lower crash rate than the national benchmark average. RVIA contended that RV manufacturers and driveaway-towaway companies have economic incentives to train, monitor, and evaluate their RV drivers because of their exposure to liability for any traffic accidents. RVIA also asserted that newly manufactured vehicles have a low risk of mechanical failures and that travel distances between the manufacturer and dealer are shorter than the typical distance which RVs travel when in recreational use. (82 FR 17734). When FMCSA affirmed the renewal in 2018, FMCSA concluded that private owners and drivers have operated large RVs for years without CDLs without generating any concern among law enforcement professionals that they pose a risk to highway safety.

In its March 15, 2022 application for renewal, RVIA asserts that RV manufacturers and driveaway-towaway companies do not seek an exemption from other safety regulations such as safe driving (49 CFR part 392), driver qualifications (49 CFR part 391), and hours of service (49 CFR part 395). RVIA also states that the exempt RVs would always be empty and their actual weight would not exceed 26,000 pounds.

FMCSA is unaware of any evidence of a degradation in safety attributable to the current exemption for employee-drivers of driveaway-towaway companies, RV manufacturers, and RV dealers transporting RVs between the manufacturing site and dealer location and for movements prior to first retail sale. There is no indication of an adverse impact on safety while operating under the terms and conditions specified in the April 6, 2015, notice of final determination (80 FR 18493).

FMCSA concludes that provisionally extending the exemption granted on April 6, 2015 for another five years, under the same terms and conditions, will likely achieve a level of safety that is equivalent to, or greater than, the level of safety achieved without the exemption.

V. Exemption Decision

A. Grant of Exemption

FMCSA provisionally renews the exemption for a period of five years subject to the terms and conditions of this decision and the absence of public comments that would cause the Agency to terminate the exemption under Sec. V.F. below. The exemption from the requirements of 49 CFR 383.91(a)(1)–(2) is otherwise effective April 6, 2022 through April 6, 2027, 11:59 p.m. local time, unless renewed or rescinded.

B. Applicability of Exemption

The exemption is restricted to employees of driveaway-towaway companies, RV manufacturers, and RV dealers transporting RVs between the manufacturing site and dealer location and for movements prior to first retail sale. Drivers covered by the exemption will not be required to hold a CDL when transporting RVs with a gross vehicle weight not exceeding 26,000 pounds, or a combination of RV trailer/tow vehicle with the gross weight of the towed unit not exceeding 10,000 pounds and the gross combined weight not exceeding 26,000 pounds.

C. Terms and Conditions

When operating under this exemption, motor carriers and drivers are subject to the following terms and conditions:

(1) The drivers and motor carriers must comply with all other applicable Federal Motor Carrier Safety Regulations (49 CFR part 350–399);

(2) The drivers must be able to provide this exemption document to enforcement officials; and

(3) The drivers must be in possession of a valid State driver's license.

D. Preemption

In accordance with 49 U.S.C. 31315(d), as implemented by 49 CFR 381.600, during the period this exemption is in effect, no State shall enforce any law or regulation that conflicts with or is inconsistent with this exemption with respect to a firm or person operating under the exemption. States may, but are not required to, adopt the same exemption with respect to operations in intrastate commerce.

E. Notification to FMCSA

Motor carriers using exempt drivers must notify FMCSA within 5 business days of any accident (as defined in 49 CFR 390.5) involving any of its CMVs operating under the terms of this exemption. The notification must include the following information:

(a) Name of the exemption: ''RVIA'';

(b) Name of the operating motor carrier;

(c) Date of the accident;

(d) City or town, and State, in which the accident occurred, or closest to the accident scene;

(e) Driver's name and license number;

(f) Vehicle number and State license number;

(g) Number of individuals suffering physical injury;

(h) Number of fatalities;

(i) The police-reported cause of the accident;

(j) Whether the driver was cited for violation of any traffic laws, motor carrier safety regulations; and

(k) The driver's total driving time and total on-duty time period prior to the accident.

Reports filed under this provision shall be emailed to *MCPSD@DOT.GOV.*

F. Termination

FMCSA does not believe the drivers covered by this exemption will experience any deterioration of their safety record. The exemption will be rescinded if: (1) Motor carriers and drivers operating under the exemption fail to comply with the terms and conditions of the exemption; (2) the exemption has resulted in a lower level of safety than was maintained before it was granted; or (3) continuation of the exemption would not be consistent with the goals and objects of 49 U.S.C. 31136(e) and 31315.

VI. Request for Comments

FMCSA requests comments from parties with data concerning the safety record of drivers employed by driveaway-towaway companies, RV manufacturers, and RV dealers transporting RVs between the manufacturing site and dealer location and for movements prior to first retail sale. The Agency will evaluate any adverse evidence submitted and, if safety is being compromised or if continuation of the exemption would not be consistent with the goals and objectives of 49 U.S.C. 31136(e) and 31315, FMCSA will take immediate steps to rescind the exemption of the company or companies and drivers in question.

Robin Hutcheson,

Deputy Administrator.

[FR Doc. 2022–10762 Filed 5–18–22; 8:45 am]

BILLING CODE 4910–EX–P

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

[Docket No. NHTSA–2021–0034; Notice 1]

Toyo Tire Holdings of Americas Inc., Receipt of Petition for Decision of Inconsequential Noncompliance

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

ACTION: Receipt of petition.

SUMMARY: Toyo Tire Holdings of Americas, Inc., (Toyo) has determined that certain Open Country R/T light truck tires, do not fully comply with Federal Motor Vehicle Safety Standard (FMVSS) No. 119, *New Pneumatic Tires for Motor Vehicles with a GVWR of More Than 4,536 Kilograms (10,000 Pounds) and Motorcycles.* Toyo filed a noncompliance report dated March 15, 2021, and later amended it on April 2, 2021. Toyo simultaneously petitioned NHTSA on April 2, 2021, for a decision that the subject noncompliance is inconsequential as it relates to motor vehicle safety. This notice announces receipt of Toyo's petition.

DATES: Send comments on or before June 21, 2022.

ADDRESSES: Interested persons are invited to submit written data, views, and arguments on this petition. Comments must refer to the docket and notice number cited in the title of this notice and submitted by any of the following methods:

- *Mail:* Send comments by mail addressed to the U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- *Hand Delivery:* Deliver comments by hand to the U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590. The Docket Section is open on weekdays from 10 a.m. to 5 p.m. except for Federal holidays.
- *Electronically:* Submit comments electronically by logging onto the Federal Docket Management System (FDMS) website at *https://www.regulations.gov/.* Follow the online instructions for submitting comments.
- Comments may also be faxed to (202) 493–2251.

Comments must be written in the English language and be no greater than 15 pages in length, although there is no limit to the length of necessary attachments to the comments. If comments are submitted in hard copy form, please ensure that two copies are provided. If you wish to receive confirmation that comments you have submitted by mail were received, please enclose a stamped, self-addressed postcard with the comments. Note that all comments received will be posted without change to *https://www.regulations.gov,* including any personal information provided.

All comments and supporting materials received before the close of business on the closing date indicated above will be filed in the docket and will be considered. All comments and supporting materials received after the closing date will also be filed and will be considered to the fullest extent possible.

When the petition is granted or denied, notice of the decision will also be published in the **Federal Register** pursuant to the authority indicated at the end of this notice.

All comments, background documentation, and supporting materials submitted to the docket may be viewed by anyone at the address and times given above. The documents may also be viewed on the internet at *https://www.regulations.gov* by following the online instructions for accessing the docket. The docket ID number for this petition is shown in the heading of this notice.

DOT's complete Privacy Act Statement is available for review in a **Federal Register** notice published on April 11, 2000 (65 FR 19477–78).

FOR FURTHER INFORMATION CONTACT: Jayton Lindley, General Engineer, NHTSA, Office of Vehicle Safety Compliance, (325) 655–0547.

SUPPLEMENTARY INFORMATION:

I. Overview

Toyo has determined that certain Toyo Open Country R/T light truck tires, do not fully comply with paragraph S6.5(j) of FMVSS No. 119, *New Pneumatic Tires for Motor Vehicles with a GVWR of More Than 4,536 Kilograms (10,000 Pounds) and Motorcycles* (49 CFR 571.119). Toyo filed a noncompliance report dated March 15, 2021, and later amended it on April 2, 2021, pursuant to 49 CFR part 573, *Defect and Noncompliance Responsibility and Reports.* Toyo simultaneously petitioned NHTSA on April 2, 2021, for an exemption from the notification and remedy requirements of 49 U.S.C. Chapter 301 on the basis that this noncompliance is inconsequential as it relates to motor vehicle safety, pursuant to 49 U.S.C. 30118(d) and 30120(h) and 49 CFR part 556, *Exemption for Inconsequential Defect or Noncompliance.*

This notice of receipt of Toyo's petition is published under 49 U.S.C. 30118 and 30120 and does not represent any Agency decision or other exercise of judgment concerning the merits of the petition.

II. Tires Involved

Approximately 518 Toyo Open Country R/T light truck tires, size 35X12.50R20LT 125Q, manufactured between January 29, 2021, and March 8, 2021, are potentially involved.

III. Noncompliance

Toyo explains that the noncompliance was due to a mold error in which the sidewall with the partial TIN incorrectly states the load range as required by paragraph S6.5(j) of FMVSS No. 119. Specifically, the tires were marked: LOAD RANGE E when they should have been marked: LOAD RANGE F.

IV. Rule Requirements

Paragraph S6.5(j) of FMVSS No. 119 includes the requirements relevant to this petition. The subject tires are required to be marked on each sidewall with the letter designating the tire load range.

V. Summary of Toyo's Petition

The following views and arguments presented in this section, ''V. Summary of Toyo's Petition,'' are the views and arguments provided by Toyo. They have not been evaluated by the Agency and do not reflect the views of the Agency. Toyo describes the subject noncompliance and contends that the noncompliance is inconsequential as it relates to motor vehicle safety. In support of its petition, Toyo submitted the following reasoning:

During production, the plate containing the load range letter was not changed on the sidewall containing the partial TIN when production was converted from the load range ''E'' tire to the load range ''F'' tire.

Toyo stated that the affected tire mold was immediately corrected after this issue was discovered and all future production will have the correct load range letter.

For the 35X12.50R20LT tire size, Load Range E tires have a maximum load carrying capacity of 1,450 kg (3,195 lbs.) at 450 kPa (65 PSI); Load Range F tires have a maximum load carrying capacity of 1,650 kg (3,640 lbs.) at 550 kPa (80 PSI). Thus, even if a consumer were to rely on the incorrect load range designation on the non-serial sidewall,

there would be no associated risk of overloading.

Toyo says that NHTSA has previously granted inconsequentiality petitions for similar FMVSS noncompliances and cited sections from the following previous petitions that NHTSA had been granted:

- Guizhou Tyre Corporation; Grant of Petition for Decision of Inconsequential Noncompliance. 78 FR 12828, February 25, 2013.
- Yokohama Tire Corporation, Grant of Petition for Decision of Inconsequential Noncompliance. 84 FR. 64403, November 21, 2019.
- Tireco, Inc., Ruling on Petition for Decision of Inconsequential Noncompliance. 81 FR 58550, August 25, 2016.

Toyo says that the subject tires meet all other performance and regulatory requirements of FMVSS No. 119. Further, Toyo also says that they have not received any complaints, claims, or warranty adjustments related to this noncompliance.

Toyo concludes that the subject noncompliance is inconsequential as it relates to motor vehicle safety as these tires have a higher load carrying capacity than the incorrect marking indicates, therefore, the marking will not cause an operator to overload the tires. Thus, Toyo believes that its petition to be exempted from providing notification of the noncompliance, as required by 49 U.S.C. 30118, and a remedy for the noncompliance, as required by 49 U.S.C. 30120, should be granted.

NHTSA notes that the statutory provisions (49 U.S.C. 30118(d) and 30120(h)) that permit manufacturers to file petitions for a determination of inconsequentiality allow NHTSA to exempt manufacturers only from the duties found in sections 30118 and 30120, respectively, to notify owners, purchasers, and dealers of a defect or noncompliance and to remedy the defect or noncompliance. Therefore, any decision on this petition only applies to the subject equipment that Toyo no longer controlled at the time it determined that the noncompliance existed. However, any decision on this petition does not relieve equipment distributors and dealers of the prohibitions on the sale, offer for sale, or introduction or delivery for introduction into interstate commerce of the noncompliant tires under their control after Toyo notified them that the subject noncompliance existed.

(Authority: 49 U.S.C. 30118, 30120: delegations of authority at 49 CFR 1.95 and 501.8)

Otto G. Matheke III,

Director, Office of Vehicle Safety Compliance.

[FR Doc. 2022–10770 Filed 5–18–22; 8:45 am]

BILLING CODE 4910–59–P

DEPARTMENT OF THE TREASURY

Office of Foreign Assets Control

Notice of OFAC Sanctions Actions

AGENCY: Office of Foreign Assets Control, Department of the Treasury.

ACTION: Notice.

SUMMARY: The U.S. Department of the Treasury's Office of Foreign Assets Control (OFAC) is publishing the names of persons whose property and interests in property have been unblocked and who have been removed from the list of Specially Designated Nationals and Blocked Persons.

DATES: See **SUPPLEMENTARY INFORMATION** section for effective dates.

FOR FURTHER INFORMATION CONTACT: OFAC: Associate Director for Global Targeting, tel: 202–622–2420; Assistant Director for Licensing, tel.: 202–622–2480; Assistant Director for Regulatory Affairs, tel.: 202–622–4855; or Assistant Director for Sanctions Compliance & Evaluation, tel.: 202–622–2490.

SUPPLEMENTARY INFORMATION:

Electronic Availability

The Specially Designated Nationals and Blocked Persons List (SDN List) and additional information concerning OFAC sanctions programs are available on OFAC's website (*https://www.treasury.gov/ofac*).

Notice of OFAC Actions

On November 12, 2021, OFAC determined that the property and interests in property subject to U.S. jurisdiction of the following persons are unblocked and they have been removed from the SDN List.

Individuals

1. VILLARREAL BARRAGAN, Sergio Enrique (a.k.a. VILLAREAL BARRAGAN, Sergio; a.k.a. VILLARREAL BARRAGAN, Sergio), Torreon, Coahuila, Mexico; Cuernavaca, Morelos, Mexico; Mazatlan, Sinaloa, Mexico; DOB 21 Sep 1969; POB Torreon, Coahuila, Mexico; nationality Mexico; citizen Mexico; C.U.R.P. VIBS690921HCLLRR01 (Mexico) (individual) [SDNTK].

2. CIFUENTES VILLA, Lucia Ines, c/o BIO FORESTAL S.A., Medellin, Colombia; c/o C.I. DISTRIBUIDORA DE SERVICIOS COMBUSTIBLES Y MINERIA S.A., Bogota, Colombia; c/o C.I. GLOBAL INVESTMENTS S.A., Medellin, Colombia; c/o C.I. OKCOFFEE COLOMBIA S.A., Bogota, Colombia; c/o C.I. OKCOFFEE INTERNATIONAL S.A., Bogota, Colombia; c/o GANADERIA LA SORGUITA S.A., Medellin, Colombia; c/o HOTELES Y BIENES S.A., Bogota, Colombia; c/o INVERPUNTO DEL VALLE S.A., Cali, Colombia; c/o PARQUES TEMATICOS S.A., Medellin, Colombia; c/o PROMO RAIZ S.A., Medellin, Colombia; c/o ROBLE DE MINAS S.A., Medellin, Colombia; Carrera 41A No. 22 Sur-87, Envigado, Antioquia, Colombia; c/o TRANSPORTADORA Y COMERCIALIZADORA SYSTOLE S.A.S., Envigado, Antioquia, Colombia; DOB 04 Nov 1956; POB Yolombo, Antioquia, Colombia; Cedula No. 32524640 (Colombia) (individual) [SDNTK].

3. CIFUENTES OSORIO, Jorge Andres, c/o BIO FORESTAL S.A., Medellin, Colombia; c/o C.I. DISTRIBUIDORA DE SERVICIOS COMBUSTIBLES Y MINERIA S.A., Bogota, Colombia; c/o C.I. OKCOFFEE COLOMBIA S.A., Bogota, Colombia; c/o C.I. OKCOFFEE INTERNATIONAL S.A., Bogota, Colombia; c/o FUNDACION PARA EL BIENESTAR Y EL PORVENIR, Medellin, Colombia; c/o GANADERIA LA SORGUITA S.A., Medellin, Colombia; c/o HOTELES Y BIENES S.A., Bogota, Colombia; c/o INVERPUNTO DEL VALLE S.A., Cali, Colombia; c/o INVERSIONES CIFUENTES Y CIA. S. EN C., Medellin, Colombia; c/o PARQUES TEMATICOS S.A., Medellin, Colombia; c/o PROMO RAIZ S.A., Medellin, Colombia; c/o UNION DE CONSTRUCTORES CONUSA S.A., Bogota, Colombia; Carrera 48B No. 10 Sur-76, Medellin, Colombia; DOB 29 Mar 1985; POB Medellin, Colombia; Cedula No. 80796876 (Colombia) (individual) [SDNTK].

4. CIFUENTES VILLA, Teresa de Jesus (a.k.a. CIFUENTES VILLA, Maria Teresa), c/o C.I. DISTRIBUIDORA DE SERVICIOS COMBUSTIBLES Y MINERIA S.A., Bogota, Colombia; c/o RED MUNDIAL INMOBILIARIA, S.A. DE C.V., Huixquilucan, Estado de Mexico, Mexico; c/o ROBLE DE MINAS S.A., Medellin, Colombia; Avenida Xochilt No. 4262–10, Colonia Prados Tepeyac, Zapopan, Jalisco C.P. 45050, Mexico; Privada Paseo de las Montanas No. 100, Colonia Club de Golf Santa Anita, Tlacumulco de Zuniga, Jalisco C.P. 45640, Mexico; DOB 13 Jun 1953; POB Medellin, Colombia; Cedula No. 32505252 (Colombia); Passport

AJ111604 (Colombia); R.F.C. CIVT530613DI0 (Mexico); C.U.R.P. CIVT530613MNEFLR00 (Mexico) (individual) [SDNTK].

5. CIFUENTES VILLA, Jorge Milton (a.k.a. LOPEZ SALAZAR, Elkin de Jesus; a.k.a. OSUNA VILLARREAL, Sergio), Calle 6 No. 33–29 Apto. 801, Medellin, Colombia; Calle 74 No. 10–33 Apto. 806, Bogota, Colombia; Calle Blas Pascal No. 106, Colonia Los Morales, Delegacion Miguel Hidalgo, Mexico City, Distrito Federal C.P. 11510, Mexico; Calle Eje J No. 999 Pasaje Santa Fe, Departamento No. 301, Colonia Ciudad Santa Fe, Delegacion Alvaro Obregon, Mexico City, Distrito Federal C.P. 01210, Mexico; Camino del Remanso, No. 80 A, Planta Baja, Colonia Lomas Country Club, Huixquilucan, Estado de Mexico C.P. 52779, Mexico; Camino del Remanso No. 80 Interior 2, Colonia Lomas Country Club, Huixquilucan, Estado de Mexico C.P. 52779, Mexico; Carrera 8 No. 10–56 Of. 201, Cali, Colombia; Carrera 68D No. 25–10, Lote 41 E/S Terminal, Bogota, Colombia; Carrera 68D No. 25B–86 Of. 504, Bogota, Colombia; Miguel Schultz No. 127, Colonia San Rafael, Delegacion Cuauhtemoc, Mexico City, Distrito Federal C.P. 06470, Mexico; Paseo de las Gacelas No. 550, Fraccionamiento Ciudad Bugambilias, Guadalajara, Jalisco, Mexico; DOB 13 May 1965; alt. DOB 13 Apr 1968; alt. DOB 07 Jul 1964; POB Medellin, Colombia; alt. POB Marinilla, Antioquia, Colombia; alt. POB Ciudad Victoria, Tamaulipas, Mexico; Cedula No. 7548733 (Colombia); alt. Cedula No. 70163752 (Colombia); alt. Cedula No. 172489729–1 (Ecuador); Passport AL720622 (Colombia); R.F.C. CIVJ650513LJA (Mexico); alt. R.F.C. OUSV–640707 (Mexico); C.U.R.P. CIVJ650513HNEFLR06 (Mexico); alt. C.U.R.P. OUVS640707HTSSLR07 (Mexico); Matricula Mercantil No 181301–1 Cali (Colombia); alt. Matricula Mercantil No 405885 Bogota (Colombia) (individual) [SDNTK] (Linked To: BIO FORESTAL S.A.S.; Linked To: CUBI CAFE CLICK CUBE MEXICO, S.A. DE C.V.; Linked To: DOLPHIN DIVE SCHOOL S.A.; Linked To: GANADERIA LA SORGUITA S.A.S.; Linked To: GESTORES DEL ECUADOR GESTORUM S.A.; Linked To: INVERPUNTO DEL VALLE S.A.; Linked To: INVERSIONES CIFUENTES Y CIA. S. EN C.; Linked To: LE CLAUDE, S.A. DE C.V.; Linked To: OPERADORA NUEVA GRANADA, S.A. DE C.V.; Linked To: PARQUES TEMATICOS S.A.S.; Linked To: PROMO RAIZ S.A.S.; Linked To: RED MUNDIAL INMOBILIARIA, S.A. DE C.V.; Linked To: FUNDACION PARA EL BIENESTAR Y EL PORVENIR; Linked To: C.I. METALURGIA EXTRACTIVA DE COLOMBIA S.A.S.; Linked To: GRUPO MUNDO MARINO, S.A.; Linked To: C.I. DISERCOM S.A.S.; Linked To: C.I. OKCOFFEE COLOMBIA S.A.S.; Linked To: C.I. OKCOFFEE INTERNATIONAL S.A.S.; Linked To: FUNDACION OKCOFFEE COLOMBIA; Linked To: CUBICAFE S.A.S.; Linked To: HOTELES Y BIENES S.A.; Linked To: FUNDACION SALVA LA SELVA; Linked To: LINEA AEREA PUEBLOS AMAZONICOS S.A.S.; Linked To: DESARROLLO MINERO RESPONSABLE C.I. S.A.S.; Linked To: R D I S.A.).

6. GALLEGO MARIN, Fabian Rodrigo, c/o IGA LTDA., Itagui, Antioquia, Colombia; c/o RUTA 33 MOTOCICLETAS Y ACCESORIOS LTDA., Medellin, Colombia; Calle 79A Sur No. 46–53, Sabaneta, Antioquia, Colombia; Avenida Homero No. 136, Interior 10, Colonia Chapultepec Morales, Delegacion Miguel Hidalgo, Mexico City, Distrito Federal, Mexico; Calle Rio Elba No. 56, Interior 6, Colonia Cuauhtemoc, Delegacion Cuauhtemoc, Mexico City, Distrito Federal C.P. 06170, Mexico; c/o INTERNATIONAL GROUP OIRALIH, S.A. DE C.V., Huixquilucan, Estado de Mexico, Mexico; c/o NEGOCIOS INTERNACIONALES DEL ECUADOR NIDEGROUP S.A., Quito, Pichincha, Ecuador; DOB 25 Aug 1967; Cedula No. 98522962 (Colombia) (individual) [SDNTK].

7. NICHOLLS EASTMAN, Winston, c/o CROSS WINDS, S.A., Panama City, Panama; c/o FEDERAL CAPITAL GROUP, S.A., Panama City, Panama; c/o LINEAS AEREAS ANDINAS LINCANDISA S.A., Quito, Ecuador; c/o COMERCIALIZADORA EMPRESARIAL TEAM BUSINESS S.A., Quito, Pichincha, Ecuador; DOB 27 Mar 1943; POB Manizales, Colombia; Cedula No. 5199571 (Colombia); Residency Number 172191348–9 (Ecuador) (individual) [SDNTK].

8. YELINEK, Shimon Yalin (a.k.a. YELINKE, Shimon), c/o CROCKER JEANS CORP. S.A., Panama City, Panama; c/o CROCKER JEANS STATION CORPORATION, Panama City, Panama; c/o FOX FASHION, S.A., Panama City, Panama; DOB 23 Jan 1961; POB Israel; Cedula No. E–8–92856 (Panama); Passport 9023900 (Israel) (individual) [SDNTK].

9. VARGAS CIFUENTES, Paula Andrea, c/o C.I. GLOBAL INVESTMENTS S.A., Medellin, Colombia; c/o HOTELES Y BIENES S.A., Bogota, Colombia; c/o INVERPUNTO DEL VALLE S.A., Cali, Colombia; c/o PARQUES TEMATICOS S.A., Medellin, Colombia; Boulevard Bugambilias No. 2114, Ciudad Bugambilias, Zapopan, Jalisco, Mexico; DOB 23 May 1976; POB Medellin, Colombia; Cedula No. 66973070 (Colombia); Passport AK715253 (Colombia); C.U.R.P. VACP760523MNERFL00 (Mexico) (individual) [SDNTK].

10. VARGAS CIFUENTES, Edmon Felipe, c/o HOTELES Y BIENES S.A., Bogota, Colombia; c/o PROMO RAIZ S.A., Medellin, Colombia; c/o C.I. GLOBAL INVESTMENTS S.A., Medellin, Colombia; Zapopan, Jalisco, Mexico; DOB 19 Aug 1978; POB Medellin, Colombia; Cedula No. 79934460 (Colombia); Passport AI999013 (Colombia); C.U.R.P. VACE780819HNERFD01 (Mexico) (individual) [SDNTK].

Entities

1. TRANSPORTADORA Y COMERCIALIZADORA SYSTOLE S.A.S., Calle 6A No. 22–46 Apto. 1104, Medellin, Colombia; Carrera 41A No. 22 Sur-87 Apto. 510, Envigado, Antioquia, Colombia; NIT #900184013–1 (Colombia) [SDNTK].

2. BIO FORESTAL S.A.S. (f.k.a. BIO FORESTAL S.A.; f.k.a. BIOFORESTAL S.A.), Autopista Bogota-Medellin Km. 7, Parque Industrial Celta Lote 41 Bodega 8, Funza, Cundinamarca, Colombia; Calle 7 Sur No. 42–70 Of. 1205, Medellin, Colombia; Finca Casa Blanca, Arboletes y Necoli, Antioquia, Colombia; Finca La Cana, Cordoba, Colombia; Finca San Luis, Monteria, Cordoba, Colombia; Finca Toldas, Guarne, Antioquia, Colombia; La Sorguita, Jerico, Antioquia, Colombia; NIT#811038709–1 (Colombia) [SDNTK].

3. C.I. DISERCOM S.A.S. (f.k.a. C.I. DISERCOM S.A.; f.k.a. C.I. DISTRIBUIDORA DE SERVICIOS COMBUSTIBLES Y MINERIA S.A.; f.k.a. DISERCOM S.A.; f.k.a. DISTRIBUIDORA DE SERVICIOS Y COMBUSTIBLES S.A.), Autopista Bogota-Medellin Km. 7, Parque Industrial Celta Lote 41 Bodega 8, Funza, Cundinamarca, Colombia; Carrera 13 No. 29–21, Manzana 1 Oficina 401, Bogota, Colombia; NIT#830046009–5 (Colombia) [SDNTK].

4. C.I. METALURGIA EXTRACTIVA DE COLOMBIA S.A.S. (a.k.a. C.I. METEXCOL S.A.S.), Carrera 86 No. 13A–66, Bogota, Colombia; NIT#900389216–9 (Colombia) [SDNTK].

5. C.I. OKCOFFEE COLOMBIA S.A.S. (f.k.a. C.I. OKCOFFEE COLOMBIA S.A.), Autopista Bogota-Medellin Km. 7, Parque Industrial Celta Lote 41 Bodega 8, Funza, Cundinamarca, Colombia; NIT#830124959–1 (Colombia) [SDNTK].

6. C.I. OKCOFFEE INTERNATIONAL S.A.S. (f.k.a. C.I. OKCOFFEE INTERNATIONAL S.A.), Autopista Bogota-Medellin Km. 7, Parque Industrial Celta Lote 41 Bodega 8, Funza, Cundinamarca, Colombia; NIT#900060391–6 (Colombia) [SDNTK].

7. CROCKER JEANS CORP. S.A., Panama City, Panama; RUC #721135–1–473097 (Panama) [SDNTK].

8. CROCKER JEANS STATION CORPORATION, Panama City, Panama; RUC #744528–1–478564 (Panama) [SDNTK].

9. CROSS WINDS, S.A., Panama City, Panama; RUC #1303425–1–607081–77 (Panama) [SDNTK].

10. CUBI CAFE CLICK CUBE MEXICO, S.A. DE C.V., Montecito No. 38 Piso 21 Of. 29, Col. Napoles, Deleg. Benito Juarez, Mexico City, Distrito Federal C.P. 03810, Mexico; R.F.C. CCC–070201–4W7 (Mexico) [SDNTK].

11. CUBICAFE S.A.S. (f.k.a. CUBICAFE S.A.; a.k.a. OK COFFEE), Autopista Bogota-Medellin Km. 7, Parque Industrial Celta Lote 41 Bodega 8, Funza, Cundinamarca, Colombia; Calle 65 Bis No. 89A–73, Bogota, Colombia; NIT#830136426–1 (Colombia) [SDNTK].

12. DESARROLLO MINERO RESPONSABLE C.I. S.A.S. (a.k.a. DMR C.I. S.A.S.); NIT#900386627–9 (Colombia) [SDNTK].

13. DOLPHIN DIVE SCHOOL S.A., Calle Jardin No 39–45, Cartagena, Colombia; Isla Pavito, Cartagena, Colombia; NIT#806008379–6 (Colombia) [SDNTK].

14. FEDERAL CAPITAL GROUP, S.A. (f.k.a. GARIZIM CAPITAL GROUP, S.A.), Panama City, Panama; RUC #1149963–1–571540 (Panama) [SDNTK].

15. FOX FASHION, S.A. (a.k.a. FOX KIDS & BABY; a.k.a. FOX MEN & WOMEN), Albrook Mall, Local Q–20, Panama City, Panama; Albrook Mall, Local 47–B, Panama City, Panama; Multiplaza, Local 207, Panama City, Panama; RUC #699492–1–468385–12 (Panama) [SDNTK].

16. FUNDACION SALVA LA SELVA; NIT#900390392–9 (Colombia) [SDNTK].

17. GANADERIA LA SORGUITA S.A.S. (f.k.a. GANADERIA LA SORGUITA S.A.; f.k.a. LA SORGUITA S.A.), Calle 16 Sur No. 46A–49 Piso 6, Medellin, Colombia; NIT#800220730–4 (Colombia) [SDNTK].

18. GRUPO MUNDO MARINO, S.A., Panama; Business Registration Document #383112 (Panama) [SDNTK].

19. HOTELES Y BIENES S.A. (a.k.a. HOTEL NUEVA GRANADA), Avenida Calle 13 No. 4–77, Bogota, Colombia; Avenida Jimenez No. 4–77, Bogota, Colombia; NIT#830092519–5 (Colombia) [SDNTK].

20. IGA LTDA., Carrera 47 No. 66–127, Itagui, Antioquia, Colombia; NIT#811033126–3 (Colombia) [SDNTK].

21. INTERNATIONAL GROUP OIRALIH, S.A. DE C.V., Boulevard Interlomas 5 Local W–13, Colonia San Fernando La Herradura, Huixquilucan, Estado de Mexico C.P. 52787, Mexico; R.F.C. IGO0106296K5 (Mexico) [SDNTK].

22. INVERPUNTO DEL VALLE S.A., Calle 4 No. 6–02, Cali, Colombia; NIT#805024892–7 (Colombia) [SDNTK].

23. INVERSIONES CIFUENTES Y CIA. S. EN C., Calle 7 Sur No. 42–70 Of. 1205, Medellin, Colombia; NIT#811008928–8 (Colombia) [SDNTK].

24. LE CLAUDE, S.A. DE C.V., Calle Miguel E. Shultz No. 127, Colonia San Rafael, Delegacion Cuauhtemoc, Mexico City, Distrito Federal C.P. 06470, Mexico; R.F.C. LCL020619C14 (Mexico) [SDNTK].

25. LINEA AEREA PUEBLOS AMAZONICOS S.A.S. (a.k.a. LAPA S.A.S.), Mitu, Vaupes, Colombia; Villavicencio, Colombia; NIT#900377739–7 (Colombia) [SDNTK].

26. NEGOCIOS INTERNACIONALES DEL ECUADOR NIDEGROUP S.A., Calle B, Lote 27 y Calle A, Quito, Pichincha, Ecuador; RUC #1792138884001 (Ecuador) [SDNTK].

27. OPERADORA NUEVA GRANADA, S.A. DE C.V., Avenida 13 No. 4–77, Bogota, Colombia; Mexico City, Distrito Federal, Mexico; Folio Mercantil No. 293481 Distrito Federal (Mexico) [SDNTK].

28. PARQUES TEMATICOS S.A.S. (a.k.a. HACIENDA HOTEL EL INDIO; f.k.a. PARQUES TEMATICOS S.A.), Calle 16C Sur No. 42–70, Apto. 502, Medellin, Colombia; Vereda la Playita, Barbosa, Antioquia, Colombia; NIT#811035877–5 (Colombia) [SDNTK].

29. PROMO RAIZ S.A.S. (f.k.a. PROMO RAIZ S.A.), Calle 7 Sur No. 42–70 Of. 1205, Medellin, Colombia; NIT#811035904–6 (Colombia) [SDNTK].

30. R D I S.A., Calle 64A No. 32–52, Bogota, Colombia; NIT#830054366–3 (Colombia) [SDNTK].

31. RED MUNDIAL INMOBILIARIA, S.A. DE C.V., Av. Parques de Granada No. 32–405, Col. Parques de la Herradura, Huixquilucan, Estado de Mexico, Mexico; Calle Montecito No. 38, Piso 21, Colonia Napoles, Delegacion Benito Juarez, Mexico City, Distrito Federal C.P. 03810, Mexico; R.F.C. RMI020130JB9 (Mexico) [SDNTK].

32. RUTA 33 MOTOCICLETAS Y ACCESORIOS LTDA., Avenida 33 No. 66B–134, Medellin, Colombia; NIT#900105312–1 (Colombia) [SDNTK].

33. UNION DE CONSTRUCTORES CONUSA S.A.S. (f.k.a. UNION DE CONSTRUCTORES CONUSA S.A.), Apartamentos Life, Medellin, Colombia; Boca Salinas, Santa Marta, Colombia; Calle 74 No. 10–33, Mirador del Moderno, Bogota, Colombia; Carrera 68D No. 258–86 Of. 504 Torre Central, Bogota, Colombia; Haciendas de Potrerito, Cali, Colombia; Isla Pavito, Cartagena, Colombia; Transversal 1B Este No. 7A–20 Sur, Buenos Aires Etapa II, Bogota, Colombia; NIT#800226431–4 (Colombia) [SDNTK].

Dated: November 12, 2021.

Gregory T. Gatjanis,

Associate Director, Office of Global Targeting Office of Foreign Assets Control, U.S. Department of the Treasury.

Editorial note: This document was received for publication by the Office of the Federal Register on May 16, 2022.

[FR Doc. 2022–10769 Filed 5–18–22; 8:45 am]

BILLING CODE 4810–AL–P

DEPARTMENT OF THE TREASURY

Mandatory Survey of Foreign Ownership of U.S. Securities

AGENCY: Departmental Offices, Department of the Treasury.

ACTION: Notice of reporting requirements.

By this Notice and in accordance with 31 CFR part 129, the Department of the Treasury is informing the public that it is conducting a mandatory survey of foreign ownership of U.S. securities as of June 30, 2022. This mandatory survey is conducted under the authority of the International Investment and Trade in Services Survey Act. This Notice constitutes legal notification to all United States persons (defined below) who meet the reporting requirements set forth in this Notice that they must respond to, and comply with, this survey. Additional copies of the reporting forms SHLA (2022) and instructions may be printed from the internet at: *https://home.treasury.gov/data/treasury-international-capital-tic-system-home-page/tic-forms-instructions/forms-shl.*

Definition: A U.S. person is any individual, branch, partnership, associated group, association, estate, trust, corporation, or other organization (whether or not organized under the laws of any State), and any government (including a foreign government, the United States Government, a State or local government, and any agency, corporation, financial institution, or other entity or instrumentality thereof, including a government-sponsored

agency), who resides in the United States or is subject to the jurisdiction of the United States.

Who Must Report: This mandatory survey is conducted under the authority of the International Investment and Trade in Services Survey Act (22 U.S.C. 3101 *et seq.*) The panel for this survey is based primarily on the level of foreign resident holdings of U.S. securities reported on the June 2019 benchmark survey of foreign resident holdings of U.S. securities, and on the Aggregate Holdings of Long-Term Securities by U.S. and Foreign Residents (TIC SLT) report as of December 2021, and will consist mostly of the largest reporters. Entities required to report will be contacted individually by the Federal Reserve Bank of New York. Entities not contacted by the Federal Reserve Bank of New York have no reporting responsibilities.

What to Report: This report will collect information on foreign resident holdings of U.S. securities, including equities, short-term debt securities (including selected money market instruments), and long-term debt securities.

How to Report: Copies of the survey forms and instructions, which contain complete information on reporting procedures and definitions, may be obtained at the website address given above in the Summary, or by contacting the survey staff of the Federal Reserve Bank of New York at (212) 720–6300 or (646) 720–6300, email: *SHLA.help@ny.frb.org.* The mailing address is: Federal Reserve Bank of New York, Data and Statistics Function, 6th Floor, 33 Liberty Street, New York, NY 10045–0001. Inquiries can also be made to the Federal Reserve Board of Governors, at (202) 452–3476, or to Dwight Wolkow, at (202) 923–0518, or by email: *comments2TIC@treasury.gov.*

When to Report: Data should be submitted to the Federal Reserve Bank of New York, acting as fiscal agent for the Department of the Treasury, by August 31, 2022.

Paperwork Reduction Act Notice: This data collection has been approved by the Office of Management and Budget (OMB) in accordance with the Paperwork Reduction Act and assigned control number 1505–0123. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid control number assigned by OMB. The estimated average annual burden associated with this collection of information is 486 hours per report for the largest custodians of securities, and 110 hours per report for the largest issuers of securities that have data to report and are not custodians. Comments concerning the accuracy of this burden estimate and suggestions for reducing this burden should be directed to the Department of the Treasury, Office of International Affairs, Attention Administrator, International Portfolio Investment Data Reporting Systems, Room 1050, Washington, DC 20220, and to OMB, Attention Desk Officer for the Department of the Treasury, Office of Information and Regulatory Affairs, Washington, DC 20503.

Dwight D. Wolkow,

Administrator, International Portfolio Investment Data Reporting Systems.

[FR Doc. 2022–10721 Filed 5–18–22; 8:45 am]

BILLING CODE 4810–AK–P

DEPARTMENT OF VETERANS AFFAIRS

VA National Academic Affiliations Council; Notice of Meeting

The Department of Veterans Affairs (VA) gives notice under the Federal Advisory Committee Act, 5 U.S.C. App. 2, that the VA National Academic Affiliations Council (Council) will meet via conference call on July 12, from 1 p.m. to 3 p.m. EST. The meeting is open to the public.

The purpose of the Council is to advise the Secretary on matters affecting partnerships between VA and its academic affiliates.

On July 12, 2022, the Council will receive a debrief of the spring 2022 face-to-face meeting; a brief on MISSION Act, Section 403 updates; expansion of minority serving institution relationships/geomapping status updates; and update on the telesupervision project. The Council will receive public comments from 2:50 p.m. to 2:55 p.m. EST.

Interested persons may attend and/or present oral statements to the Council. The dial in number to attend the conference call is: 669–254–5252. At the prompt, enter meeting ID 161 496 9601, then press #. The meeting passcode is 122469, then press #. Individuals seeking to present oral statements are invited to submit a 1–2 page summary of their comments at the time of the meeting for inclusion in the official meeting record. Oral presentations will be limited to five minutes or less, depending on the number of participants. Interested parties may also provide written comments for review by the Council prior to the meeting or at any time, by email to *Larissa.Emory@va.gov,* or by mail to Larissa A. Emory PMP, CBP, MS, Designated Federal Officer, Office of Academic Affiliations (14AA), 810 Vermont Avenue NW, Washington, DC 20420. Any member of the public wishing to participate or seeking additional information should contact Ms. Emory via email or by phone at (915) 269–0465.

Dated: May 16, 2022.

Jelessa M. Burney,

Federal Advisory Committee Management Officer.

[FR Doc. 2022–10771 Filed 5–18–22; 8:45 am]

BILLING CODE P

DEPARTMENT OF VETERANS AFFAIRS

[OMB Control No. 2900–0043]

Agency Information Collection Activity: Application Request To Add and/or Remove Dependents

AGENCY: Veterans Benefits Administration, Department of Veterans Affairs.

ACTION: Notice.

SUMMARY: Veterans Benefits Administration, Department of Veterans Affairs (VA), is announcing an opportunity for public comment on the proposed collection of certain information by the agency. Under the Paperwork Reduction Act (PRA) of 1995, Federal agencies are required to publish notice in the **Federal Register** concerning each proposed collection of information, including each proposed reinstatement of a previously approved collection, and allow 60 days for public comment in response to the notice.

DATES: Written comments and recommendations on the proposed collection of information should be received on or before July 18, 2022.

ADDRESSES: Submit written comments on the collection of information through Federal Docket Management System (FDMS) at *www.Regulations.gov* or to Nancy J. Kessinger, Veterans Benefits Administration (20M33), Department of Veterans Affairs, 810 Vermont Avenue NW, Washington, DC 20420 or email to *nancy.kessinger@va.gov.* Please refer to ''OMB Control No. 2900–0043'' in any correspondence. During the comment period, comments may be viewed online through FDMS.

FOR FURTHER INFORMATION CONTACT: Maribel Aponte, Office of Enterprise and Integration, Data Governance Analytics (008), 1717 H Street NW, Washington, DC 20006, (202) 266–4688 or email *maribel.aponte@va.gov.* Please refer to ''OMB Control No. 2900–0043'' in any correspondence.

SUPPLEMENTARY INFORMATION: Under the PRA of 1995, Federal agencies must obtain approval from the Office of Management and Budget (OMB) for each collection of information they conduct or sponsor. This request for comment is being made pursuant to Section 3506(c)(2)(A) of the PRA.

With respect to the following collection of information, VBA invites comments on:

(1) Whether the proposed collection of information is necessary for the proper performance of VBA's functions, including whether the information will have practical utility; (2) the accuracy of VBA's estimate of the burden of the proposed collection of information; (3) ways to enhance the quality, utility, and clarity of the information to be collected; and (4) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or the use of other forms of information technology.

Authority: 38 U.S.C. 1115, 38 CFR 3.205 and 3.209.

Title: Application Request to Add and/or Remove Dependents (VA Form 21–686c).

OMB Control Number: 2900–0043.

Type of Review: Reinstatement of a previously approved collection.

Abstract: VA Form 21–686c is used to obtain current information about marital status and dependent child(ren). The information is needed to determine the correct rate of payment for veterans and beneficiaries who may be entitled to an additional allowance for dependents or to remove dependents. Without this information, entitlement to these benefits could not be determined.

No changes have been made to this form. The respondent burden has increased due to the estimated number of receivables averaged over the past year.

Affected Public: Individuals or Households.

Estimated Annual Burden: 184,581.

Estimated Average Burden per Respondent: 30 minutes.

Frequency of Response: One time.

Estimated Number of Respondents: 369,162.

By direction of the Secretary.

Maribel Aponte,

VA PRA Clearance Officer, Office of Enterprise and Integration/Data Governance Analytics, Department of Veterans Affairs.

[FR Doc. 2022–10727 Filed 5–18–22; 8:45 am]

BILLING CODE 8320–01–P

DEPARTMENT OF VETERANS AFFAIRS

Advisory Committee on Cemeteries and Memorials, Notice of Meeting

The Department of Veterans Affairs (VA) gives notice under the Federal Advisory Committee Act, 5 U.S.C. app. 2, that the annual meeting of the Advisory Committee on Cemeteries and Memorials (hereinafter the Committee) will be held at the Veterans of Foreign Wars, Memorial Building, 200 Maryland Ave. NE, Washington, DC 20002. The meeting sessions will begin and end as shown in the following table:

Date	Time
Wednesday, June 15, 2022.	8:30 a.m. to 4:00 p.m. EDT.
Thursday, June 16, 2022.	8:30 a.m. to 12:05 p.m. EDT.

The meeting sessions are open to the public. If you wish to observe the meeting virtually may use the following WebEx link: *https://veteransaffairs.webex.com/veteransaffairs/j.php?MTID=mfb026d75837bb96941a29e0054d71c09.* To join by phone: 1–404–397–1596 (toll free); meeting number: 2762 151 2229; password: 2M9fHeupt@8.

The purpose of the Committee is to advise the Secretary of Veterans Affairs on the administration of national cemeteries, soldiers' lots and plots, the selection of new national cemetery sites, the erection of appropriate memorials, and the adequacy of Federal burial benefits. The Committee will make recommendations to the Secretary regarding such activities.

On Wednesday, June 15, 2022, the agenda will include remarks by National Cemetery Administration Leadership; appointment of new members, Mr. Eric Brown and Mr. James Rudolph; report on the Office of Inspector General Report on Unclaimed Veterans Remains; briefing on Arlington National Cemetery, American Battle Monuments Commission and National Park Service; update on the Urn and Commemorative Plaque benefit, Cemetery Operations, Veterans Cemetery Grants Program; public comments; and open discussion.

On Thursday, June 16, 2022, the agenda will include remarks and recap from committee chair; update on Outreach, Cemetery Dedications, Social Media and other initiatives to inform the public about benefits to memorialize Veterans; Committee working group updates, public comments; and open discussion. In the afternoon, the Committee will visit Alexandria National Cemetery. Transportation will not be provided for public guests.

Any member of the public wishing to attend the meeting or seeking additional information should contact Ms. Faith Hopkins, Designated Federal Officer, at 202–603–4499. Please leave a voice message. The Committee will also accept written comments. Comments may be transmitted electronically to the Committee at *faith.hopkins@va.gov.* In the public's communications with the Committee, the writers must identify themselves and state the organizations, associations, or persons they represent.

Dated: May 16, 2022.

Jelessa M. Burney,

Federal Advisory Committee Management Officer.

[FR Doc. 2022–10773 Filed 5–18–22; 8:45 am]

BILLING CODE P

FEDERAL REGISTER

Vol. 87 Thursday,
No. 97 May 19, 2022

Part II

Department of Justice

Drug Enforcement Administration

Fares Jeries Rabadi, M.D.; Decision and Order; Notice

DEPARTMENT OF JUSTICE

Drug Enforcement Administration

[Docket No. 20–14]

Fares Jeries Rabadi, M.D.; Decision and Order

On March 2, 2020, a former Acting Administrator of the Drug Enforcement Administration (hereinafter, DEA or Government), issued an Order to Show Cause and Immediate Suspension of Registration (hereinafter collectively, OSC) to Fares Jeries Rabadi, M.D. (hereinafter, Respondent). Administrative Law Judge Exhibit (hereinafter, ALJ Ex.) 1 (OSC), at 1. The OSC immediately suspended Respondent's DEA Certificate of Registration Number BR6081018 (hereinafter, registration or COR) ''because [Respondent's] continued registration constitutes an 'imminent danger to the public health or safety.' '' *Id.* (citing 21 U.S.C. 824(d)). The OSC also proposed revocation of Respondent's registration, the denial of any pending applications for renewal or modification of such registration, and the denial of any pending applications for additional DEA registrations pursuant to 21 U.S.C. 824(a)(4) and 823(f), because Respondent's ''continued registration is inconsistent with the public interest.'' *Id.*

In response to the OSC, Respondent timely requested a hearing before an Administrative Law Judge. ALJ Ex. 2. The hearing in this matter was conducted on September 29–30, 2020, via video teleconference technology. On December 22, 2020, Administrative Law Judge Mark M. Dowd, (hereinafter, ALJ) issued his Recommended Rulings, Findings of Fact, Conclusions of Law and Decision (hereinafter, Recommended Decision or RD) to which both parties filed Exceptions. I have addressed both the Respondent's and Government's Exceptions in footnotes added to the corresponding parts of the RD. While I have made some modifications to the RD based on the Exceptions, none of those changes and none of Respondent's arguments persuaded me to reach a different conclusion than the ALJ in this matter. I issue my final Order in this case following the Recommended Decision.[*A]

[*A] I have made minor, nonsubstantive, and grammatical changes to the RD and nonsubstantive conforming edits. Where I have added to the ALJ's opinion to include additional information, I have noted the additions in brackets or in footnotes marked with an asterisk and a letter. Where I have made substantive changes, omitted language for brevity or relevance, or where I have modified the ALJ's opinion, I have noted the edits in brackets and have included specific descriptions of the modifications in brackets or in footnotes marked with an asterisk and a letter. Within those brackets and footnotes, the use of the personal pronoun ''I'' refers to myself—the Administrator.

Recommended Rulings, Findings of Fact, Conclusions of Law, and Decision of the Administrative Law Judge [*B]

The issue to be decided by the Administrator is whether the record as a whole establishes by a preponderance of the evidence that the DEA Certificate of Registration, No. BR6081018, issued to Respondent should be revoked, and any pending applications for modification or renewal of the existing registration should be denied, and any pending applications for additional registrations should be denied, because his continued registration would be inconsistent with the public interest under 21 U.S.C. 823(f) and 824(a)(4).

After carefully considering the testimony elicited at the hearing, the admitted exhibits, the arguments of counsel, and the record as a whole, I have set forth my recommended findings of fact and conclusions of law below.

The Allegations

The Government alleges the Respondent violated federal and California law,[1] by issuing numerous prescriptions for Schedule II through IV controlled substances outside the usual course of professional practice and not for a legitimate medical purpose to seven individuals as recently as December 31, 2019. These prescriptions fell below minimal medical standards applicable to the practice of medicine in California. Therefore, these prescriptions violated federal and California state law.

The Government alleges the Respondent regularly prescribed highly addictive and intoxicating combinations of controlled substances to his patients, and that he consistently failed to: (1) Perform adequate physical evaluations and obtain appropriate patient histories; (2) make appropriate diagnoses based on sufficient clinical evidence and document these diagnoses in his medical records; (3) document a legitimate medical purpose for the controlled substances that he prescribed; (4) monitor his patients' medication compliance; and (5) respond to red flags of drug abuse and diversion. These failures constitute extreme departures from the standard of care in California, and that his actions were dangerous and reckless. Because of these failures, he regularly put his patients at significant risk for harm, including overdose or death. He also continued to prescribe controlled substances to these patients despite the fact that he knew they were suffering from opioid dependencies. [The OSC went on to provide specific examples of Respondent's alleged failures related to seven individuals: S.B., M.B., B.C., J.C., D.D., J.M., and K.S. ALJX 1, at 14.] For each of the seven patients, he continued to prescribe opioids to them, even while noting that each patient suffered from an opioid dependency.[*C]

The Hearing

Government's Opening Statement [2]

DEA initiated an investigation into Dr. Rabadi, a California registered physician, upon receipt of a report from the Department of Health and Human Services Office of Inspector General. Tr. 23. The report characterized him as a ''high-risk prescriber'' due to his prescribing of a large number of highly diverted and highly abused drugs. Initially, DEA reviewed Dr. Rabadi's prescribing practices through the California PDMP. Tr. 23. Significant red flags were revealed, including dangerous combinations of controlled substances. Three drugs, hydrocodone acetaminophen, alprazolam and

[*B] I have omitted the RD's discussion of the procedural history to avoid repetition with my introduction.

[1] [Omitted for brevity. Specifically, Respondent was charged with violating:]

a. Cal. Health & Safety Code § 11153(a), requiring that a ''prescription for a controlled substance shall only be issued for a legitimate medical purpose by an individual practitioner acting in the usual course of his or her professional practice'';

b. Cal. Health & Safety Code § 11154(a), directing that ''no person shall knowingly prescribe, administer, dispense, or furnish a controlled substance to or for any person . . . not under his or her treatment for a pathology or condition . . .'';

c. Cal. Bus.& Prof. Code § 2242, prohibiting the ''[p]rescribing, dispensing, or furnishing [of controlled substances] . . . without an appropriate prior examination and a medical indication,'' the violation of which constitutes unprofessional conduct;

d. Cal. Bus. & Prof. Code § 2234, defining unprofessional conduct to include: ''[g]ross negligence''; ''[r]epeated negligent acts''; ''[i]ncompetence''; or ''[t]he commission of any act involving dishonesty or corruption that is substantially related to the qualifications, functions, or duties of a physician and surgeon''; and

e. Cal. Bus. & Prof. Code § 725, further defining unprofessional conduct to include ''[r]epeated acts of clearly excessive prescribing, furnishing, dispensing, or administering of drugs. . . .''

Additionally, [Respondent was alleged to have issued prescriptions outside of] California's applicable standard of care as outlined in the ''Guide to the Laws Governing the Practice of Medicine by Physicians and Surgeons,'' Medical Board of California, 7th ed. 2013 (the ''Guide''). [Omitted for brevity.] *See* ALJ Ex. 1. [The Government did not address (b) or (d) above in its Posthearing Brief, so I will not address those allegations herein.]

[*C] Omitted for brevity.

[2] The Respondent waived the opportunity to make an opening statement. Tr. 30.

carisoprodol constituted over 95% of the controlled substance prescriptions he issued between November 20, 2015, and November 21, 2018. Tr. 24. In combination, these three drugs make up a highly dangerous and diverted cocktail commonly known among drug seekers as the Holy Trinity.

On November 6, 2018, an undercover agent (hereinafter, UC) posing as a prospective patient with back pain, sought treatment from Dr. Rabadi. Dr. Rabadi declined to treat UC, explaining that he was an internist and did not treat back pain. Tr. 24.

In February of 2019, DEA executed federal search warrants on Dr. Rabadi's clinic, home, and three safety deposit boxes. DEA seized a number of prescriptions and patient files. Tr. 24. DEA also seized an unusually large amount of cash from Dr. Rabadi's home and clinic examination room suggestive of diversion and mis-prescribing. Tr. 25. Subpoenas to pharmacies produced prescriptions for a number of Dr. Rabadi's patients, including the seven patients at issue in this case. Tr. 25.

The Government's expert, Dr. Timothy Munzing, will testify that his review of the patient files and prescriptions revealed, in his opinion, that Dr. Rabadi prescribed controlled substances to each of the seven patients outside the usual course of professional practice in California. Tr. 25. Dr. Munzing will testify that Dr. Rabadi never established a legitimate medical purpose for the controlled substances he prescribed, and was not acting in the usual course of professional practice. Tr. 25. Dr. Munzing will testify that Dr. Rabadi consistently failed to meet fundamental elements of the California standard of care for prescribing controlled substances, including failure to obtain appropriate medical histories, failure to perform minimally appropriate physical exams, failure to make appropriate diagnoses based on sufficient medical evidence, failure to document appropriate treatment plans, failure to document a legitimate medical purpose for the controlled substances, failure to discuss the risks and benefits of the cocktails and controlled substances he prescribed, failure to conduct even a single urine drug screen, and failure to respond to red flags of abuse and diversion. Tr. 27. Dr. Rabadi prescribed controlled substances in dangerous and addictive combinations and outside the usual course of professional practice and without establishing a legitimate medical purpose. Dr. Rabadi diagnosed neck and back pain without sufficient medical evidence. Tr. 27. Dr. Rabadi frequently and plausibly diagnosed opioid dependency for patients on long term opioid use. Dr. Rabadi frequently issued Norco prescriptions to treat M.B., B.C., J.C., D.D., J.M., and K.S. for opioid dependency, which was a dangerous and illegal course that was outside the standard of care. Tr. 27–28. Dr. Rabadi prescribed Xanax in dangerously high dosages to Patients S.B., B.C., J.M., and K.S. of six to eight mgs per day, almost twice the recommended maximum dosage for anxiety disorder. Tr. 28. With early refills of Xanax, the Respondent exposed J.M. to more than 10 mgs per day for nearly two years. Tr. 29. He further exposed these patients to the risk of overdose and death by concurrently prescribing them opioids. Tr. 28.

Thus, the Respondent was not providing medical care to these patients, he was exposing them to risk of harm by handing out dangerous and addictive drugs without medical justification. Dr. Rabadi's controlled substance prescriptions to Patients S.B., M.B., B.C., J.C., D.D., J.M., and K.S. were not issued for a legitimate medical purpose, were not issued by a practitioner acting within the usual course of professional practice in California, and were issued in violation of the standard of care in California and in violation of the laws of the United States. Tr. 29. Accordingly, the Government then requested that the tribunal recommend revocation of Dr. Rabadi's DEA certificate of registration.[3]

Government's Case-in-Chief

The Government presented its case-in-chief through the testimony of two witnesses. First, the Government presented the testimony of a DEA Diversion Investigator (DI). Secondly, the Government presented the testimony of Dr. Timothy Munzing, M.D.

Diversion Investigator

DI has served as a Diversion Investigator at DEA's Los Angeles Field Division for three years. Tr. 33–34. Previously, she served with United States Citizenship and Immigration Service for four years. Tr. 75. As a DI, she enforces compliance with the Controlled Substances Act (CSA), looking for signs of diversion within the registration system, including monitoring for regulatory compliance. Tr. 34–35. She has attended the basic diversion investigation training at the DEA Academy, which included training to spot signs of diversion, investigating diversion and enforcing compliance with the CSA, both in the criminal and administrative settings. Tr. 35. She has also received training regarding CURES—the California prescription drug monitoring program.

Regarding the Respondent, in April 2018, DEA received a report from the Department of Health and Human Service (HHS) that the Respondent was on a ''high-risk model for overprescribing of controlled substances.'' Tr. 37, 75. DEA ran two CURES reports, one in April of 2018, which revealed numerous red flags, including prescribing hydrocodone at the maximum strength and a large amount of polypharmaceutical cocktails or combinations of a benzodiazepine and an opioid. Additionally, the volume of opioid prescribing was high, at over 9,000 prescriptions over the course of three years from November 2015 to November 2018. Tr. 38–39, 42, 56–57, 82; GX 16–19. Fifty-percent of these were for hydrocodone. Tr. 42. According to DI, the combination of a benzodiazepine and an opioid are significant as they are highly sought after by the black market and are dangerous to the patient. Tr. 39. The Respondent also prescribed a large number of combinations of the highly sought after ''Holy Trinity,'' which includes a narcotic, a muscle relaxant and a benzodiazepine—96% of his prescriptions during that three-year period.[*D] Tr. 40, 42–43. These highly addictive and highly dangerous combinations were prescribed over a long period of time. Tr. 40–41.

Due to these red flags, on September 26, 2018, DEA sent an undercover agent (UC) to the Respondent's clinic—posing as a prospective patient. Tr. 43. The first attempt was foiled as the clinic was closed. The second attempt occurred on October 30, 2018. Tr. 44, 75–76. The clinic was again closed. The third attempt occurred on November 6, 2018. UC complained of back pain and shoulder pain and sought help from Dr. Rabadi. Dr. Rabadi declined to help the UC—explaining that he was not taking new patients and that he was an internist and not a pain specialist. Tr. 45, 75–76. Ultimately, DEA obtained five search warrants, four of which were

[3] Government allegations included a reference to statistics that 95% of the Respondent's prescriptions were for the ''Holy Trinity'' suggesting that evidence, in itself, demonstrated illegitimate prescribing by the Respondent. The Government confirmed that those statistics did not form an independent allegation. Tr. 32–33.

[*D] To be clear, the DI did not testify that 96% of the prescriptions that Respondent issued were issued in the ''Holy Trinity'' combination. Rather, DI testified that 96% of Respondent's issued controlled substance prescriptions were for either hydrocodone (a narcotic), alprazolam (a benzodiazepine), or carisoprodol (a muscle relaxant). Tr. 42.

executed on February 21, 2019. Tr. 46, 76–77. The fifth was served on February 22, 2019. Tr. 74. They were served on his clinic, on his home and on two safety deposit boxes at two separate banks. Tr. 46. DEA seized 1.2 million dollars in cash at his home.[4] Dr. Rabadi was home when the search warrant was served. Tr. 77. He agreed to be interviewed regarding his prescribing practices. Tr. 77. At his clinic, DEA seized patient files and some prescriptions for S.B., B.C., M.B., J.C., D.D., J.M. and K.S. Tr. 49–50. Additional prescriptions and fill stickers were obtained from pharmacies.[5] Tr. 50–55; GX 1–15. Thereafter, in January 2020, DEA issued an administrative subpoena to the Respondent for any and all updated medical records and prescriptions for the noted patients. Tr. 55–56.[6] In all, DEA obtained twenty-seven files or updated files. Tr. 78.

Dr. Timothy Munzing

Dr. Munzing is a physician licensed in California and holds a DEA Certificate of Registration there. Tr. 86–87; GX 23. Dr. Munzing graduated from UCLA Medical School in 1982. Tr. 89. He completed his internship and residency in family medicine at the Kaiser Permanente Medical Center in Los Angeles in 1985. Tr. 89. He then went to Kaiser Permanente Orange County, where he has been employed for the last 35 years in the family medicine department. He is also available as a consultant. Tr. 90.

In his family medicine practice, he takes care of his patients from ''cradle to grave.'' Tr. 90. Most of his present patients are adults. Tr. 90. Twenty-five percent of his work is spent treating his patients. Tr. 92. In his clinical practice, he has prescribed controlled substances, including opioids and benzodiazepines. Tr. 92. Thirty-two years ago Dr. Munzing founded a family medicine practice residency program, and continues to be the residency director for twenty-four residents. Tr. 90. He also sits on the National Accreditation Board for Family Medicine Residency. He is a member of the American Medical Association, the California Medical Association, and the American Academy of Family Physicians, to name a few. Tr. 91; GX 23. He also serves as a full clinical professor at the University of California Irvine, and at the Kaiser Permanente School of Medicine. Tr. 91. He has been called as an expert witness by the California Medical Board for the past ten years, and by federal law enforcement for the past six years. Tr. 623. Dr. Munzing has been qualified approximately thirty-five times to offer his expert opinion for the California Medical Board, DEA, FBI, and the Department of Justice, including his opinion on the standard of care for prescribing controlled substances, and whether a prescription was issued for a legitimate medical purpose in the usual course of professional practice. Tr. 92–94, 623. He has testified as an expert in five or six prior DEA Administrative hearings. Most of his opinions have related to illegal prescribing of opioids. Tr. 95. Internal rules of Kaiser Permanente prevent him from testifying on behalf of physicians. Tr. 624. Dr. Munzing estimated he had received approximately $20,000 for his time on the instant case at $400 per hour. Tr. 624.

He is familiar with the California standard of care for prescribing controlled substances. Tr. 94. The California standard of care is informed by publications by the California Medical Board. Tr. 95–97; GX 20 at 59–61, GX 21. In particular, ''The Laws Governing the Practice of Medicine by Physicians and Surgeons,'' sets out minimum requirements for care, including history and physical examination, assessment of pain, physical and psychological functioning, substance abuse history, treatment plan, and maintaining accurate and complete records. Tr. 374–80. In forming his opinions in this case, Dr. Munzing reviewed the medical records and prescriptions for the subject patients. Tr. 100–01. Dr. Munzing was qualified, without objection, as an expert in California medical practice, including the applicable standards of care in California for the prescribing of controlled substances within the usual course of the professional practice of medicine. Tr. 101–02.

Dr. Munzing explained that the standard of care is generally ''what a responsible, knowledgeable physician can do'' under similar circumstances. Tr. 102–03. In prescribing controlled substances this would include performing a physical examination, taking a history, including both a medical history and a psychological and substance abuse history, attempting to obtain prior medical records, formulating a diagnosis, evaluating risk factors for the controlled medications including the risk of abuse, discussing the risks with the patient to obtain informed consent, developing a customized treatment plan with goals and objectives, documenting all of the above in the medical record, and providing ongoing monitoring of the patient and of his treatment, including urine drug screens (UDS) and alternate therapies. Tr. 103–112, 114–25, 128–35. Ongoing and comprehensive documentation is critical for accurate evaluation of a patient's condition and treatment. Tr. 142–50. The goal is to maximize function, while minimizing risk. Tr. 139–40. Compliance with all relevant California statutes and regulations is also required by the standard of care. Tr. 104. It requires addressing, resolving and documenting red flags. Tr. 112. Dr. Munzing identified the FDA ''black box'' warning regarding combining opioids with benzodiazepines, titled New Safety Measures Announced for Opioid Analgesics, dated August 31, 2016. Tr. 151; GX 22 at 1–3, 4, 25, 40. The FDA specifically noted diazepam, Klonopin, and Xanax should not be combined with opioids unless absolutely necessary, and for no longer than absolutely necessary. Tr. 153–55.

Dr. Munzing testified that the higher the morphine milligram equivalent (MME) prescribed, the increased risk of addiction and overdose. Tr. 126–28. Prescribing controlled substances for psychological illness requires an even greater emphasis on history, and a more-focused physical exam [of the ''heart, lung, vital signs . . . seeing if [there is] any evidence of some other medical diagnosis'' in addition to the mental health disorder.] Tr. 136, 138–39, 141. The General Anxiety Disorder screening tool, GAD–7, is a useful tool in assessing a patient's level of anxiety. Tr. 136–37.

Dr. Munzing reviewed the patient files, prescriptions, and CURES data for Patients S.B., M.B., B.C., J.C., D.D., J.M., and K.S. [and concluded that the prescriptions at issue were ''not consistent with the standard of care in the state of California.''] Tr. 156–57. Dr. Munzing noted that the history for these seven patients was deficient. Tr. 157. There was no indication prior medical records were obtained. Tr. 157. The physical exams, if present, were missing key elements. There were no documented CURES checks. Tr. 158.

[4] The Respondent objected to the evidence of the cash seizure as irrelevant and immaterial. The objection was carried. Tr. 47–49. [I find that this evidence, while useful to understanding the course of DEA's investigation, is immaterial to the ultimate issue in this case, which is whether or not Respondent issued controlled substance prescriptions that were outside the usual course of professional practice and beneath the standard of care. Accordingly, I have not considered this information in making my decision.]

[5] DI noted record-keeping deficiencies on the part of some of the pharmacies, Tr. 51–55, but clarified they were not a negative reflection on the Respondent. Tr. 79–80.

[6] The Government authenticated Government Demonstrative Exhibits 1–8, which were summary charts for each of the seven subject patients containing the subject prescriptions and patient files consistent with the seized and stipulated to records. Tr. 57–73.

Diagnoses appeared and disappeared. Opioids were prescribed at high dosages. There was no indication of the necessary patient monitoring and there was no documentation of informed consent. Tr. 159–60, 207. Dr. Munzing summarized that none of the controlled prescriptions issued for the charged patients were issued for a legitimate medical purpose by a practitioner acting within the usual course of professional practice. Tr. 620–21. According to Dr. Munzing, all of the relevant prescriptions were issued outside the standard of care. Tr. 621.

Patient S.B.

As per the parties' stipulations, between February 2, 2017, and January 30, 2019, S.B. was prescribed hydrocodone, carisoprodol, Adderall and alprazolam. Tr. 162–63; GDX 1. Dr. Munzing characterized the patient file as meager. He characterized the controlled substance prescriptions as being outside the standard of care. Tr. 163, 207, 241–44. For S.B.'s initial visit on August 3, 2016, she was diagnosed with Generalized Anxiety Disorder (GAD), Attention Deficit Disorder (ADD), and Fibromyalgia. Tr. 163–65; GX 1 at 62, 66. There were no supporting findings from a physical examination or history for the fibromyalgia diagnosis, which typically is reached after a certain number of tender points are determined. Tr. 166. Similarly, there were no supporting findings from a physical examination or history to support the GAD or ADD diagnoses. Tr. 166–71, 241–44. There was no physical functioning level documented nor mental functioning level documented. Tr. 171. Without sufficient evaluation and supporting documentation for the three diagnoses, Dr. Munzing deemed the diagnoses inappropriate. Tr. 241–44. Without an appropriate diagnosis, there was no legitimate medical purpose for the controlled substance prescriptions. Tr. 172, 207, 241–44. Similarly, there was no documented treatment plan. Tr. 241–44. On February 2, 2017, S.B. presented to the clinic suffering from fibromyalgia and ADD. Tr. 173; GX 1 at 59. The Respondent diagnosed her with fibromyalgia-opioid dependent, refusing detox, and ADD. He prescribed hydrocodone, carisoprodol, and Adderall. Tr. 173–74. Again, there was no medical history justifying the diagnosis. The physical exam conducted on February 2, 2017, consisted of blood pressure, cardiovascular, heart and lung, all of which were normal. Again, the physical exam was insufficient to justify the fibromyalgia and ADD diagnoses. Tr. 175. There was no documentation of the pain level, or functionality level, to justify continued controlled substance prescribing. Tr. 175–76. For the progress notes of June 28, 2017, the Respondent diagnosed her with fibromyalgia-opioid dependent, refusing detox, and ADD. He prescribed hydrocodone, carisoprodol, and Adderall. Tr. 177. Again, there was no medical history justifying the diagnoses. There was no documentation of the pain level, or functionality level, to justify continued controlled substance prescribing. Tr. 177–78; GX 1 at 57. Again, blood pressure and heart and lung exams were performed. Tr. 177. There was insufficient medical evidence to justify the three diagnoses. Tr. 177–78. For the progress note for December 21, 2018, S.B. presented with eczema and fibromyalgia. Tr. 179; GX 1 at 49. The Respondent diagnosed her with fibromyalgia-opioid dependent, refusing detox. She was prescribed hydrocodone. No history was recorded. Again, blood pressure and heart and lung exams were performed. Tr. 180. There was no documentation of the pain level or functionality level, to justify continued controlled substance prescribing. Tr. 180. There was insufficient medical evidence to justify the fibromyalgia diagnosis. Tr. 181. In the progress notes for January 30, 2019, S.B. reported to the clinic with ADD and rhinitis. Tr. 181; GX 1 at 47. She was prescribed Adderall for the ADD. No medical history was taken. ADD patient progress was reported as ''stable.'' There was insufficient medical evidence to justify the ADD diagnosis. Tr. 183. Dr. Munzing deemed the ADD diagnoses inappropriate. Without an appropriate diagnosis, there is no legitimate medical purpose for the controlled substance prescription. Tr. 185–86. During the subject period of the Respondent's treatment of S.B., he never obtained any prior medical records. Tr. 184. He never recorded a history, which would justify his diagnoses for Fibromyalgia, GAD, or ADD. Tr. 184–85. He never reported a sufficient physical or mental exam to justify the Fibromyalgia, GAD, or ADD diagnoses. *Id.* He never reported a sufficient evaluation to justify his diagnoses for Fibromyalgia, GAD, or ADD. *Id.* The relevant controlled substance prescriptions for S.B. were not issued within the California standard of care, nor were they issued within the usual course of professional practice. Tr. 186–87, 244.

Dr. Munzing observed that the diagnoses would come and go in the records and were inconsistently reported, which is atypical for chronic diagnoses. Tr. 188–97. A chronic disease, with symptoms that appear to come and go would raise the question of whether the patient had the disease at all. Tr. 192. Even a lessening of symptoms should cause evaluation as to whether tapering of medication would be appropriate. Tr. 196.

Dr. Munzing noted that the Respondent prescribed S.B. both hydrocodone and Soma to treat Fibromyalgia on numerous occasions. Tr. 197–98. On other occasions, he prescribed the hydrocodone only without documenting any explanation for changing the medication protocol, which was beneath the California standard of care for documentation. Tr. 198–201; GX 20 at 61. [Dr. Munzing testified that Respondent did not establish a legitimate medical purpose for issuing to S.B. any of the controlled substances at issue. Tr. 201.] Dr. Munzing noted that S.B. was prescribed a dangerous, highly addictive combination of medications that was popular for abuse and diversion; namely hydrocodone and Soma, which are respiratory depressants, and Adderall. Tr. 202.

Another dangerous combination, hydrocodone, Adderall and Xanax was prescribed March 1, 2017, April 2017, and June 2017. Tr. 203; GX 1. Dr. Munzing noted this combination is referred to by drug abusers as the ''new Holy Trinity.'' Tr. 204. It includes the depressants, hydrocodone and Soma, and is followed by the stimulant, Adderall, to counteract the effects of the depressants. Again, the combination of hydrocodone and Soma are the subject of the FDA ''black box'' warning. Tr. 205. The high dosage of Xanax, 6 mg per day, heightens the risk of this already dangerous combination. With Xanax and Adderall prescribed at their highest commercially available dosage units, the danger and risk of addiction are further increased. Tr. 205. Additionally, two mg tablets of Xanax are popular for abuse and diversion. Tr. 217–18. On September 29, 2017, and monthly from July 2018, to July 2019, S.B. was prescribed hydrocodone and Adderall. Besides the serious risk of addiction posed by these two Schedule II medications, the hydrocodone was prescribed at a daily dosage of 60 mg MME, which significantly increases the risk of overdose and death. This risk was increased by its combination with Adderall. Tr. 206–07. Dr. Munzing could not foresee any medical condition in which this combination would be appropriate. Tr. 211–12.

Dr. Munzing noted that the medical records failed to disclose any indication that the Respondent warned S.B. regarding the risks associated with these dangerous combinations of controlled

substances. This failure precludes any informed consent by S.B. Tr. 207. The Declaration of Pain Medication Use document in the file, dated August 3, 2016, which requires the patient to alert the Respondent if the patient takes additional medications [(other than those prescribed by Respondent)] because they could result in drug interactions, does not put the patient on notice of the dangerous combinations prescribed by the Respondent. Tr. 207–10; GX 1 at 67. Similarly, Dr. Munzing noted the repeated notation within the patient records of ''SED,'' which Dr. Munzing assumed meant, ''side effects discussed,'' was insufficient documentation within the standard of care to establish that Respondent discussed the various risks of these medication combinations. Tr. 210–11; GX 1 at 59.

In March, April and June of 2017, the Respondent prescribed S.B. Xanax at 6 mg per day, in excess of the FDA recommended daily limit of 4 mg per day. Tr. 212–15; GX 1 at 57, 58, 59. GX 22 at 40, 59–61. In May of 2017, the Xanax was abruptly stopped. Tr. 216–17; GDX 1. And abruptly restarted in June of 2017, and again stopped. Tr. 217. This is very dangerous as the abrupt stoppage of Xanax without titration, especially at this high dosage, can cause seizures, and restarting at this high dosage can trigger an overdose, especially in conjunction with the prescribed opioid. Tr. 212–18.

Dr. Munzing testified that regarding the monitoring of S.B., there were no urine drug screens evident in the records, which the standard of care would have required at least quarterly. Tr. 218–21; GX 1 at 44. In the progress notes for February, March, April 2017, all the way to January 30, 2019, the Respondent noted ''refusal to detox.'' Tr. 220–21, 227–29; GX 1 at 58, 59. This is a huge red flag for opioid use disorder and for diversion. However, the chart reflects the Respondent did not take any necessary action, such as CURES monitoring, random pill count, UDS, counseling, or titration. Rather, he simply prescribed the same levels of medications she was on, PRN. Tr. 222–23. The Respondent's course of action was outside the California standard of care. Tr. 223, 229. Respondent's medical file for S.B. contained a June 2017 report from Dr. F., an orthopedic surgeon who saw S.B. for reported neck and back pain. According to Dr. F's report, S.B. reported her past medical history as only ''anxiety.'' Tr. 229; GX 1 at 30, 32, 36–42, 56. She did not report Fibromyalgia or ADD. Tr. 229–30. S.B. further reported to Dr. F. that she was not then taking any medication for pain, which is contrary to the Respondent's medical records and prescription evidence. Tr. 231–32. Dr. F.'s report was part of S.B.'s disability application, claiming disability as of June 15, 2017. A report from Chiropractor B.H. is also included in the disability packet. Tr. 235. Dr. B.H. reports the disability was caused by ''accident or trauma,'' which is inconsistent with what the patient reported to Dr. F. and to the Respondent. Tr. 236. There is no indication within the Respondent's records for S.B. that he ever discussed, with S.B. or with Dr. F., the discrepancies revealed by Dr. F.'s report. Tr. 233–37.

Contemporaneous to the preparation of the disability claim, Dr. Rabadi ordered a series of radiologic tests on S.B., none of which were related to the Respondent's diagnosis of fibromyalgia. The progress notes from August 17, 2017, say that S.B. presented with ''overactive thyroid, gait disturbance.'' Tr. 237–40; GX 1 at 5, 7, 9, 11, 13, 16, 17, 56. Dr. Rabadi ordered an MRI of the brain to rule out MS, a thyroid ultrasound to rule out hyperthyroidism, an MRI of the lumbar spine, and an MRI of the thoracic spine. The MRI of the cervical spine was ordered by Dr. F. Tr. 241.

[Dr. Munzing, summarizing his opinions based on his review of the entire file for S.B., testified that Respondent never took a proper medical or mental health history, never conducted a sufficient physical or mental health examination for S.B.'s relevant diagnoses, never made an appropriately supported diagnosis, never recorded S.B.'s pain and functionality level, never documented an appropriate treatment plan with goals or objectives, never appropriately documented discussion of the risks of the prescribed controlled substances with S.B., never appropriately monitored S.B. and failed to appropriately respond to red flags of diversion. Tr. 241–44. Accordingly, Dr. Munzing opined that each of the relevant prescriptions Respondent issued to S.B. were issued without a legitimate medical purpose, outside the usual course of professional practice and beneath the standard of care in California. Tr. 244.]

Patient M.B.

After a review of M.B.'s patient file, CURES report and related prescriptions, Dr. Munzing observed that between January 5, 2018, and November 20, 2019, the Respondent prescribed hydrocodone and Adderall. Tr. 245. As with patient S.B., Dr. Munzing characterized the patient file as containing ''very little'' information. Tr. 245–47. The Respondent never obtained prior medical records of M.B. Tr. 288. Dr. Munzing observed that none of the subject prescriptions were within the California standard of care. Tr. 248, 289.

On April 19, 2006, M.B. presented for his first visit. Tr. 248–49; GX 3, p. 88, 91. In his ''Comprehensive History and Physical Examination,'' the Respondent reported that M.B. presented with symptoms of ''chronic back pain, left knee pain, dyslipidemia.'' Tr. 249–50. However, there are no appropriate diagnoses relating to the back and knee pain and therefore no legitimate medical purpose for prescribing hydrocodone.[*E] Tr. 250–51, 258. To address the reported pain, the Respondent prescribed hydrocodone. Tr. 252. The file fails to evidence sufficient history to justify the pain prescriptions under the standard of care. Tr. 252–54. The file fails to evidence any physical exam to justify the pain prescriptions under the standard of care.[*F] Tr. 254–55, 258, 287. The file fails to evidence any treatment plan or goals, or past drug abuse to justify the pain prescriptions under the standard of care. Tr. 254–55, 258, 287.

Although M.B. declared on a ''Declaration of Pain Medication Use'' form that he had no prior drug abuse in August 2009, which was three years after his first visit, such static declaration does not satisfy the physician's ongoing responsibility under the standard of care to monitor this issue [to determine whether the patient is ''currently using drugs.''] Tr. 259–61; GX 3 at 93.

On July 9, 2013, M.B. presented with ADD and neck pain. Tr. 261–62; GX 3 at 46. He was prescribed Adderall for the ADD. Tr. 262. Again, the records reveal there was no history taken to support the diagnosis or justify the prescriptions for Adderall. Tr. 262. There was no evident evaluation done by the Respondent. Tr. 287. There was no treatment plan. Tr. 263. Although

[*E] Dr. Munzing clarified that ''knee pain and back pain are really symptoms, and chronic back pain is essentially, you have a symptom that's there ongoing.'' Tr. 250. He further testified that these symptoms are not diagnoses, though Respondent treated them as such, and that the distinction is important because the way knee and back pain are treated differs ''depending on the more specific diagnoses or diagnosis causing the symptoms.'' Tr. 251.

The Government's attorney and Dr. Munzing agreed about the importance of this distinction and the Government's attorney apologized in advance that he might refer to certain symptoms as diagnoses as ''shorthand,'' even though they both understood what he meant. *Id.*

[*F] Dr. Munzing testified, ''there was no back exam. There was no knee exam. Again, heart, lung, abdomen. There is a head, ear, eyes exam. . . . He, once again, did a testicular and a rectal exam. But there is no back and knee exam evident.'' Tr. 256.

there was a diagnosis related to the neck pain, there was no history or physical exam evident in the file. Tr. 263–64. The Respondent never established a legitimate medical purpose for hydrocodone. Tr. 264. On September 6, 2013, M.B. presented with ADD. Tr. 264–65; GX 3 at 46. He was prescribed Adderall for the ADD, but at double the dosage of the previous visit without any reported justification. Tr. 264–65.

Dr. Munzing testified that on January 5, 2018, M.B. presented to the clinic. Tr. 265–66; GX 3 at 37. He was prescribed hydrocodone and Adderall. There was no medical history, assessment of M.B.'s response to treatment, evaluation of pain or functioning, substance abuse history, diagnoses, rationale for establishing a legitimate medical purpose for prescribing or to justify continuing the medication regimen. Tr. 265–66. On March 6, 2018, M.B. presented to the clinic with ''ADD and opioid dependency.'' Tr. 266–67; GX 3 at 36. Absent was any report of pain. He was diagnosed with ''Opioid dependency, refusing detox.'' Tr. 267. Hydrocodone as treatment for opioid dependency is not a legitimate medical purpose and is outside the usual course of professional practice. Tr. 268. He was prescribed hydrocodone, which not only is outside the standard of care, but is illegal in California.*G Tr. 267–68. Dr. Munzing observed that the Respondent prescribed hydrocodone repeatedly to address his diagnosis of opioid dependency until November 20, 2019. Tr. 268–69. On November 20, 2019, M.B. presented with ADD and back pain. Tr. 269; GX 3 at 27. He was prescribed Adderall, and his hydrocodone was increased. Tr. 270. No medical history was taken or updated. No response to treatment or patient functionality was included. Although vital signs were taken, no physical or mental exam was performed. Tr. 270–71. There was no appropriate diagnosis for the back pain. Tr. 272. There was no evaluation for ADD, such as mental functioning. Tr. 271, 274, 287–88. The Respondent never obtained a sufficient history to support the diagnosis for ADD. Tr. 273. There was no appropriate diagnosis for ADD. Tr. 272.

[Dr. Munzing, in summary, testified that Respondent never took a proper medical or mental health history and never conducted a sufficient physical or mental health examination for M.B.'s relevant diagnoses; therefore, he never made an appropriately supported diagnosis. Tr. 273–74. Accordingly,] the Respondent never established a legitimate medical purpose to prescribe either hydrocodone or Adderall to M.B. throughout the reported treatment. Tr. 274. Dr. Munzing opined that such prescriptions were not issued in the usual course of professional practice, were not for a legitimate medical purpose, and were outside the standard of care. Tr. 274–75.

Dr. Munzing noted the inconsistency of the various diagnoses. Diagnoses would come and go within the records. Tr. 275–278; GX 3 at 35, 37, 43, 67. Although the recorded diagnoses were always treated with hydrocodone, the diagnoses varied greatly; [in 2009, it was prescribed for shoulder pain, in 2013, it was prescribed for neck pain, in 2014, it was prescribed for back pain, in 2018, it was prescribed for opioid dependency, and sometimes there was no diagnosis whatsoever given for the hydrocodone prescribed. Tr. 275–78.] Yet no explanation for the changing diagnoses is included in the file, as required by the standard of care. Tr. 278–80.

Dr. Munzing noted the serious dangers occasioned by the combination of Adderall and hydrocodone by reference to his testimony regarding S.B.'s similar prescriptions.[7] Tr. 281. Dr. Munzing deemed this combination of medications for over ten years inappropriate and unsafe. Tr. 284. The only semblance of a warning to M.B. regarding these dangerous combinations appeared in a 2009 ''Controlled Substance Therapy Agreement.'' For the same reasons as Patient S.B., Dr. Munzing deemed the signed form wholly insufficient to satisfy the California standard of care in this regard. Tr. 281–82; GX 3 at 92. Similarly, the notation within the file, ''SED'' was insufficient to satisfy the standard of care. Tr. 283. Dr. Munzing also testified that there was never a UDS ordered for M.B., which was necessary under the standard of care for any patient receiving opioids, but especially for a patient who has refused opioid detox. Tr. 284–85. A patient diagnosed with opioid dependency and refusing detox is also a red flag of abuse and diversion. Such red flag was not appropriately addressed by the Respondent repeatedly as to M.B. Tr. 285–87; GX 3 at 36.

[Dr. Munzing, summarizing his opinions based on his review of the entire file for M.B., testified that Respondent never took a proper medical or mental health history, never conducted a sufficient physical or mental health examination for M.B.'s relevant diagnoses, never made an appropriately supported diagnosis, never recorded M.B.'s pain and functionality level, never documented an appropriate treatment plan with goals or objectives, never appropriately documented discussion of the risks of the prescribed controlled substances with M.B., never appropriately monitored M.B. for medication compliance and failed to appropriately respond to red flags of diversion. Tr. 287–89. Accordingly, Dr. Munzing opined that each of the relevant prescriptions Respondent issued to M.B. were issued without a legitimate medical purpose, outside the usual course of professional practice and beneath the standard of care in California. Tr. 289–90.]

Patient B.C.

Dr. Munzing reviewed the subject prescriptions, patient file and CURES report for Patient B.C., which he described as containing ''very little.'' Tr. 290–92; GDX 3. He opined that the subject controlled substance prescriptions issued for hydrocodone, Xanax and Adderall, from January 25, 2017, to December 19, 2019, were all issued outside the California standard of care. Tr. 290–92, 335–38. B.C. presented on March 27, 2014, with GAD and back pain. Tr. 293–94; GX 5 at 48, 55. B.C. was diagnosed with GAD and back pain, refusing detox. He was prescribed Xanax (6 mg per day) for the GAD, and hydrocodone for the back pain, refusing detox. Tr. 294. Dr. Munzing reiterated the risks involved in prescribing 6 mg of Xanax per day. Tr. 295.

The records failed to disclose the minimum history necessary under the standard of care to appropriately diagnose ''back pain'' and GAD [or to prescribe controlled substances to treat those conditions.] Tr. 295–96. Other than limited vital signs, the records failed to disclose the minimum physical examination necessary under the

*G As written, this language suggests that there is a specific California law prohibiting hydrocodone prescriptions for individuals who are opioid dependent and refusing detox. The Government did not introduce specific evidence of any such law. However, the Government, through Dr. Munzing's testimony, has established that opioid dependency is not a legitimate medical purpose for prescribing hydrocodone and that such prescriptions are outside the usual course of professional practice. Furthermore, the Government has established that prescribing without a legitimate medical purpose and outside of the usual course of professional practice is a violation of Cal. Health & Safety Code § 11153(a). Accordingly, I agree that the conduct is illegal and have moved the sentence for clarity.

[7] On September 29, 2017, and monthly from July 2018, to July, 2019, S.B. was prescribed hydrocodone and Adderall. Besides the serious risk of addiction posed by these two Schedule II medications, the hydrocodone was prescribed at a daily dosage of 60 mg MME, which significantly increases the risk of overdose and death. This risk was increased by its combination with Adderall. Tr. 206–07. Dr. Munzing could not foresee a medical condition in which this combination would be appropriate. Tr. 211–12.

standard of care to appropriately diagnose ''back pain,'' or to justify a hydrocodone prescription. Tr. 296–97. Dr. Munzing could not remember seeing any prior medical records in the Respondent's subject files. Tr. 297. There were no entries in B.C.'s file indicating physical or mental functioning. Tr. 298, 335–38. There was no treatment plan indicated. The Declaration of Pain Medication Use, signed by B.C. at his first visit, as discussed previously, is insufficient to evaluate B.C. and to establish informed consent for the controlled substances prescribed. Tr. 299–300. There was insufficient medical evidence to support either diagnosis. Tr. 298, 335–38. Accordingly, there was no legitimate medical purpose for either controlled substance prescription. Tr. 299, 335–38.

B.C. presented on May 20, 2014, with ADD and was prescribed Adderall. Tr. 301–02; GX 5 at 47. The ADD diagnosis was deficient, as no history was developed, no mental functioning was assessed, the medical evidence was deficient, and a treatment plan was lacking. The Respondent failed to establish a legitimate medical purpose for prescribing Adderall. Tr. 302. Additionally, starting B.C. on 30 mg of Adderall twice daily is a very high dosage, and extremely inappropriate to an Adderall naive patient, which is not developed within the patient file. Tr. 302–03.

According to Dr. Munzing, B.C. presented on January 25, 2017, with ADD, opioid dependency and GAD. Tr. 303; GX 5 at 33. He was diagnosed with ADD for which he was prescribed Adderall, and GAD for which he was prescribed Xanax (6 mg per day). Tr. 304. Pain levels were not reported at this visit. The diagnoses were unsupported by sufficient medical history, medical evaluation, response to treatment, patient functionality, and medical evidence. Tr. 304–06. He failed to establish a legitimate medical purpose for both Adderall and Xanax. Tr. 306, 335–38. The Respondent further diagnosed, ''Opioid dependency, refusing detox'' for which the Respondent again prescribed hydrocodone. Tr. 306. Hydrocodone as treatment for opioid dependency is not a legitimate medical purpose and is outside the usual course of professional practice. Tr. 307. Prescribing hydrocodone for opioid dependence is not only outside the standard of care, but it is illegal in California. Tr. 307. A patient diagnosed with opioid dependency and refusing detox is also a red flag of abuse and diversion. Such red flag was not addressed by the Respondent repeatedly as to B.C. Tr. 306–07; GX 5, at 33.

On July 31, 2018, B.C. presented with ADD, back pain and GAD. Tr. 308; GX 5 at 28. He was diagnosed with ADD for which he was prescribed Adderall (60 mg per day), ''back pain, opiate dependent, refusing detox'' for which he was prescribed hydrocodone, and GAD for which he was prescribed Xanax (6 mg per day). Tr. 308. There was no medical history supporting the prescriptions. There was no indication how the patient was responding to treatment and no indication that a physical exam was performed to support the diagnoses or justify the prescriptions. Tr. 308–09, 335–38. There was no reference to pain levels or physical functionality. Tr. 309–10. There was no reference to mental functioning with respect to the ADD and GAD diagnoses. Though three diagnoses were recorded, Dr. Munzing testified that none of them were appropriate. Tr. 309–10. Neither did Respondent establish a legitimate medical purpose for the three controlled substance prescriptions. Tr. 311.

B.C. presented on December 19, 2019, with ADD and back pain, which were also his diagnoses, and for which he was prescribed Adderall (60 mg per day) and hydrocodone. Tr. 311–12; GX 5 at 20. The record is lacking documentation of a medical history, any updated medical history, the patient's state of health, how he is responding to treatment, a physical exam, pain levels, mental or physical functioning, appropriate rationale for continued treatment, and information relating to drug abuse. Tr. 312–13, 335–38. As a result, the three diagnoses are without sufficient medical evidence. Tr. 313. Dr. Munzing testified that each of the controlled substance prescriptions were issued without a legitimate medical purpose, outside the usual course of professional practice, and beneath the standard of care. Tr. 313–16, 335–38.

Dr. Munzing noted the inconsistency of diagnoses throughout B.C.'s records and the dual prescribing of hydrocodone, sometimes for opioid abuse, sometimes for skeletal pain, and sometimes for both, without explanation in the record. Tr. 316–19; GX 5 at 31, 32, 33. [Dr. Munzing explained that it ''would be important to document [what is] going on here.'' Tr. 318.] Dr. Munzing noted the GAD and ADD diagnoses appear and disappear within the record, as do their treatment medications without explanation. Tr. 319–24; GX 5 at 27, 31, 32, 33. Dr. Munzing deemed it highly unlikely that ADD and GAD were appropriate diagnoses.[*H] Tr. 322, 324.

Dr. Munzing also testified that the Respondent prescribed B.C. a combination of hydrocodone, Adderall and Xanax. Tr. 327; GDX 3. Dr. Munzing could not conceive of a medical condition warranting this dosage, duration, and combination of medications, noting Adderall is counter-indicated for GAD, and combining Xanax with an opioid represents a dangerous combination that is contrary to an FDA black box warning and CDC guidance. Tr. 327–29, 332–33; GDX 3. A further concern, as detailed earlier in his testimony, is reflected by the repeated combination of hydrocodone and Adderall by the Respondent. Tr. 329–30; GDX 3. These dangerous combinations were prescribed without an established legitimate medical purpose, outside the usual course of professional practice, without sufficient warnings and informed consent, without sufficient patient monitoring, and without regard to obvious red flags. Tr. 330–35.

[Dr. Munzing, summarizing his opinions based on his review of the entire file for B.C., testified that Respondent never took a proper medical or mental health history, never conducted a sufficient physical or mental health examination for B.C.'s relevant diagnoses, never made an appropriately supported diagnosis, never recorded B.C.'s pain and functionality level, never documented an appropriate treatment plan with goals or objectives, never appropriately documented discussion of the risks of the prescribed controlled substances with B.C., never appropriately monitored B.C. for medication compliance and failed to appropriately respond to red flags of diversion. Tr. 335–37. Accordingly, Dr. Munzing opined that each of the relevant prescriptions Respondent issued to B.C. were issued without a legitimate medical purpose, Tr. 330, outside the usual course of professional practice and beneath the standard of care in California. Tr. 330, 338.]

[*H] Dr. Munzing's opinion regarding the credibility of any assigned diagnosis is not particularly relevant to my analysis. Here, the standard of care requires that a diagnosis be based on a patient's history and physical examination. *See infra,* The Standard of Care for Prescribing. Accordingly, where, as here, Dr. Munzing has testified that the diagnosis was not adequately supported by the patient's history and physical examination, then I find that, based on his expert testimony, the diagnosis is inadequate to serve as the basis for the prescribed prescriptions. This is true whether or not a practitioner acting in the usual course of professional practice could have properly reached the same diagnosis for that individual.

Patient J.C.

Dr. Munzing reviewed the subject prescriptions issued from January 16, 2018, to December 30, 2019, patient records and CURES data relating to Patient J.C. Tr. 381–82; GDX 4. Dr. Munzing opined that none of the subject prescriptions issued to J.C. were issued within the California standard of care. Tr. 382. J.C. presented to the Respondent's clinic on May 18, 2009, with a headache and GAD. Tr. 383–384; GX 7, at 216, 233. He was prescribed hydrocodone for migraine and Xanax for GAD and remained on this medication regimen for a long period. As to the migraine diagnosis, insufficient medical history was obtained, symptom evaluation was absent, no neurological exam was conducted, no evaluation of functioning level was made, no treatment plan was evident, and no evaluation of possible drug abuse was provided. Tr. 384–90. In short, there was insufficient medical evidence to support the diagnoses of migraines and GAD, nor was there a legitimate medical purpose to prescribe hydrocodone and Xanax. Tr. 386–88.

[On August 17, 2009, J.C. signed a ''Declaration of Pain Medication Use'' form indicating that he had no prior drug abuse, and Dr. Munzing testified that there is no record of J.C. ever being asked about illicit substance abuse again. Tr. 389–90. Dr. Munzing testified that the 2009 Declaration was an insufficient inquiry to cover Respondent's prescribing during the relevant period. *Id.*]

J.C. presented on July 21, 2016, with ''GAD, chronic back pain, consented for H&P.'' Tr. 390; GX 7 at 189. He was diagnosed with GAD and back pain—refusing detox for which he was prescribed Xanax and hydrocodone, respectively. Tr. 390–91. There was no updated history taken for either diagnosis, no physical exam, no treatment plan, no response to treatment, no pain or functioning level evaluations, no discussion regarding drug abuse, and no rationale for continued treatment, as required by the standard of care. Tr. 390–94. There was deficient medical evidence to support either diagnosis. The Respondent did not establish a legitimate medical purpose to prescribe the controlled substances. Tr. 393–94. J.C. presented on January 16, 2018, with GAD and back pain for which he was diagnosed with GAD and back pain, opiate dependent, refused detox. Tr. 394–95; GX 7 at 180. He was prescribed Valium for the GAD (Klonopin was discontinued), and hydrocodone for back pain, although no explanation was given for substituting the Valium for the Klonopin. Tr. 395. There was no medical history included in the records, no response to treatment, no physical exam, no pain or functioning evaluation, no drug abuse history, rendering each diagnosis inappropriate. Tr. 395–97. Without a legitimate medical purpose, there was no appropriate rationale for continued treatment with controlled substances. Tr. 396–98. J.C. presented on February 16, 2018, with ''opioid dependency, GAD,'' yet without the previously noted back pain. Tr. 398; GX 7, 9. There was no reference to pain. He was diagnosed with ''Opioid dependency, refusing detox'' for which he was prescribed hydrocodone, which again, is outside the usual course of professional practice and illegal in California. Tr. 398–400. The diagnosis for opioid dependency that was treated with hydrocodone appeared repeatedly in the records. Tr. 399. J.C. presented on May 6, 2019, however no treatment notes for this visit are evident in the file. Tr. 401; GX 4, GX 7 at 168.

On April 9, 2019, J.C. presented with GERD and back pain for which he was prescribed hydrocodone. Tr. 402. However, there was no medical history included in the records, no response to treatment, no adequate physical exam, no pain or functioning evaluation, no mental health history, and no drug abuse history, which rendered the back pain diagnosis inappropriate. Tr. 402–04. Without a legitimate medical purpose, there was no appropriate rationale for continued treatment with controlled substances. Tr. 402–04. On December 30, 2019, J.C. presented with GERD and GAD. Tr. 404; GX 7, p. 171. He was prescribed Valium for the GAD. However, there was no appropriate medical history included in the records, no response to treatment, no documented evaluation for GAD or functioning evaluation, no mental health history, and no drug abuse history, rendering the GAD diagnosis inappropriate from January 16, 2018, to December 30, 2019. Tr. 404–08, 425–28. Without a legitimate medical purpose, there was no appropriate rationale for continued treatment with controlled substances. Tr. 408, 425–28. Such prescriptions, from January 16, 2018, to December 30, 2019, were issued outside the standard of care, without legitimate medical purpose and outside the usual course of professional practice. Tr. 408, 425–28.

Dr. Munzing noted the inconsistency of diagnoses throughout J.C.'s records, and the dual prescribing of hydrocodone for opioid abuse, migraines, and for skeletal (sometimes neck, sometimes back) pain, without documenting an explanation for the changes in the record. Tr. 410–14; GX 7 at 188, 189, 205, 214, 215. [There was never any discussion regarding ''where one condition was going and another was coming from'' as Dr. Munzing agreed ''would be important for a practitioner acting within the standard of care to understand'' and to document. Tr. 414.] Dr. Munzing noted the skeletal pain diagnoses appears and disappears within the record. Tr. 414–15. Dr. Munzing suspected the skeletal pain complaints were not legitimate. Tr. 415; GX 7 at 188, 189, 205, 214, 215. Dr. Munzing noted the Respondent had prescribed a combination of hydrocodone and Valium monthly between January 2018 and January 2019 without a legitimate medical purpose. Tr. 416–17; GX 4. Combining Valium with an opioid represents a dangerous combination and is contrary to an FDA black box warning and to CDC guidance, especially with the Valium at its highest available strength. Tr. 417. Dr. Munzing could not envision a condition for which this medication regimen would be appropriate treatment. Tr. 418. These dangerous combinations were prescribed without an established legitimate medical purpose, outside the usual course of professional practice, without sufficient warnings and informed consent, without sufficient patient monitoring,[*1] and without addressing obvious red flags. Tr. 418–23; GX 7 at 19, 25, 27, 180, 225.

[Dr. Munzing, summarizing his opinions based on his review of the entire file for J.C., testified that Respondent never took a proper medical or mental health history, never conducted a sufficient physical or mental health examination for J.C.'s relevant diagnoses, never made an appropriately supported diagnosis, never recorded J.C.'s pain and functionality level, never documented an appropriate treatment plan with goals or objectives, never appropriately documented discussion of the risks of the prescribed controlled substances with J.C., never appropriately monitored J.C. for medication compliance and failed to appropriately respond to red flags of diversion. Tr. 424–27. Accordingly, Dr. Munzing opined that each of the relevant prescriptions Respondent issued to J.C. were issued without a legitimate medical purpose, outside the usual course of professional

[*1] Dr. Munzing testified that given the prescribed combination of medications and how ''highly sought after [they are] in the drug abusing community,'' it would have been ''[v]itally important'' to conduct appropriate ongoing monitoring, which was not done and was therefore outside the standard of care here. Tr. 421.

practice and beneath the standard of care in California. Tr. 428.]

Patient D.D.

Dr. Munzing reviewed the subject prescriptions issued from January 4, 2018, to February 12, 2019, patient records and CURES data relating to Patient D.D. Tr. 428–29; GDX 5. Dr. Munzing opined that none of the subject prescriptions issued to D.D., which were for hydrocodone, Soma, and Xanax, were within the California standard of care. Tr. 430. Again, the records contained ''very little information.'' Tr. 429. D.D. presented on July 9, 2008, with GAD and back pain. Tr. 430–31 GX 9 at 74. For the GAD, he was prescribed Valium. For back pain, he was prescribed hydrocodone and Soma. Tr. 431. The medical records reflect that D.D. refused an MRI and refused referral to orthopedist or a pain specialist. Tr. 431. According to Dr. Munzing, each refusal is a red flag, and suggestive of drug-seeking behavior. Tr. 432. [''Those are huge red flags. [For] someone who truly wants to be treated for back pain to be refusing kind of ways to try to improve that or to better diagnose it through an MRI or an evaluation from a subspecialist are just enormous red flags and certainly brings in the distinct possibility [he] is here seeking drugs rather than really trying to get his pain managed.'' Tr. 432.] Instead of addressing the red flags, the Respondent prescribed opioids. Tr. 432. The Respondent's response was the same throughout the subject treatment of D.D., a total of nine and a half years. Tr. 433.

According to Dr. Munzing, there was no appropriate medical history included in the records, no response to treatment, no physical exam, insufficient patient monitoring, no evaluation for GAD, no functioning evaluation, no mental health history, no drug abuse history, no discussion of risk factors and informed consent, and no patient monitoring, rendering the GAD and back pain diagnoses inappropriate from July 9, 2008, to January 4, 2019. Tr. 433–38; GX 9 at 37, 39, 41, 43, 44. Without a legitimate medical purpose, there was no appropriate rationale for continued treatment with controlled substances. Tr. 434–48. Such prescriptions, from July 9, 2008, to January 4, 2019,[*J] were issued outside the standard of care, without legitimate medical purpose and outside the usual course of professional practice. Tr. 434–48.

[On January 11, 2019, D.D. was diagnosed with GERD and ''back pain—opiate dependent refusing detox.'' Tr. 439. This is the last time Respondent prescribed D.D. both hydrocodone and Soma, but the medical records again reflected a lack of appropriate medical history, response to treatment, an appropriate physical examination, assessment of pain or physical functionality, an appropriate diagnosis, or an established legitimate medical purpose for the prescriptions. Tr. 439–40. On February 12, 2019, Respondent prescribed D.D. hydrocodone to treat opioid dependency—refusing detox without there being any mention of pain. Dr. Munzing testified that this was outside the standard of care for all of the reasons he had previously testified. Tr. 441–42. Dr. Munzing testified that at no point during the treatment period did Respondent ever obtain a sufficient history to establish a diagnosis for back pain or support prescribing of hydrocodone and that the prescriptions for hydrocodone and Soma were not issued within the usual course of professional practice and were outside the standard of care. Tr. 443–44.'']

Dr. Munzing noted a period of over a year when no diagnosis for GAD appeared in D.D.'s records, from May 10, 2017, to September 19, 2018, and the 30 mg daily dose of Valium was stopped. Tr. 447–48. Then on September 19, 2018, the Respondent was placed on 6 mg of Xanax, which is a very high dosage especially for the beginning dosage. [Dr. Munzing testified that Respondent failed to obtain sufficient medical evidence upon which to base a GAD diagnosis. Tr. 446.] Compounding this dangerous dosage of Xanax, D.D. was prescribed hydrocodone in combination, which heightened the risk of overdose [without any warning from Respondent regarding the dangers of the controlled substances being prescribed.] Tr. 446, 448–50, 458. [Dr. Munzing testified that there was no established legitimate medical purpose for prescribing Xanax to D.D. Tr. 446.]

Dr. Munzing noted the inconsistency of diagnoses throughout D.D.'s records and the dual prescribing of hydrocodone and Soma for fibromyalgia, opioid abuse, and skeletal pain (namely back pain or neck pain), without a documented explanation in the record. Tr. 450–56; GX 9 at 43, 51, 64, 70; GDX 5. Dr. Munzing noted the skeletal pain diagnoses appear and disappear within the record. Tr. 450–56. Dr. Munzing suspected the skeletal pain complaints were not legitimate. Tr. 456; GX 9 at 43, 51, 64, 70. Prescribing Soma with hydrocodone presents considerable risks to the patient. Each are respiratory depressants, which presents a significant risk of overdose, [and each is highly abused.] Tr. 458. [Dr. Munzing also reiterated the risks of prescribing both hydrocodone and Xanax together. Tr. 458. Dr. Munzing testified that in 2009, D.D. signed ''the same controlled substance therapy agreement we've seen with the previous four patients,'' and it was insufficient notice of the risks of using controlled substances for the reasons already discussed. Tr. 458–59. Dr. Munzing further testified that the record is lacking any documentation that Respondent adequately warned D.D. of the risks of the controlled substances he was taking, particularly in light of the various combinations and high dosages. Tr. 459–60.]

D.D. presented on March 23, 2019, with opioid dependency, refusing detox, which is a red flag. He was again prescribed hydrocodone and Soma. Tr. 463; GX 9 at 42, 43. [Dr. Munzing reiterated his testimony that hydrocodone is not an appropriate treatment for opioid dependency and added that neither is Soma. Tr. 454–55. Accordingly, Dr. Munzing testified, every relevant prescription for hydrocodone and/or Soma that was issued to treat opioid dependency was issued outside the standard of care. Tr. 455.] The Respondent failed to address this red flag repeatedly, instead prescribing Soma and hydrocodone. Tr. 465.

[Dr. Munzing, summarizing his opinions based on his review of the entire file for D.D., testified that Respondent never took a proper medical or mental health history, never conducted a sufficient physical or mental health examination for D.D.'s relevant diagnoses, never made an appropriately supported diagnosis, never recorded D.D.'s pain and functionality level, never documented an appropriate treatment plan with goals or objectives, never appropriately documented discussion of the risks of the prescribed controlled substances with D.D., never appropriately monitored D.D. for medication compliance and failed to appropriately respond to red flags of diversion. Tr. 465–68. Accordingly, Dr. Munzing opined that each of the relevant prescriptions Respondent issued to D.D. were issued without a legitimate medical purpose, outside the usual course of professional practice and beneath the standard of care in California. Tr. 468.]

Patient J.M.

Dr. Munzing reviewed the subject prescriptions and fill stickers issued from January 10, 2017, to December 31,

[*J] Only the prescriptions issued between January 4, 2018, and February 12, 2019, were alleged in the OSC and are relevant to my decision.

2019, patient records and CURES data relating to Patient J.M. Tr. 469–70; GDX 6. [Again Dr. Munzing testified there was ''very little information'' in the patient's medical records. Tr. 470.] Dr. Munzing opined that none of the subject prescriptions issued to J.C., namely for hydrocodone, Xanax and Soma, were issued within the California standard of care. Tr. 470–71.

On May 13, 2007, J.M. presented with hypertension, back pain, GAD, dyslipidemia and insomnia. Tr. 470–72; GX 7 at 104, 111. He was diagnosed with hypertension, back pain, GAD, dyslipidemia and insomnia. He was prescribed hydrocodone for back pain and Xanax (6 mg per day) for GAD. Tr. 472. Xanax and hydrocodone were recurring prescriptions. As discussed, the high dosage of Xanax was a concern to Dr. Munzing, as well as its combination with an opioid. Tr. 473.

According to Dr. Munzing, there was no appropriate medical history included in the records, no response to treatment, no physical exam of the back or other areas of issue, insufficient patient monitoring, no evaluation for GAD, no treatment plan, no pain or functioning evaluation, no mental health history, no ongoing drug abuse history or monitoring, no discussion of risk factors and informed consent, and no patient monitoring, which rendered the GAD and back pain diagnoses inappropriate from May 13, 2007, to January 13, 2017. Tr. 473–76, 478, 481–83, 485–500. The MRI dated May 30, 2007, and its ''mild'' findings, did not independently satisfy the Respondent's obligations or justify the subject prescriptions. Tr. 479–80, 485–87; GX 11 at 14, 16, 17, 22, 26, 31, 37, 41, 42, 115. [Dr. Munzing testified that for the five visits between January 10, 2017, through March 27, 2017, there is so little documentation that Dr. Munzing cannot tell whether the records reflect ''actual visits'' or just ''documentation of a refill of the medication.'' Tr. 482–85. This is because, according to Dr. Munzing, the records lack examination or history notations, documentation of the dose or strength prescribed, diagnoses, nothing to meet the standard of care for prescribing hydrocodone and Xanax for that period. Tr. 482–85.

The first prescription for Soma during the relevant time period was on April 13, 2017, and according to Dr. Munzing, the medical note said ''Xanax number 90, Soma number 50SED, and then a signature'' with absolutely nothing else recorded and none of the elements of the standard of care met. Tr. 485–86. Dr. Munzing testified specifically about selected office visits. On April 25, 2018, Respondent's records for J.M. contain information suggesting an office visit occurred, but they continue to have the same deficiencies. That day, J.M. was not diagnosed with pain, but with GAD and opioid dependence—refusing detox, which was treated with hydrocodone. Tr. 487. Dr. Munzing reiterated his concern that hydrocodone is not appropriate treatment for opioid dependence and was inappropriate each time it was prescribed for that purpose. Tr. 488. Dr. Munzing testified about the November 19, 2018 visit during which J.M. was prescribed Xanax for GAD and Soma for back pain; the February 20, 2019 visit during which he was prescribed Xanax for GAD and hydrocodone for back pain; and the December 31, 2019 visit during which he was prescribed Xanax for GAD and was not diagnosed with back pain. Tr. 489, 492–93, 495. Dr. Munzing again testified, amongst other things, that for each of these visits, there was an insufficient medical history or physical examination to make the diagnoses, there was no information regarding the response to treatment, pain level, or functionality, and there was no legitimate medical purpose established for the prescriptions at issue. Tr. 489–91, 493–97.] Without a legitimate medical purpose, there was no appropriate rationale for the controlled substance prescriptions, or to continue treatment with controlled substances. Tr. 473–76, 478, 485–500, 505; GDX 7.

There were also red flags left unaddressed by the Respondent. J.M. refused to see a pain specialist, which gives rise to the suspicion that he is not concerned about getting better, but just getting medicated. Tr. 476–77.[*K] Dr. Munzing noted that there were gaps in prescribing hydrocodone and Soma without any required explanation for changes to the medication regimen. Tr. 500–04; GX 11 at 36, 37, 40, 41, 42, 76. He observed that the hydrocodone was prescribed either for back pain or for opioid dependence. Tr. 504. However, as with the other patients, the required evaluation for the diagnoses coming and going and explanation for treatment is lacking. This further diminishes any medical legitimacy for prescribing hydrocodone. Tr. 504.

Additionally, on multiple occasions the Respondent prescribed a very addictive and dangerous combination of medications including an opioid and a benzodiazepine. Tr. 558–60. Even more concerning, he added a muscle relaxant, to this already dangerous combination to form the ''Holy Trinity,'' which is a favorite drug combination for abuse. Tr. 505–10. Dr. Munzing could not conceive of a medical condition in which the trinity combination would represent appropriate treatment. Tr. 512. This trinity of medications was prescribed to J.M. repeatedly. GDX 6. The file fails to reveal whether appropriate warnings were given to J.M. in connection with this dangerous combination. Tr. 511; GX 11 at 113. The CURES report reveals that 40 Xanax prescriptions (totaling 3600 dosage units and 7200 mgs) were issued to J.M. over a period of 22 months between January 2017 and November 2018. This means that Respondent was issuing a Xanax prescription to Respondent every 16 days on average for an average total of 10.5 mgs per day. Tr. 512–17, 527–28; GX 7, 17, 18. Ten and a half mgs per day is considerably greater than the maximum 4 mg per day recommended for treatment of anxiety. The CURES report lists two different dates of birth for J.M., as well as two different spellings of his first name. Tr. 517–18, 547–49; GX 18. A CURES search would be name and date of birth specific, so a search by one name and date of birth would not reveal prescriptions filed under the alternate name and date of birth. Tr. 526. The main sources of the CURES report information are two pharmacies, Reliable Rexall and Northridge Pharmacy. Tr. 518–19. Despite the fact that J.M. was using different names and dates of birth at different pharmacies, which was a considerable red flag suggesting abuse or diversion, the Respondent did not address these issues. Tr. 519–20, 525–26. Even if J.M. or the pharmacies were the source of the alternate dates of birth and alternate first names, with due diligence, the Respondent would have discovered that a search by a single name and date of birth would only include half of the Xanax prescriptions the Respondent issued to J.M. Tr. 521–26, 549–50. [Dr. Munzing testified that there is ''nothing in the notes'' addressing this red flag.'' Tr. 550.] Additionally, two prescriptions, one written by the Respondent and one called in by the Respondent on the same day, contain two different dates of birth. Tr. 533–34.

The CURES report also reveals J.M. was alternating the filling of the Xanax prescriptions between the two pharmacies—which could indicate that he was trying to hide the bi-monthly frequency of the prescriptions. Tr. 520; GX 17, 18. Dr. Munzing noted this was a suspicious prescribing practice by the Respondent. Tr. 530; GX 17, # 425 & 575.[8] He would issue two prescriptions

[*K] Omitted for relevance.

[8] These are prescription numbers.

on the same day to J.M., one for hydrocodone and one for Xanax. He would issue a written prescription for hydrocodone, which J.M. would invariably fill at Northridge Pharmacy, but would call in the Xanax prescription to Reliable pharmacy. Tr. 531–33, 535–45, 550–58; GX 11 at 32, 33, 35, 36, 38, 40, 41, GX 12 at 5, 6, 10, 11, 14, 22, 24, 27, 33, 34; GX 13, at 20, 25, 27, 32, 34; GX 17, 18 #473, #474, #994, #1120, #1228, #1386, #1472, #1553, #2102, #2229, #2341, #2342. Dr. Munzing testified that this could have been an attempt to avoid the suspicion generated by the opioid/benzodiazepine combination if filled at a single pharmacy. Tr. 532–33, 557–60. There was an additional suspicious circumstance related to a Xanax prescription. The Respondent wrote in his medical notes that the medication should be taken once every eight hours, but the call-in information to the pharmacy was once every six hours. Tr. 543–45, 554, 556–57. [Dr. Munzing testified ''[there is] not consistency between what [Respondent is] telling the pharmacist and what [he is] documenting in the progress note.'' Tr. 545.]

The red flag of refusing to detox was repeatedly evident within J.M.'s patient file. Tr. 562; GX 11 at 37. He was diagnosed with ''Opioid dependency, refusing detox'' for which he was prescribed hydrocodone, which again, is outside the usual course of professional practice and illegal in California. Tr. 563–64. The diagnosis for opioid dependency being treated with hydrocodone appeared repeatedly in the records. The Respondent never addressed this red flag. Tr. 564.

[Dr. Munzing, summarizing his opinions based on his review of the entire file for J.M., testified that Respondent never took a proper medical or mental health history, never conducted a sufficient physical or mental health examination for J.M.'s relevant diagnoses, never made an appropriately supported diagnosis, never recorded J.M.'s pain and functionality level, never documented an appropriate treatment plan with goals or objectives, never appropriately documented discussion of the risks of the prescribed controlled substances with J.M., never appropriately monitored J.M. for medication compliance and failed to appropriately respond to red flags of diversion. Tr. 564–67. Accordingly, Dr. Munzing opined that each of the relevant prescriptions Respondent issued to J.M. were issued without a legitimate medical purpose, outside the usual course of professional practice and beneath the standard of care in California. Tr. 567–68.] [*L]

Patient K.S.

Dr. Munzing reviewed the subject prescriptions and fill stickers issued from January 19, 2018, to January 31, 2019, patient records and CURES data relating to Patient K.S. Tr. 469–70; GDX 8. [Again Dr. Munzing testified there was ''very little'' information in the medical records. Tr. 569.] Dr. Munzing opined that none of the subject prescriptions issued to K.S., namely hydrocodone, Xanax and Adderall, were issued within the California standard of care. Tr. 568–70. K.S. presented on June 21, 2007, with ''back pain'' for which he was prescribed hydrocodone and Soma. Tr. 570; GX 13 at 117. Although the Respondent noted he would get an MRI for the lumbar spine, no such MRI appears in the records. Tr. 571. There was no medical history included in this record regarding back pain, no treatment plan, no response to treatment, no physical exam of the back or musculoskeletal area, no pain or functioning evaluation, no ongoing drug abuse history, rendering the back pain diagnosis inappropriate. Tr. 570–74. Without a legitimate medical purpose, there was no appropriate rationale for continued treatment with controlled substances for back pain. Tr. 571–74.

[On August 5, 2009, K.S. signed a ''Declaration of Pain Medication Use'' form indicating that he had no prior drug abuse, and Dr. Munzing testified that there is no record of K.S. ever being asked about illicit substance abuse again. Tr. 575. Dr. Munzing testified that the 2009 Declaration was an insufficient inquiry to cover prescribing at any point in time when Respondent was treating K.S. Tr. 576.]

On May 1, 2012, K.S. presented with GAD and neck pain. Tr. 576; GX 14 at 80. He was diagnosed with GAD and neck pain, and prescribed Xanax for GAD and hydrocodone for the neck pain, refusing detox. Tr. 577. K.S. was prescribed a combination of hydrocodone and Xanax frequently throughout his treatment. This combination of an opioid and a benzodiazepine is dangerous, beneath the standard of care and represents a red flag unresolved by the Respondent throughout the records. Tr. 578–79. There was no medical history supporting the prescriptions. There was no indication of how the patient was responding to treatment. There was no treatment plan and no indication a physical exam was performed to support the diagnoses or justify the prescriptions. Tr. 579–81. There was no reference to pain levels or physical functionality. There was no reference to mental functioning with respect to the GAD diagnosis. There was no appropriate diagnosis for the GAD and neck pain. Respondent did not establish a legitimate medical purpose for the controlled substance prescriptions. Tr. 580–81.

According to Dr. Munzing, K.S. presented on November 18, 2013, and was prescribed Adderall (60 mg per day) with no documented evaluation for or diagnosis of any condition that Adderall may treat. Tr. 581–82; GX 14 at 70. There is also no medical history, physical exam, or treatment plan, and accordingly, the subject prescription is without a legitimate medical purpose.[*M] Tr. 582.

On January 19, 2018, K.S. presented with GAD, back pain and ADD.[*N] Tr. 583, 599; GX 14 at 41. For GAD, the Respondent prescribed Xanax. For back pain—opioid dependent, refusing detox, the Respondent prescribed hydrocodone; and for ADD, Adderall. Tr. 584. The record is missing any medical history, any updated medical history, the patient's state of health, how he is responding to treatment, a physical exam, pain levels, mental or physical functioning assessment, appropriate rationale for continued treatment, and information relating to drug abuse. Tr. 583–86. As a result, the treatment is without sufficient medical evidence. Tr. 584–86. Accordingly, the subject charged prescriptions are without a legitimate medical purpose. Tr. 586.

On February 27, 2018, K.S. presented with ADD, opioid dependency and GAD. Tr. 586–87, 599–600; GX 14 at 39, 40. He was diagnosed with ADD, opioid dependency-refusing detox, and GAD. Back pain was not reported, nor was any report of pain made. At the April 30, 2018 visit, again, back pain was not reported, nor was any report of pain made. Tr. 601. Throughout the records, the Respondent failed to explain the appearance and disappearance of back pain. Tr. 601–02. Again, beneath the standard of care and against the law in California, K.S. was prescribed hydrocodone for opioid dependency, which Dr. Munzing testified was neither appropriate nor legal. Tr. 587–88. On November 28, 2018, K.S. presented with opioid dependency and GAD for which

[*L] This text replaces the ALJ's summary paragraph for consistency.

[*M] This sentence was modified for clarity.

[*N] Dr. Munzing testified that Respondent did not obtain sufficient medical evidence to diagnose K.S. with ADD at any point between the November 2013 visit and the January 2018 visit. Tr. 583.

he was diagnosed with opioid dependency-refusing detox and GAD, and for which he was prescribed hydrocodone and Xanax respectively. Tr. 588–589; GX 14 at 33; GDX 8. Again, beneath the standard of care and contrary to the law in California, K.S. was prescribed hydrocodone for opioid dependency. Tr. 588–89. And again, the medication regimen included the dangerous combination of an opioid and benzodiazepine. The record is missing any medical history, any updated medical history, the patient's state of health, how he is responding to treatment, a physical exam, pain levels, mental or physical functioning, any evaluation for GAD, appropriate rationale for continued treatment, and information relating to drug abuse. As a result, the treatment is without sufficient medical evidence. Tr. 588–89. Accordingly, the subject charged prescriptions were issued without a legitimate medical purpose, outside the usual course of professional practice, and beneath the standard of care. Tr. 590.

On December 11, 2018, K.S. presented with ADD and eczema for which he was diagnosed with ADD and eczema. Tr. 591; GX 14 at 33. For ADD, he was prescribed Adderall. [Dr. Munzing testified that the Adderall prescription lacked a legitimate medical purpose for the same reasons as the prior prescriptions he had just discussed. Tr. 591–93.] On January 31, 2019, K.S. presented with and was diagnosed with back pain and stomatitis. Tr. 593–94; GX 14 at 31. For the back pain he was prescribed hydrocodone. [Again, Dr. Munzing testified that the hydrocodone prescription lacked a legitimate medical purpose for the same reasons as the prior prescriptions he had just discussed. Tr. 594–95.]

A review of the entirety of K.S.'s subject medical records reveals that the Respondent never obtained any prior medical records. Tr. 596, 619. The record is missing an adequate prior medical history, any updated medical history, the patient's state of health, how he is responding to treatment, a physical exam, pain levels, mental or physical functioning, any evaluation for GAD, appropriate rationale for continued treatment, and information relating to drug abuse. As a result, the treatment is without sufficient medical evidence. Tr. 598–99, 620. Accordingly, the subject charged prescriptions were issued without a legitimate medical purpose, outside the usual course of professional practice, and beneath the standard of care. Tr. 597–98, 619–20.

[Dr. Munzing testified that, similar to the other patients, Respondent prescribed hydrocodone to K.S. for back pain, then neck pain, then for opioid dependency, and sometimes for a combination of these reasons, without any documentation regarding these changes or the coming and going of the pain issues as would be required by the standard of care. Tr. 598–602.] Dr. Munzing also noted the inconsistency of the GAD diagnoses throughout the records. Tr. 602–05; GX 14 at 31, 42, 47, 48. With the GAD diagnoses appearing and disappearing within the records and without any explanation, Dr. Munzing observed there is no medical evidence it was a medically legitimate diagnosis. Tr. 605–09; GX 8. Similarly, ADD was inconsistently diagnosed with Adderall inconsistently prescribed. Tr. 605–06; GX 14 at 34, 35; GX 8. With the ADD diagnoses appearing and disappearing within the records and without any explanation, Dr. Munzing observed there is no medical evidence it was a medically legitimate diagnosis. Tr. 609.

Dr. Munzing noted the Respondent prescribed a dangerous combination of medications, including hydrocodone, Adderall and Xanax, which was prescribed from January 2018, through August 2018. Tr. 609–10. Dr. Munzing noted it is referred to by drug abusers as the ''new Holy Trinity.'' Tr. 610. Additionally, the combination of an opioid and a benzodiazepine is present in August, October and November 2018. Tr. 610–11. The records fail to reveal that the appropriate warnings were conveyed to K.S., or that informed consent was obtained. Tr. 611–13; GX 8. Dr. Munzing could not conceive of a medical condition warranting the dangerous combinations of medications prescribed. Tr. 614. [Dr. Munzing also noted that Respondent failed to properly monitor medication compliance, and conducted no urine drug screens, as was required by the standard of care in California. Tr. 614.]

Dr. Munzing noted the Respondent's failure to resolve red flags, including K.S.'s diagnosis of opiate dependency with refusal to detox, the dangerous combinations of medications, and high dosages of controlled medications. Tr. 615–18, 620; GX 14 at 39, 40, 41. The refusal to detox is a major red flag for opioid use disorder and for diversion. However, the Respondent did not take any necessary action, such as CURES monitoring, UDS, counseling, or titration. Rather, he simply prescribed the same levels of medications she was on, PRN. Tr. 615–17. The Respondent's course of action was outside the California standard of care.

[Dr. Munzing, summarizing his opinions based on his review of the entire file for K.S., testified that Respondent never took a proper medical or mental health history, never conducted a sufficient physical or mental health examination for K.S.'s relevant diagnoses, never made an appropriately supported diagnosis, never recorded K.S.'s pain and functionality level, never documented an appropriate treatment plan with goals or objectives, never appropriately documented discussion of the risks of the prescribed controlled substances with K.S., never appropriately monitored K.S. for medication compliance and failed to appropriately respond to red flags of diversion. Tr. 617–20. Accordingly, Dr. Munzing opined that each of the relevant prescriptions Respondent issued to K.S. were issued without a legitimate medical purpose, outside the usual course of professional practice and beneath the standard of care in California. Tr. 620.

In summarizing the entire body of evidence he reviewed in this matter, Dr. Munzing opined that each of the controlled substance prescriptions at issue in this matter were issued ''outside the standard of care'' and that Respondent's prescribing of high dosages of these controlled substances ''absolutely'' constituted clear excessive prescribing. Tr. 621.]

Respondent's Case-in-Chief

The Respondent presented his case-in-chief through the testimony of one witness, the Respondent, Fares Rabadi, M.D.

Fares Rabadi, M.D.

Dr. Rabadi attended medical school in the former Soviet Union. Tr. 626. He underwent a three-year residency training in internal medicine at State University of New York School of Medicine and Biomedical Science in Buffalo, New York. Tr. 627. According to Respondent, he is currently licensed to practice medicine in New York (inactive), California, and Indiana. Tr. 627. He has been licensed in California since September 25, 1998. His first two years practicing in California were spent working at another medical group. For the past twenty-years he has had his own practice. Tr. 628. He is a member of the American Medical Association (AMA), the American College of Physicians, a Master of the College of Physicians, the American Society of Internal Medicine, the Los Angeles Medical Association and Arab American Medical Association. Tr. 628. He is affiliated with the U.S.C. Keck School of Medicine, and is on the volunteer faculty with the UCLA's David Geffen School of Medicine. He teaches family

medicine residents at the Northridge Hospital. Tr. 628–29.

Dr. Rabadi was familiar with the federal regulations, the California Health and Safety Code, and the California Business and Professional Code cited in the Order to Show Cause. Tr. 630. Dr. Rabadi was familiar with the Government Exhibits 1–19 (records relating to the prescribing to the charged patients), and 20 (The [California] Guide to the Laws Governing the Practice of Medicine by Physicians and Surgeons). Tr. 630. He was specifically familiar with pages 59–60 relating to pain management. Tr. 630; GX 20. He was also familiar with the Guidelines for Prescribing Controlled Substances. Tr. 630; GX 21.

In his medical career Dr. Rabadi has treated thousands of patients, including hundreds of pain patients. At the time of the issuance of the Order to Show Cause, Dr. Rabadi had 300–400 patients of which 175–200 were pain management patients. Tr. 631, 792. In both 2017 and 2018, he estimated he treated 400 to 500 patients. Tr. 803. In 2019, he estimated he saw 400 patients, and less than 200 in 2020.[9] Tr. 804.

Dr. Rabadi described his protocol upon a patient's first visit to his clinic prior to the issuance of a prescription. Tr. 631. The patient initially fills out paperwork. His office verifies insurance coverage. The patient is weighed and then sent to an examination room. Dr. Rabadi enters the room, greets the patient and sits on a stool ''so [his] eyes are with the same level as the patient's eyes.'' [*O] Tr. 632. Dr. Rabadi determines how the patient was referred to him. Dr. Rabadi then takes the patient's history, which begins with the patient's main complaint. Dr. Rabadi disagreed with Dr. Munzing's estimate that a diagnosis is 85% based on the patient's history. Dr. Rabadi believed it was upwards of 95% based on history. Tr. 635–36. The Respondent conceded history is critical to understanding the patient's condition and how to treat the patient. Tr. 804. He inquires about family history and their medical issues. Dr. Rabadi then inquires regarding social history, surgeries and present pain. He inquires into habits, such as smoking, and past and present use of illegal drugs. He then probes any allergies, including allergies to medications. If a patient has no allergies, he reports NKDA. Tr. 635. Following history, Dr. Rabadi testified he ''starts going in depth about the main complaint,'' with an eye toward isolating the ultimate medical source of the malady, and whether the symptoms are resolved with medication. Tr. 635–37. Regarding complaints of ''back pain,'' for example, Dr. Rabadi testified that he will review previous diagnoses, probe the source and triggers for the pain, explore any nerve restrictions, and discuss the success of different past treatment methods. Tr. 638–40. If pain medication management was the only treatment that alleviated the pain, Dr. Rabadi would explore the history of that treatment and its efficacy. [Respondent testified that ''after [he] complete[s] the history in general, and organ-specific where the complaint is, then [he does the] physical examination.'' Tr. 641.]

Dr. Rabadi testified that the physical exam he performs for all patients starts with the head. He examines the skull. He explores headaches, noted in the records as, ''HEENT.'' Tr. 641. He then checks the eyes, the ears, and the mouth. Tr. 642. He moves down to the neck, checking for issues with the veins of the neck. He then checks the efficiency of the heart's pumping and its rhythm. Next, he checks the lungs. Moving down to the abdominal cavity, he palpates the liver and spleen for abnormal size. Tr. 643. He then checks the remaining organs of the abdomen and the bowel for irregularities. Tr. 643. He then checks the extremities for circulation issues, often noting in the records, ''No ECC'' (edema, clubbing or cyanosis). He then checks for skin issues. Finally, he performs a neurological examination, including a mini mental-state exam and their orientation as to time and space. Tr. 643–45. He checks their reflexes, their cranial nerves. Tr. 645. He decides if further radiologic testing is necessary. Tr. 651–52. For men aged 17–35, he offers a testicular exam to check for cancer. For men over 50, he offers a rectal exam to determine indications of prostate and colorectal cancer. The complete exam takes from 30–40 minutes. Then, Dr. Rabadi formulates his diagnosis, [though he noted that ''the patient many times comes with a diagnosis already.''] [*P] Tr. 647. He then establishes a treatment plan. Tr. 649. He discusses the treatment plan with the patient and obtains informed consent. Tr. 658. For patients experiencing pain, he explains the mechanism of pain, the modalities of pain and the type of pain; chronic pain, acute pain, malignant pain, post-traumatic pain, rheumatological pain, psychogenic pain, and neuropathic pain.[10] Tr. 668. For patients receiving pain medication prescriptions, Dr. Rabadi explains the medications, their side effects, including addiction, overdose and death, and cautions patients not to operate machinery or use heavy equipment. Tr. 668–70. [When asked whether he had ever prescribed a controlled substance for a patient without having this discussion about the dangers, he responded, ''Absolutely not. Absolutely not. Absolutely not.'' Tr. 669.] Dr. Rabadi assures his patients that if they take the medication as prescribed, they will not overdose. Tr. 670.[11] He typically sees his pain patients monthly. Tr. 672.

For return visits, Dr. Rabadi is focused on the specific reason for their visit. Tr. 673. This explains why Dr. Munzing's noted diagnoses would appear and disappear from month to month. Tr. 673. Dr. Rabadi does not make note each month of long-term chronic conditions. Tr. 673. If a patient has new symptoms, Dr. Rabadi will focus on these new symptoms and tailor his examination to these symptoms, although at least two organ systems are always examined. Tr. 674. At least every three months blood pressure is checked. Tr. 675. Dr. Rabadi explained that much depends on the physician's judgment. Guidelines are essentially recommendations. Following the guidelines does not make the Respondent a good doctor. The most important thing is to perform with knowledge, with care and in good faith, placing the interest of the patient as the Respondent's top priority. Tr. 676.

[9] There was some confusion in the transcript as to the total number of patients in 2019. The Respondent estimated 400 total patients for 2019, but later agreed it was approximately 200 total patients in 2019. Tr. 804. [Respondent also testified at the hearing that ''I have close to 550–600 patients'' suggesting that was his total number of patients at the time of the hearing in September 2020. Tr. 792. He testified that he had 175–200 patients who were specifically pain patients up until the time of the OSC which was dated March 2020. I note that the exact number of patients that Respondent was treating at any given time has little relevance to my decision in this matter, other than as it relates to his ability to accurately recall the undocumented details of each medical visit to which he testified.]

[*O] Modified for clarity.

[*P] At this point in his testimony, Respondent stated, ''[T]he Government seized more than 223 charts . . . they returned more than 200. . . . And now, they are focusing and fixating on these seven charts. So, they're just looking at the charts and some notes and immediately demonizing an astute clinician who's been in the medical field for 41 years without a blemish to my reputation and career. And now, I'm just portrayed as I'm just feeding the addicts; I'm just distributing his medications.'' Tr. 648–49. I note that for the purposes of this Decision, I presume that all prescriptions issued by Respondent that are not at issue in this cases were legitimate.

[10] Dr. Rabadi contrasted these classifications with those he indicated were described by Dr. Munzing, mild, moderate and severe. Tr. 667–68.

[11] As I understand Dr. Rabadi's testimony, Dr. Rabadi noted that an unnamed study found that dosages 5–6 times higher than that recommended by the FDA were safe. This highly specific evidence was not noticed prehearing, was not reasonably anticipated by the Government, and will not be considered.

If patients' symptoms subsided and they did not finish their medication, Dr. Rabadi would not prescribe more medication. He would wait until the medication was finished. This explains why prescriptions would sometimes stop and restart from month to month. Tr. 673.

For patients on pain medication and desiring to continue on pain medication, he discusses the options of detox and referral to a pain specialist. Tr. 650. All of his patients on pain medications are required to sign a ''Controlled Substance Agreement.'' Tr. 658. Dr. Rabadi also verbally tells patients that they cannot obtain pain medication from different physicians, and they cannot go to different pharmacies for refills. Tr. 660. If a patient overdoses, or is arrested selling medications, he is banned from further treatment. Tr. 660. Dr. Rabadi has little sympathy for reports of lost or stolen medication. Tr. 661.

In the United States, the patient ''is in the driver's seat.'' The patient's wishes are granted unless they are asking for something illegal or abnormal. Treatment cannot be forced on them. Tr. 650. When a patient reports that he has received extensive radiologic testing and has exhausted medical treatment and surgeries for his injury and wishes to remain on pain medications, the only option is to prescribe those medications or to drop the patient, which Dr. Rabadi did not view as an ethical option.*Q Tr. 651. No one deserves to be in pain. Tr. 664–65, 670. If chronic pain patients were dropped from the practice, they may turn to buying illegal drugs off the street. Tr. 663. Dr. Rabadi was realistic as to most of his pain patients. Some had been on pain medications for 10, 15 and 20 years and were chemically dependent on them. Tr. 662. The goal was not to make them pain free, which would be impossible. It was to minimize the pain, and maximize their functionality without making them a slave to the medications. Tr. 662, 664. For acute pain, Dr. Rabadi typically restricted pain medication to one week. Tr. 662.

Dr. Rabadi noted that almost all of his patients work full time in the motion picture industry doing hard labor and suffer serious and sometimes recurring injuries. Tr. 647, 663. They have had long term injuries with surgeries, and have been on pain medication for a long period of time prior to coming to see him, and are still able to function. Tr. 647–48, 663.

Regarding the use of pain scales in diagnosing, Dr. Rabadi noted their limitations—it is purely subjective to each patient. Tr. 658–59. Regarding the high doses of medications he prescribed, Dr. Rabadi agreed with Dr. Munzing that starting patients on such high doses was dangerous. Tr. 640. However, if the patients were acclimated to such high doses, prescribing lower doses would be ineffectual and potentially dangerous. Tr. 656–58. If Dr. Rabadi was just starting treatment for ADD, for example, he would start the patient on .25 mg of Xanax per day. Tr. 657.

Patient S.B.

Patient S.B. remained a patient of Dr. Rabadi's. Tr. 708–09. She was prescribed hydrocodone, Xanax and Adderall. Tr. 709. Dr. Rabadi believed his prescription practice concerning S.B. was within the California standard of care. Tr. 709. Dr. Rabadi began his treatment of S.B. on August 3, 2016. Tr. 718. She presented as a 29 year-old female to establish care for the treatment of ongoing conditions of GAD, fibromyalgia, and ADD. Tr. 719. As per Dr. Rabadi's policy, as detailed in his earlier testimony, he took a complete history.*R Tr. 719–20. He performed a complete physical examination [''head to toe including every organ and system,''] reviewed her existing diagnoses of GAD and ADD, and her medication history in general and specifically for those diagnoses. Tr. 720, 722–24. He obtained her pain level with and without medication. Without medication her subjective pain level was eight. With medication, it was one to two, which permitted her to function and perform daily activities. Tr. 721. The Respondent conceded that the detailed findings of the complete physical exam are not reflected in his chart, but noted he was a clinician with 41-years of experience, and not a medical student. Tr. 810. Tr. 810. [He testified that he inquired regarding any behavioral and psychological issued S.B. might have. Tr. 722.] Dr. Rabadi noted that patients with ADD are six times more likely to have other psychiatric conditions as people without ADD. Tr. 722. Ultimately, Dr. Rabadi concurred with the previous physician's diagnoses of ADD, GAD, and fibromyalgia. Tr. 724, 728. To obtain informed consent to prescribe controlled substances to S.B., the Respondent executed the ''pain management contract.'' Tr. 728–29. The patient reads it and signs it. The Respondent then goes over the contract in detail with the patient. The Respondent then explains that the medications are meant to help the patient, not to cause side effects or addiction, although they tend to cause chemical dependence. Tr. 729. The Respondent then goes over all the alternative treatments, but in the end, it is the patient's decision as to the treatment she will receive. Tr. 729. If the Respondent objected to every patient's choice of treatment, there would no medical care. If a patient says she is on medication and it permits her to function, the Respondent will continue that treatment. Tr. 729–30. S.B. indicated she had been through several alternate treatments, including, occupational therapy, physical therapy, hydrotherapy, yoga and meditation. Tr. 731, 805.

The Respondent conceded the list of prior therapies was not in his progress notes. Tr. 805–06, 808. The Respondent explained its absence as maybe he ''did not feel it was crucial to be documented,'' as he memorizes what the patient tells him.*S Tr. 806. Respondent testified that including references to prior, concluded treatment was irrelevant as the prior treatment was concluded and the patient had moved on to the new treatment. Tr. 807–08. The Respondent testified to S.B.'s prior treatment from memory. Tr. 808. The Respondent explained that, as he still maintained handwritten records and saw up to 20 patients a day, with new patients taking an hour and returning patients taking up to 20 minutes each, he did not have the luxury of documenting in detail. Tr. 807, 849. So, the basic information is reflected in his written notes, while the rest he remembers; ''I rely on my photographic memory.'' Tr. 808–09. The

*Q Respondent testified, ''[i]f the patient tells me, 'Look, I've already been with pain specialists; I've already seen a couple of specialists; I already had three-four MRIs; I already had surgery; I'm on this medication for years, and it's working for me,' then it comes down to one of two options. Either I tell him I will fill his prescription or I kick him out of my office. And I don't think it is ethical to do that latter approach.'' Tr. 651.

*R Respondent testified both generally and specifically to S.B. that he ''take[s] personally a very lengthy history. [He] spend[s] close to 60 minutes in the first visit the patient comes.'' Tr. 719, 721.

*S Respondent testified that, ''the record is probably missing these things, because maybe at the time of the documentation I did not feel that was crucial to be documented. As soon as the patient disclosed that to me, I memorize it. I remember it. You've seen how several years later I still remember it. . . . I did not feel I have to clutter my charts with, you know, this information.'' Tr. 806–07. Respondent further testified that he does not have electronic medical records, he is ''still writing . . . And when I see 15, 20 patients a day . . . There [are] only 24 hours a day. I don't have the luxury to write ten pages on each patient. . . . [W]hat's pertinent, what's your diagnosis, what's your main exam, and what's your treatment is reflected there. The rest I remember. I don't need to write it.'' Tr. 807–08.

Respondent conceded that ''maybe'' it was ''inappropriate'' of him not to more thoroughly detail this information in the charts. Tr. 809. But with handwritten charts he was only able to include the ''main ideas.'' His notes are simply to remind him of the matters. Tr. 810–11. He keeps his notes as brief as possible to remind him in the future. Tr. 815.

Respondent testified that S.B. further reported that she had been on the same dosage of medications for several years to good effect. Tr. 731–32. [Respondent testified that ''medically it is very inappropriate when a patient is stable at [a] certain dose, to start cutting the dose because [the] patient will regress'' and either] suffer withdrawal symptoms or have severe pain.*T Tr. 732. Prior to each prescription, the Respondent discussed side effects, and changes in status. Tr. 733.

The Government sought to test the Respondent's ''photographic memory'' by asking to confirm that, consistent with his direct testimony, he only treated S.B. with hydrocodone, Xanax and Adderall. Tr. 810–13. The Respondent confirmed his direct testimony. Tr. 812. The Government reminded the Respondent that he prescribed Soma as well, [but Respondent testified that he did not mention it on direct because it ''was not [an] ongoing prescription. Maybe the patient got it once or twice over the course of the years.''] Tr. 813.

Although the Respondent testified he developed a treatment plan for each of his patients, the Government pointed out, and the Respondent agreed, that S.B.'s treatment plan and objectives were not documented in her chart. Tr. 813–14.

Although the Respondent testified he did not introduce any of his subject patients to controlled substances, the chart reflects he did prescribe Soma to S.B. for the first time. Tr. 816–17; GX 1 at 61, 62. The Respondent remembered during cross-examination that, although not in the chart, S.B. told him she had been on Soma previously. Tr. 817–19.

Patient J.M.[12]

J.M. has been a patient for thirteen years. Tr. 734. The Respondent has prescribed him Xanax, Soma and hydrocodone. The Respondent believed his treatment of J.M. was within the California standard of care. J.M. first presented on May 14, 2007, with chronic pain syndrome, which sometimes manifests as back pain, and neck pain, and GAD. Tr. 735; GX 11 at 104. The Respondent took a history. J.M. had been involved in a motor vehicle accident injuring his back, neck and lumbar spine. Additionally, he suffered from GAD and hypertension. Tr. 736. The motor vehicle accident as the source of the injury was not documented. Tr. 853. J.M. had seen an orthopedic surgeon, although it was not documented in the chart. Tr. 853. Without medication, J.M. reported severe pain of 10 or 11 of 10. With medication, he reported pain levels of three of ten, which permitted him to function and to work full time; the pain levels were not documented in the chart. Tr. 736, 854–55. J.M. reported prior treatments and medication. He had received physical therapy, occupational therapy, hypnosis and acupuncture to no avail prior to turning to chronic pain management, although these previous therapies were not documented in the chart. Tr. 737, 854. His present medication protocol delivered the best results with the least side effects. Tr. 737. The Respondent probed his psychological history, which included an all-consuming fear.

The Respondent performed a comprehensive physical exam ''head to toe.'' Tr. 739. To obtain informed consent to prescribe J.M. controlled substances, the Respondent went over the pain management contract, which J.M. also read and signed. The Respondent cautioned J.M. about diversion and red flags of doctor shopping and pharmacy hopping, which would result in discharge. Tr. 739–40. The Respondent noted that J.M. is a very well-respected man. He's very well-known in the community. Tr. 740.[13] The Respondent then discussed the beneficial aspects of the pain medication and potential negative effects if abused. Respondent testified that J.M. never gave any indication he represented a risk of diversion. Tr. 741. Prior to seeing the Respondent, J.M. was on a higher MME of opioids. He was able to reduce the dosages to the level he was on when he first saw the Respondent. He remains on that dosage. Again, he is able to function and work full-time on this dosage. Tr. 742. The Respondent noted that J.M. would sometimes try to avoid taking his medication, even if he suffered pain, as explanation for the breaks in prescribing. Tr. 743.

The Respondent denied ever using a different first name for J.M., or using a different birth date for him [and attributed any mistake to the pharmacy.] Tr. 778–82.

Patient B.C.

Patient B.C. has been a patient of the Respondent since March 27, 2014. Tr. 750–51. Patient B.C. has been prescribed hydrocodone, Xanax and Adderall. Tr. 749. The Respondent obtained a complete history, a complete physical exam and then probed the complaint that brought him to the Respondent, which was right shoulder and chronic back pain. Tr. 751. Without medication, B.C. reported pain at seven or eight, and with medication at one or two. Tr. 752. As far as his medication history, B.C. had been on pain medication for years following a neurosurgical procedure to treat a herniated disc with radiculopathy.[14] Tr. 752. To obtain informed consent, the Respondent discussed the pain management contract, which B.C. read and signed. Tr. 752–53. The Respondent then discussed side effects of the medication [including ''addiction, overdose, and death.'' Tr. 753.] B.C. is a married man with three children. He works full time. He gave the Respondent no indication he was a risk for diversion. Tr. 753.

Regarding prior alternate treatment, B.C. reported that he has tried surgery, physical therapy and acupuncture, but that only pain medication therapy alleviates his pain to the extent he can function. Tr. 754. At each visit, the Respondent reviewed B.C.'s progress and believed B.C.'s condition warranted the medication he was prescribed. Tr. 754, 757. Although the Respondent remembered discussing B.C.'s pain levels on March 27, 2014, and that it was one or two on medication, he conceded it was not documented in the

*T Modified for clarity.

[12] In transcript pages 734–43, Patient J.M. is discussed. However, due to some confusion with patient initials, the Respondent described his treatment of J.M. as M.B. within the transcript. Tr. 774. [All of the questions and responses for pages 734–43 referred to this patient as ''M.B.''; however the factual information that was being discussed was actually applicable to ''J.M.'' The error was not discovered until Respondent was questioned about the patient whose initials were actually M.B. The parties entered ''a stipulation that Dr. Rabadi's [prior] testimony as to M.B., the second patient discussed, is actually applied or attributed to Patient J.M.'' Tr. 774–75. This exchange did not fill me with confidence that Respondent's testimony reflected his true recollection of the specific actions he took with regard to the specific patient being discussed. Rather, Respondent seemed to testify to the policies and procedures he followed in the regular course and assumed that those policies and procedures were followed with regard to all the named patients.]

[13] J.M.'s prestigious background will not be considered. It is an unnoticed matter that the government would have no way of checking or countering. [It is also completely irrelevant to my decision in this case.]

[14] The Government objected to B.C.'s prior treatment history, which was not noticed in the RPHS. I ruled it was reasonably anticipated. The Respondent cited to specific treatment from a prior physician. The contested evidence is reflected in GX 5 at 14, so the Government was certainly not surprised by the evidence.

chart. Tr. 832–34; GX 5 at 48. Although the Respondent remembered B.C. reporting he had a herniated disc, this report was not documented in the chart. Tr. 836. Neither were B.C.'s reported prior surgery, physical therapy, acupuncture, or occupational therapy documented. Tr. 837.

Patient J.C.

Patient J.C. presented on May 18, 2009, with chronic back pain, ulcerative colitis and GAD. Tr. 759–60, 761–62. He was prescribed hydrocodone, and Xanax, sometimes substituted with Valium. Tr. 759. The Government pointed out to the Respondent that there were visits during which several other controlled substances were prescribed. Tr. 842–46; GX 7 at 181, 214, 215.

He had suffered multiple injuries, and had been immobile for some time. However, the Respondent did not document the injuries or the immobility in the chart, nor did the file contain any prior medical records.[15] Tr. 839, 842; GX 7 at 216. He had undergone physical therapy, occupational therapy, and finally pain management, which permitted him to resume working full-time. Tr. 760. These alternate treatments and therapies and prior surgeries were not documented within the chart. Tr. 840. The Respondent could not remember if J.C. mentioned his prior surgeries at the first or second visit.*U Tr. 840. The Respondent performed a full exam on J.C. Tr. 760–61. His GAD resulted from his ulcerative colitis. Tr. 762.

The Respondent obtained informed consent to prescribe controlled substances by explaining the pain contract; afterwards, J.C. read it and signed it. Tr. 763. The Respondent explained the dangers of overdose. Tr. 764. The Respondent had no concerns about J.C. diverting his medication. Tr. 764–65. On the basis of J.C.'s considerable injuries and condition, the Respondent felt J.C.'s medication protocol was fully justified. Tr. 765. The Respondent denied ever intentionally misspelling J.C.'s first name.*V Tr. 765–66. Although the Respondent remembered J.C. reporting that he had seen two previous doctors, including a pain physician, that report was not reflected in the chart. Tr. 841–42. Although the Respondent remembered performing a complete mental health evaluation on J.C., it is not documented in the chart. Tr. 842.

Patient D.D.

Patient D.D. first presented on July 9, 2008, with GAD and severe back pain, although the source of the back injury was not documented. Tr. 767–68, 850; GX 9 at 74. Over the course of treatment, the Respondent prescribed hydrocodone, Xanax and Soma. Tr. 850. The Respondent added that he probably prescribed Valium, as well, explaining he was remembering from 13 years ago. Tr. 850. The Respondent remembered D.D. was prescribed Valium, hydrocodone and Soma the first visit. Tr. 851–52. The Respondent believes his treatment was within the standard of care in California. The Respondent took a complete medical history, family history, personal history and medication history. Tr. 768. The family history was not documented in the chart. Tr. 848. The Respondent explained that the family history was not documented because it was non-contributory to his assessment. Tr. 848. There were no heart conditions in his family, etc. Tr. 849. The Respondent did document that D.D. was married, which he deemed contributory. Tr. 849. D.D. had a dirt bike accident, which shattered his shoulder and fractured several ribs, although the accident as the source of the injury was not documented.*W Tr. 850. He underwent physical therapy and occupational therapy after treatment by an orthopedic surgeon, although neither was documented within the chart. Tr. 769, 771, 850–51. It was several years before he reached the medication regimen he was on when he first reported to the Respondent. The Respondent performed a full physical exam. He established informed consent with the pain contract and discussion of side effects and overdose, as with all his patients. Tr. 770. He verbally cautioned D.D. regarding diversion and other red flags. Again, D.D. gave no indication of diversion. Tr. 771. Respondent testified that alternative treatments were discussed. Tr. 771.

Patient M.B.

Patient M.B. presented on April 19, 2006, with severe back pain, left knee pain and history of dyslipidemia. Tr. 782. The Respondent obtained a full medical history, medication history, pain level, and performed a complete head to toe physical exam. Tr. 783. The Respondent discovered M.B. had chronic back pain related to an injury, a manageable knee injury, and dyslipidemia. Tr. 784. Although the Respondent maintains he obtained a complete medical history as to the back pain and chronic knee pain, he concedes it is not detailed in the chart. Tr. 820–23. [He testified, ''[maybe . . . I should have documented more. I'm not going to say anything to that.'' Tr. 821.] He was already on hydrocodone, previously prescribed, when M.B. first saw the Respondent.

The Respondent obtained informed consent in the same manner as described for his earlier patients. Tr. 784. He discussed alternative forms of treatment with M.B., however M.B. had exhausted those.*X M.B. had physical

[15] The Respondent again explained the difficulty in obtaining prior medical records. Tr. 842.

*U Respondent testified, ''[w]hether he mentioned the surgery the very first visit, that I cannot tell you yes or no at this point because it's not in my notes. So I'm just second guessing myself.'' Tr. 841.

*V There was no allegation that Respondent misspelled J.C.'s name, but the OSC did allege that Respondent ''used a variant spelling of Patient J.M.'s first name.'' OSC, at 13. Accordingly, Respondent's testimony that he never intentionally misspelled J.C.'s first name is not relevant to this hearing other than it caused me to again question whether Respondent's testimony reflected his true recollection of the specific actions he took with regard to the specific patient being discussed. *See supra* n.12.

*W Respondent testified that, ''whether it is specifically dirt bike as opposed to car accident, as opposed to falling off the second story, this has become, there is a good reason for the back pain. That's the whole thing, why I did not mention specifically dirt bike injury.'' Tr. 850.

*X Specifically, when asked whether he considered alternative forms of treatment for M.B., Respondent testified: ''I do. We do discuss that. However, patient's already been through those. Again, the common denominator in my practice is unique thing . . . because these patients [have] been there, done that. They had surgeries, they had imaging, they had already physical therapy, activation, acupuncture, medication. I told you some of them had hypnosis, water pool or water therapy. Everything was done. But still . . . for the sake of clarity I have to discuss everything. The patient will tell me, Doctor, I've done that, I've been there, and this is what works for me right now.'' Tr. 785. On cross examination when asked specifically whether M.B. told Respondent that he had tried each of these forms of alternative treatment, Respondent replied ''[n]ot necessarily all of this. I always ask questions, what alternative therapy did you discuss.'' Tr. 825. When directed to identify specifically which forms of alternative treatment M.B. had tried, Respondent testified, ''I don't want to misspeak. I'm not sure if he had . . . acupuncture or not. But I know for a fact he had physical therapy.'' Tr. 827. I find this testimony illustrative of two concerns I have with Respondents testimony. First, it appears that Respondent's testimony does not always reflect an independent recollection of the undocumented events that occurred between him and the specific patients being discussed. Even where Respondent seems to be testifying about a specific patient, it morphs into testimony about his patients collectively rather than as individuals. This sort of collective focus that appears throughout Respondent's testimony causes me to question Respondent's credibility—specifically whether he remembers the events that occurred at each specific visit for each specific patient that he discussed in the absence of medical records documenting these events. Indeed, Respondent testified that ''[o]ver [his] career, [he] worked [with] about 5,000 patients.'' Tr. 792. And at the time of the hearing he had ''close to 550–600 patients'' and prior to the order to show cause he ''had between 175–200 [pain] patients.'' *Id.* Secondly, I am concerned that Respondent's ''photographic memory'' may not be as reliable as he portrays it, particularly where, as

Continued

therapy, and perhaps acupuncture, but the Respondent could not quite remember. Tr. 827. The Respondent conceded he did not document these therapies in the chart. Tr. 828. The Respondent monitored M.B. throughout his treatment. Tr. 785. The Respondent believed his prescribing was justified on the basis of M.B.'s medical conditions, level of chronic pain and present level of functioning, working in a welding factory lifting heavy things.*Y Tr. 786, 832. The Respondent conceded that he did not document M.B.'s degree of pain, but minimized the value of the subjective pain scale. Tr. 823–24. The Respondent conceded there were no imaging reports in M.B.'s chart, but explained that these patients were from the movie business. They were treated by a Health Maintenance Organization (HMO) from which it is almost impossible to obtain records. Tr. 829.

Patient K.S.

Patient K.S. presented on June 21, 2007, with chronic back pain. He was later diagnosed with ADD. He was prescribed hydrocodone, Soma and sometimes Adderall. Tr. 788–89, 861; GX 14 at 110. The Respondent added that he may have also prescribed Xanax, but it is difficult to be sure with hundreds of patients and treatment dating back fifteen years. Tr. 859. Even with a ''good memory, sometimes you just miss something.'' Tr. 859. Additionally, he noted that many times patients do not disclose all of their medications at the initial visit, if they have plenty and do not then need them to be refilled. So, he is not always aware of all of their medications at the initial visit. Tr. 860–62.

The Respondent believed his prescribing was within the standard of care for California. Tr. 788. The Respondent obtained a full medical history, medication history, pain level, and performed a complete head-to-toe physical exam. Tr. 789. The Respondent discovered K.S. had chronic back pain related to a bike accident for which he had been treated by several doctors for several years, although the bike accident as the source of the injury and treatment by other doctors was not documented. Tr. 789, 856–57, 859. Additionally, there were no records from prior treatment in the patient's records. Tr. 857. Although the Respondent explained that he requested the prior medical records, none were provided. The Respondent explained that his request for records is simply faxed to the previous physician's office. Tr. 857–58. Its absence from the file was probably because a staffer forgot to file it. Tr. 858. The Respondent did not contest the Government's observation that no requests for previous medical records were in any of the seven patient files. Tr. 859. K.S. was already on hydrocodone when K.S. first saw the Respondent. The Respondent obtained informed consent [and disclosed the potential side effects including the risk of death] in the same manner as described for his earlier patients.*Z Tr. 790. He discussed alternative forms of treatment with K.S. K.S. was obtaining physical therapy prior to seeing the Respondent and continued physical therapy after beginning treatment with the Respondent. Tr. 791. The Respondent monitored K.S. throughout his treatment. Tr. 791. K.S. presented no indications of diversion. The Respondent has treated K.S. for thirteen years during which time K.S. got married and had three children. Tr. 790–91.

The Respondent noted that, to the best of his knowledge, none of his thousands of patients have suffered any harm from his medication treatment. Tr. 793. [Respondent testified that a combination of an opiate, muscle relaxant, and benzodiazepine, when ''used in the right dosages for the right indications, and used as prescribed by a knowledgeable M.D., . . . are safe to use in combination therapy.'' Tr. 797.] The Respondent disagreed with Dr. Munzing's assertion that he could perceive of no medical condition justifying the dangerous combinations of medications identified herein. Tr. 794–800. The Respondent conceded the potential danger of individual pain medications, and the potential increase in risk in combination with other medications. However, according to him, if patients are responsible and take the medications as prescribed for the indications intended, these combinations are fairly safe. Tr. 800.[16]

The Respondent recognized his obligations to follow all federal and state rules concerning the practice of medicine, including the directives of the California Board of Medicine. Tr. 862. California's Compliance with Controlled Substance Laws and Regulations includes a provision on records. Tr. 864; GX 20 at 61. According to Respondent, it mandates that, the physician and surgeon should keep accurate and complete records according to the items above between the medical history and physical examination, other evaluations and consultations, treatment plan objectives, informed consent, treatments, medications, rationale for changes in the treatment plan or medications, agreements with the patient, and periodic reviews of the treatment plan. Tr. 864–65. The provision further requires, ''[a] medical history and physical examination must be accomplished . . . this includes an assessment of the pain, physical and psychological function.'' Tr. 866; GX 20 at 59. The Respondent assured the tribunal that the necessary assessments were made, but not fully documented. Tr. 866–67. The Respondent, [while again conceding that there was no documentation,] made the same assurances for the requirements as to ''Treatment Plan Objectives,'' ''Informed Consent,'' and ''Periodic Review,'' noting these Guidelines were published in 2013.[17] Tr. 867–72. [As justification for not documenting a treatment plan, Respondent testified that he was ''carrying the same treatment [plan] and no change and the patient is stable,'' but that ''[i]f [he] changed the treatment plan'' it would be important to document. Tr. 874. Contrary to Respondent's testimony, the treatment plan did change when on February 2, 2017, the Respondent prescribed Soma to S.B. Tr. 875; GX 1 at 59. By March 1, 2017, Soma had been discontinued, yet the chart reflected no rationale for

here, there is no documentation in support of his memory.

*Y On cross-examination Respondent testified ''the patient is in motion picture but he has also something that he does on the side that has to do [with] welding iron or something like that as well.'' Tr. 832.

*Z Specifically, when asked whether he had a conversation with this patient involving informed consent, Respondent testified: ''Yes, I did. And, as usual, he read the entire contract, understood it. Indicated that [he] understood, both verbally and signed it. Then I . . . explain[ed] the potential side effects of these medications that include from my explaining with sedation and constipation, all the way to addiction, overdose, and possible death. And I indicate always to my patients on the last two, the overdose and the death, is on you, because you can cause it yourself, or you could use this medication indefinitely and never have any problem. . . .'' Tr. 790; *see also* Tr. 670–71, 753, 770. Once again, Respondent begins his testimony purporting to have a specific recollection of his 2007 conversation with K.S., but then he turns to general language, which more supports a general assumption that he had the conversation. *See, e.g.,* Respondent's use of ''as usual, he,'' which is ambiguous because, while all of Respondent's patients purportedly receive the contract, K.S. is only purported to have received it once.

[16] Although the government objected to this opinion by the Respondent, I overruled its objection. A general disagreement by the Respondent of the government expert's opinion is certainly reasonably anticipated. The Respondent did not cite to any unnoticed medical practice guide, medical theories or other basis for his contrary opinion. The government was readily able to confront the Respondent's opinion. The Respondent's opinions were not considered expert opinions.

[17] *See* Tr. 950–52. Dr. Munzing testified credibly that the 2013 version was the 7th edition and the basic requirements have not changed over the years.

that change in medication regimen. Tr. 876–77. As the Respondent varied his prescribing between Soma and Xanax, he conceded he did document the reason for the variation in medication. Tr. 878–83. The Respondent conceded he did not document the rationale for the change in medication for J.M. or K.S. as well. Tr. 885. Similarly, the Respondent conceded he did not document pain level, function level and quality of life for any of the seven charged patients. Tr. 885–87; GX 20 at 61. The Respondent reiterated that, to his knowledge, none of his patients exhibited red flags or violated the pain agreement. Tr. 888–89.

[Respondent testified somewhat extensively and flippantly regarding his thoughts on California law's documentation requirements. ''I am not going to just say, okay, write in the chart I told the patient hello, they said hello, I said, okay, what did you have for breakfast? I am not going to document all that, there is no reason. It is just excessive wrecking [sic.] havoc on the documentation. . . . [E]verything was addressed, everything was talked about, and every exam, every consent, everything was done by the book. I am a perfectionist. I am a perfectionist.'' Tr. 871.]

Rebuttal Testimony

Diversion Investigator

DI identified a CURES Audit Report for the Respondent's Registration number. Tr. 893–94; GX 24. The audit report shows each time the Respondent accessed CURES to run a query on patients. Tr. 894. This particular audit included data from January 1, 2016, through January 13, 2020. DI also identified GX 25, which was a CURES Audit Report run on the DEA Registration of Dr. B.S., which included the patient M.B., a patient common to the Respondent. Tr. 904. Between October 10, 2018, and September 11, 2020, Dr. B.S. prescribed Suboxone [18] to M.B. Tr. 909; GX 24, 25, 25B. On March 15, 2019, the Respondent accessed CURES and would have observed M.B. was receiving Suboxone from Dr. B.S. Tr. 910; GX 24. DI identified GX 26, an additional CURES Audit Report for Dr. B.S.2, which spanned from January 2017, to September 2020, and which shared a common patient with the Respondent, J.M. Tr. 911–13; GX 26, 26B. Dr. B.S.2 similarly prescribed Suboxone to J.M. from January 2017 to August 2020. Tr. 913. The CURES Audit of the Respondent demonstrated he accessed the CURES database during the period J.M. was prescribed Suboxone by Dr. B.S.2, which would have been evident by this review. Tr. 914.

Dr. Munzing

Dr. Munzing repeatedly gave his opinion regarding the credibility of the Respondent's testimony. I find that Dr. Munzing's opinion as to the Respondent's credibility is beyond Dr. Munzing's qualified expertise. Accordingly, those opinions will not be considered herein.[19]

Dr. Munzing opined on the importance of documentation within medical records, including medical history and pain levels. Tr. 917, 936–38. He noted that documentation was not just for the then treating physician. It was important for other physicians, perhaps years later, who may treat the patient in an emergency room setting. [Dr. Munzing testified that ''[t]rue, and accurate, and thorough documentation is vitally important for patient safety. It's also part of the standard of care.'' Tr. 917.] He reiterated that the elements identified in the Board of Medicine's Guidelines on documentation are part of the standard of care. Tr. 917–18; GX 20 at 59, 60, 61. He noted the lapse in documentation regarding the history, pain levels, mental health exams, and treatment plans the Respondent testified he performed or obtained for each patient. Tr. 916, 921–22. [Specifically, Dr. Munzing testified that ''practically none of the information that Respondent mentioned [during his testimony] was documented.'' Tr. 916.] Dr. Munzing observed that the examination described by the Respondent for fibromyalgia was medically deficient and inconsistent with the standard of care, as it did not include a musculoskeletal exam. Tr. 918–20. Dr. Munzing observed that the standard of care applies equally to electronic records as to written records. It does not matter whether the physician documents electronically or in writing, the standard remains the same. Tr. 922.

Regarding the Respondent's testimony that he would continue patients on medication prescribed by previous physicians if they reported they were doing well on the medication, Dr. Munzing opined that Respondent needed to conduct an ''independent evaluation'' and ''verify what [the patient is] saying'' *[AA] to comply with the standard of care. Tr. 923–27, 928–29. Dr. Munzing observed that the Respondent's warnings regarding the potential for overdose were not consistent with the standard of care. Tr. 927. Dr. Munzing believed the Respondent's undocumented verbal caution that overdose was a potential risk if the patients took the medication other than as directed was misleading, because there were risks even if the medication were taken as prescribed, and it was beneath the standard of care. Tr. 927, 929–31.

Regarding the Respondent's explanation that he only documented the condition of which the patient was complaining, and did not document all the medications the patients were already on when coming to his clinic, Dr. Munzing opined such practice was inconsistent with the standard of care. Tr. 932. Dr. Munzing testified that the documentation was not just to remind the treating physician, but to alert any physician who may treat the patient. Tr. 931–34. Dr. Munzing also criticized the Respondent's handling of situations in which patients reported they still had medication remaining from the previous month. Rather than simply refraining from prescribing additional medication, Dr. Munzing indicated that that situation should trigger a discussion with the patient and evaluation whether the existing level of medication is appropriate, or whether titration is warranted. Tr. 933–36. Dr. Munzing deemed the Respondent's prescribing 10 mg a day of Xanax to J.M. to treat GAD and undocumented panic attacks as excessive and beneath the standard of care. Tr. 938–39. Dr. Munzing deemed the Respondent's reluctance to reduce the opioid dosage lest the patient suffer pain or withdrawal symptoms misguided. Tr. 941. Titration of high opioid dosage of high risk patients or exploration of alternate treatment is consistent with the standard of care. Tr. 941. Dr. Munzing was critical of the Respondent's handling of J.M. and S.B. after discovering they were being prescribed Suboxone by other physicians. Tr. 941–48. Suboxone is typically prescribed for opioid use disorder or addiction. Tr. 943. It directly violates the Respondent's pain contract for these patients, yet the Respondent took no action and continued to prescribe opioids. Tr. 947.

[18] Buprenorphine.

[19] [Omitted for brevity.]

*[AA] For example, Dr. Munzing testified that Respondent could have checked CURES or urine drug tests to verify what the patients were saying or could have asked the patients to bring copies of their prior medical records in with them. Tr. 923–24. Dr. Munzing testified that it is outside the standard of care in California to simply take a patient at their word when they say that they are receiving certain controlled substances in certain doses. Tr. 928–29.

The Facts [20]

Findings of Fact

The factual findings below are based on a preponderance of the evidence, including the detailed, credible, and competent testimony of the aforementioned witnesses, the exhibits entered into evidence, and the record before me.

During the hearing conducted, via video teleconference, from September 28, 2020, to September 30, 2020, the Government established the following facts through evidence, testimony, or stipulation (''Proposed Findings of Fact'' or ''PFF''):

I. Investigatory Background

1. DI has been employed by DEA as a Diversion Investigator for three years. Tr. 33.

2. DEA began investigating Respondent in April of 2018, after receiving a February 2018 report issued by the Department of Health and Human Services indicating that Respondent's prescribing habits presented a high-risk for overprescribing. Tr. 37–38.

3. DEA monitored California's prescription drug monitoring program, known as CURES, and identified several red flags regarding Respondent's prescribing. Tr. 35, 38. CURES reports obtained by DEA were admitted into evidence as GX 16, 17, 18, and 19. Tr. 16–18; *see also* Joint Stipulation Nos. 31–34. Among other things, DEA found that; (1) Respondent frequently prescribed opioids at their maximum strength, Tr. 38–39; (2) Respondent frequently prescribed patients a combination of an opioid and a benzodiazepine, Tr. 39; (3) Respondent issued prescriptions for a combination of an opioid, a benzodiazepine, and carisoprodol—a combination that is highly sought after on the illicit market, and is known as ''the Holy Trinity,'' Tr. 40; (4) Respondent prescribed high doses of controlled substances to patients for long periods of time, Tr. 40–41; (5) between November 20, 2015, and November 21, 2018, Respondent issued approximately 9,000 prescriptions for controlled substances, Tr. 39; GX 16; GX 17; GX 18; (6) Over half of those 9,000 prescriptions were for hydrocodone, and approximately 96 percent of these prescriptions were for either hydrocodone, alprazolam, or carisoprodol—which together make up the ''Holy Trinity'' cocktail. Tr. 39, 42–43; GX 16; GX 17; GX 18.

4. DEA obtained medical files from Respondent, pursuant to a federal search warrant executed at Respondent's medical clinic in February of 2019, and pursuant to an administrative subpoena issued to Respondent in January of 2020. Tr. 46, 49, 49, 55–56. These included medical files for Patients S.B., M.B., B.C., J.C., D.D., J.M., and K.S. (admitted as GXs 1, 3, 5, 7, 9, 11, and 14; Tr. 16–18).

5. DEA also obtained prescriptions for the above-mentioned patients (see PFF ¶ 4) from its search of Respondent's clinic, and from pharmacies at which these prescriptions were filled (admitted as GXs 2, 4, 6, 8, 10, 12, and 15; Tr. 16:15–18:3). DEA also obtained fill stickers for certain prescriptions issued to Patient J.M. from one of the pharmacies at which Patient J.M. filled prescriptions Respondent issued to Patient J.M. (admitted as GX 13; Tr. 16:15–18:3).

II. The Government Expert's Qualifications

6. Dr. Munzing's curriculum vitae was admitted into evidence as GX 23; Tr. 89. He is a licensed physician in the State of California, who has worked in the field of family medicine for nearly forty years. Tr. 89.

7. Dr. Munzing received his medical degree from the University of California, Los Angeles, in 1982, and did his residency at Kaiser Permanente Medical Center in Los Angeles. Tr. 89. He then began working in the family medicine department of Kaiser Permanente Orange County, where he has been for the last thirty-five years, twice serving as president of the medical staff at the hospital. Tr. 89, 94. He has a DEA COR and an active clinical practice, prescribing, inter alia, opioids, benzodiazepines, and other controlled substances when indicated. Tr. 91–92.

8. In addition to his clinical practice, Dr. Munzing teaches extensively to physicians, serving as the director of the Kaiser Permanente Orange County family medicine residency program. Tr. 90. Further, he is a full clinical professor at University of California, Irvine. Tr. 91. He also sits on the National Accreditation Board for Family Medicine Residency, which accredits all of the residency programs in the United States of America. Tr. 90–91.

9. Dr. Munzing has been called upon to provide opinions about the prescribing of other medical professionals, and he has been qualified as an expert witness in over 30 cases, including in DEA administrative hearings. Tr. 93–94.

10. As a licensed California physician who has been practicing in California for nearly 40 years, Dr. Munzing is familiar with the standard of care for prescribing controlled substances in California. He also has reviewed publications by the Medical Board of California that inform his understanding of the standard of care, including the ''Guide to the Laws Governing the Practice of Medicine by Physicians and Surgeons (7th Edition)'' (admitted as GX 20, Tr. 16–18), and the ''Guidelines for Prescribing Controlled Substances for Pain,'' (admitted as GX 21, Tr. 16). In addition, he is familiar with the FDA's black box warning regarding the risks of overdose and death posed by concurrently taking opioids and benzodiazepines, and the FDA labels for benzodiazepines including Klonopin, Valium, and Xanax (admitted as GX 22, Tr. 16–18). Further, Dr. Munzing reviewed several laws and regulations that informed his understanding of the standard of care. Tr. 99.

11. Dr. Munzing was qualified as an expert in California medical practice, including, but not limited to, applicable standards of care in California for the prescribing of controlled substances within the usual course of the professional practice of medicine. Tr. 102.

III. The Standard of Care for Prescribing Controlled Substances in California

12. Dr. Munzing testified that the standard of care in California first requires that, before prescribing controlled substances, a practitioner perform a sufficient evaluation of the patient, including, a medical history and appropriate physical examination. Tr. 103.

a. In the context of treating a patient with controlled substances for pain, the standard of care in the state of California requires the following:

i. Medical history: The practitioner must obtain detailed information about the pain, including where the pain is, how long a patient has had it, how severe the pain is, the impact of the pain on the patient's functionality and activities of daily living, and any previous diagnoses and treatments the patient has received for the pain. The practitioner must also seek to obtain any relevant prior medical records and imaging. Tr. 114–115.

[20] [The contents of the original footnote are omitted due to my omission of the Joint Stipulations. The parties agreed to Joint Stipulations numbered 1–38. *See* ALJX 3, Govt Prehearing, at 1–14 and ALJX 13, Resp Supp. Prehearing, at 1. The RD included many of the stipulated facts between the parties, but appears to have inadvertently left some out. *See* RD, at 54–67. I have omitted the joint stipulations from this decision in the interest of brevity, but I incorporate fully herein by reference Joint Stipulations 1–38. Where there is a reference to the Joint Stipulations herein, the numbering aligns with the numbering in the Government's Prehearing Statement, GX3, at 1–14.]

ii. Physical examination: The practitioner must look at the area of pain unclothed for any swelling, redness, or mass. Tr. 116–17. The practitioner must palpate the affected area and identify areas of particular tenderness or pain. Tr. 117–18. The practitioner also is required to test a patient's range of motion, as well as the patient's neurological conditions via targeted tests for the area affected by pain (*e.g.,* tendon reflexes, and strength tests for the affected area). Tr. 118–19.

b. In the context of treating a patient with controlled substances for mental health conditions, the standard of care in the state of California requires the following:

i. Medical history: The practitioner must inquire into the patient's condition, including symptoms the patient is experiencing, when the patient experiences symptoms, how those symptoms impact the patient's functionality and activities of daily living, when the condition began, and if there is a family history of mental health issues. The practitioner must also seek to obtain any relevant prior medical records. Tr. 136–38.

ii. Physical examination: The practitioner must conduct a limited and focused general examination, including heart, lungs, and vital signs, [to rule out other possible medical diagnosis.] Tr. 138–39.

13. As part of the medical history, the practitioner must inquire into the patient's history of, and/or current use or abuse of, tobacco, drugs, or alcohol, as well as into any family history of use or abuse of tobacco, drugs, or alcohol. Tr. 120–21, 142.

14. Based on the history and physical examination, the standard of care requires the practitioner to assign a diagnosis to the patient. Tr. 103. An appropriate history and physical examination are crucial to arriving at an appropriate diagnosis. Tr. 121–22, 141. Without an appropriate diagnosis, a practitioner cannot establish a legitimate medical purpose to prescribe. Tr. 124, 141. [The standard of care requires the diagnosis to be documented in the record. Tr. 122.]

15. Next, the standard of care requires the practitioner to develop a customized and documented treatment plan for the patient with goals and objectives. Tr. 109–110. The practitioner must relay that plan to the patient, inform the patient of the risks *[BB] and benefits of treatment with controlled substances, as well as potential alternative treatments, and obtain the patient's informed consent for the treatment. Tr. 103–04, 124–25. When prescribing high dosages of controlled substances, this discussion of risks must include risks of addiction, overdose, and death. Tr. 126–27. ''All of [this] needs to be documented'' in the medical record. Tr. 135.

a. In the context of treating a patient with controlled substances for pain, the standard of care in the state of California requires that a treatment plan contain goals and objectives for pain management, such as maximizing benefit to function and minimizing pain, while also minimizing the risk to the patient from the controlled substances prescribed. Tr. 131.

b. In the context of treating a patient with controlled substances for mental health conditions, the standard of care in the State of California still requires that the treatment plan contain goals and objectives for the patient. Tr. 143.

c. With respect to risks of medications, Dr. Munzing explained that practitioner should only co-prescribe opioids and benzodiazepines when ''absolutely necessary,'' and should do so for ''[n]o longer than absolutely necessary and typically in as low doses as possible to . . . decrease the risk.'' Tr. 154–55.

16. As treatment progresses, the standard of care requires a physician to monitor the patient. Tr. 104, 132. A practitioner must periodically update the patient's medical history, conduct further physical examinations, and obtain updated information regarding the etiology of a patient's state of health. Tr. 106–08. The practitioner must periodically review the course of treatment, ascertain how the patient is responding thereto, determine if continued treatment is appropriate or if the treatment plan needs to be modified, and document the rationale for any modifications. Tr. 108–09, 206; GX 20 at 61. The practitioner must also periodically re-inquire into the patient's use or abuse of tobacco, drugs, or alcohol. Tr. 259–60.

17. The practitioner must also periodically conduct updated physical examinations, both brief general examinations to ensure that the patient is healthy enough to continue receiving controlled substances, as well as focused examinations of the area for which pain is being treated to help in determining how the patient is responding to treatment. Tr. 111–12.

18. When prescribing controlled substances, the standard of care in California also requires a practitioner to monitor medication compliance, including thorough reviews of CURES, Tr. 132, periodic urine drug screening, Tr. 133, and/or pill counts. *Id.* The practitioner must address any red flags of abuse or diversion. Tr. 112.

19. In addition, the standard of care requires that a practitioner document all of these above steps in detail. *See, e.g.,* Tr. 104, 109, 110, 112, 122, 135, 144. Such documentation is critically important as it: (1) enables the practitioner to recall important facts about the patient's state of health and treatment, Tr. 145, 146; and (2) allows other practitioners who may also see the patient to see these facts. Tr. 145–146.

20. Appropriate documentation is a well-known, fundamental requirement in the medical community. Tr. 146. [According to Dr. Munzing, ''[t]he general mantra in medicine [is] . . . if [it is] not documented, it [did not] happen.'' Tr. 148. Thus, it is not credible that a practitioner who consistently failed to document these basic elements for a patient actually performed them. Tr. 148–50.

21. The practitioner must also comply with all relevant California laws.

IV. Respondent's Improper Prescribing of Controlled Substances

A. Patient S.B.

i. Patient S.B.'s Initial Visit

22. Between February 2, 2017, and January 30, 2019, Respondent issued Patient S.B. the controlled substance prescriptions listed in Joint Stipulation No. 10. *See* ALJ Ex. 3 at 2–3. During this time, Respondent diagnosed Patient S.B. with fibromyalgia, GAD, and ADD. GX 1 at 47–59.

23. Respondent's initial encounter with Patient S.B. took place on August 3, 2016. GX 1 at 62, 66; Tr. 164–65. At that visit, Respondent diagnosed Patient S.B. with fibromyalgia, GAD, and ADD. GX 1 at 62; Tr. 165. Respondent prescribed Patient S.B. hydrocodone for fibromyalgia, Xanax for GAD, and Adderall for ADD. GX 1 at 62; Tr. 165. At this initial visit, Respondent failed to:

a. Take an appropriate medical history, GX 1 at 62; Tr. 166–68;

b. address Patient S.B.'s pain or functionality levels, GX 1 at 62; Tr. 171;

c. conduct an appropriate physical examination, GX 1 at 62; Tr. 166, 168–71;

d. establish appropriate diagnoses, and therefore to establish legitimate medical purposes for hydrocodone, Xanax, or Adderall, Tr. 171–72; or

e. establish and document a treatment plan with goals and objectives, GX 1 at 62; Tr. 172–73.

*[BB] The practitioner must determine the risk posed to a patient by controlled substances due to the patient's overall health history—as well as the potential for substance abuse or addiction. Tr. 103, 109. This text, which appeared in the RD originally, has been relocated for clarity.

ii. Continued Controlled Substance Prescribing Violations

24. Throughout the entire course of treatment, Respondent never obtained a proper medical history of Patient S.B., never recorded Patient S.B.'s pain or functionality levels, never obtained prior medical records for Patient S.B.—nor does Patient S.B.'s medical file reflect Respondent requested such records—failed to periodically update Patient S.B.'s medical history as treatment progressed, and never conducted a sufficient physical examination for fibromyalgia. *See generally* GX 1; Tr. 241–43.

25. None of Respondent's diagnoses of Patient S.B. for which he prescribed controlled substances were based on sufficient clinical evidence. Tr. 243.

26. Over the course of his treatment of Patient S.B., Respondent's diagnoses of Patient S.B. for ADD, GAD and fibromyalgia came and went without explanation or comment. *See generally* GX 1; Tr. 188, 193–95. Fibromyalgia and ADD are chronic diagnoses. Tr. 188, 193. These erratic diagnoses were outside of the standard of care, [especially since these diagnoses,] including those made between February 2, 2017, and January 30, 2019, [were not supported by an adequate medical history and physical examination].*CC Tr. 191–92; 195–97.

27. Respondent sometimes prescribed Patient S.B. both hydrocodone and Soma, and sometimes only hydrocodone, for fibromyalgia. See GX 1 at 47–59; Tr. 197:3–17. Respondent never documented any rationale for changing Patient S.B.'s course of medication in violation of the California standard of care. See GX 1 at 47–59; PFF ¶ 16; Tr. 199–200.

28. Respondent never documented an appropriate treatment plan with goals and objectives for Patient S.B., never documented an appropriate rationale for continued treatment of Patient S.B. with controlled substances, and failed to properly discuss the risks and benefits of the controlled substances he prescribed to Patient S.B. *See generally* GX 1; Tr. 243.

29. Respondent also prescribed Patient S.B. the following dangerous combinations of controlled substances that put Patient S.B. at serious risk of adverse medical consequences, including addiction, overdose, and death. Tr. 203–05:

a. Hydrocodone, Adderall, and Soma on February 2, 2017, May 8, 2017, June 2, 2017, August 1, 2017, August 30, 2017, November 6, 2017, and January 23, 2018. ALJ Ex. 3 at 2–3.

b. Hydrocodone, Adderall, and Xanax on March 1, 2017, April 4, 2017, June 28, 2017. ALJ Ex. 3 at 2–3.

c. Hydrocodone and Adderall on September 29, 2017, July 2018, and in August 2018, September 2018, October 2018, and November 2018. ALJ Ex. 3 at 3.

30. Respondent's prescriptions to Patient S.B. for Xanax between February 2, 2017, and January 30, 2019, were all for 6 mg of Xanax per day. GX 1 at 57–59; Tr. 212–13. The maximum recommended dosage for Xanax for treatment of GAD is 4 mg per day, according to the FDA label for Xanax. GX 22 at 59; Tr. 213. Prescribing such high dosages of Xanax placed Patient S.B. at risk of potentially lethal withdrawal, and presented risks of diversion. Tr. 217, 218–19. The fact that Respondent prescribed Xanax to Patient S.B. concurrently with opioids, see ALJ Ex. 3 at 2–3, dramatically increased her risk of overdose and death. Tr. 217–18.

31. Respondent noted, on fifteen occasions between February 2, 2017, and December 21, 2018, that Patient S.B. was opioid dependent and refusing detoxification. GX 1 at 49–59. Refusal to detoxify is a significant red flag of abuse or diversion, indicating the prescriber feels the patient needs to detoxify, but the patient refuses. Tr. 221–22. Respondent never addressed this red flag, but simply continued to prescribe the patient opioids on an as-needed basis. GX 1 at 49–59; Tr. 222. Prescribing opioids to the patient on an as-needed basis when a patient is refusing detoxification is particularly inappropriate, because any prescribed opioids must be carefully controlled. Tr. 223.

32. Patient S.B. provided inconsistent information to other providers; she told an orthopedic surgeon during a June 28, 2017 visit that she had only a past medical history of anxiety (with no mention of fibromyalgia or ADD), and she did not disclose taking any medications when she was receiving hydrocodone, Soma, Adderall, and Xanax from Respondent. See GX 1 at 30, 57. Patient S.B. also informed the orthopedic surgeon that she had no history of trauma, *see* GX 1 at 30, but reported to the California Employment Development Department that she was disabled as a result of accident or trauma that had occurred on June 15, 2017, see GX 1 at 40. These inconsistent reports were significant red flags of abuse or diversion. Tr. 230, 231–32. Respondent, however, never addressed these red flags. Tr. 233, 235–37.

33. Respondent never conducted a urine drug screen on Patient S.B. in violation of the California standard of care. Tr. 219:13–16; PFF ¶ 18; *see generally* GX 1.

34. None of the controlled substance prescriptions Respondent issued to Patient S.B. between February 2, 2017, and January 30, 2018, were issued for a legitimate medical purpose, or by a practitioner acting within the usual course of professional practice. Tr. 244. Indeed, according to Dr. Munzing, no patient should receive the drugs that Respondent prescribed to Patient S.B. in the dosages, durations, and combinations that Respondent prescribed. Tr. 211–12.

B. Patient M.B.

35. Between January 5, 2018, and November 20, 2019, Respondent issued to Patient M.B. the controlled substance prescriptions listed in Joint Stipulation No. 13. See ALJ Ex. 3 at 4–5. During this time, Respondent diagnosed Patient M.B. with back pain, ADD, and opioid dependency. GX 3 at 24–37.

i. Patient M.B.'s Initial Visit and the First Diagnosis for ADD

36. Respondent's initial encounter with Patient M.B. took place on April 19, 2006. GX 3 at 84, 91; Tr. 248–49. At that visit, Respondent diagnosed Patient M.B. with chronic back pain, chronic left knee pain, and dyslipidemia. GX 3 at 84; Tr. 250–51. Respondent prescribed Patient M.B. hydrocodone for chronic back and left knee pain. GX 3 at 84. At this initial visit, Respondent failed to:

a. Take an appropriate medical history, GX 3 at 84; Tr. 252–54;

b. address Patient M.B.'s pain or functionality levels, GX 3 at 84; Tr. 257;

c. conduct an appropriate physical examination, GX 3 at 84; Tr. 254–56, 257;

d. establish appropriate diagnoses for back pain and knee pain and therefore to establish a legitimate medical purpose to prescribe hydrocodone, Tr. 258; or

e. establish and document a treatment plan with goals and objectives, GX 3 at 84; Tr. 258.

37. Respondent first diagnosed Patient M.B. with ADD on July 9, 2013, and prescribed 30 mg of Adderall per day. GX 3 at 46. No history was taken, nor evaluations performed, for ADD other than a note saying Patient M.B. presented as a ''40 yom with ADD, neck[ ]pain.'' GX 3 at 46; Tr. 262. Nothing supported Respondent's diagnosis for ADD, and he did not establish a legitimate medical purpose to prescribe Adderall. Tr. 263. Nor did

*CC I have made this change for S.B. and each of the subsequent patients for legal clarity pursuant to *supra* n. *HH.

he establish and document a treatment plan with goals and objectives for the Adderall. GX 3 at 46; Tr. 263.

ii. Continued Controlled Substance Violations

38. Throughout the entire course of treatment, Respondent never obtained a proper medical history of Patient M.B., recorded Patient M.B.'s pain or functionality levels, or obtained prior medical records for Patient M.B.—nor does Patient M.B.'s medical file reflect Respondent requested such records—failed to periodically update Patient M.B.'s medical history as treatment progressed, and never conducted a sufficient physical examination for pain. *See generally* GX 3; Tr. 287–88.

39. None of Respondent's diagnoses of Patient M.B. for which he prescribed controlled substances between January 5, 2018, and November 20, 2019, were based on sufficient medical evidence. Tr. 288.

40. Over the course of his treatment of Patient M.B., Respondent frequently changed without comment the diagnoses for which he prescribed Patient M.B. hydrocodone. *See generally* GX 3; Tr. 275–78. These erratic diagnoses were outside of the standard of care, [especially because these diagnoses], including those made between January 5, 2018, and November 20, 2019, [were not supported by an adequate medical history and physical examination.] Tr. 278–80.

41. Other than inquiring into smoking and alcohol use at Patient M.B.'s initial visit, see GX 3 at 84, Respondent did not inquire about current or past substance abuse until over three years later, on August 11, 2009, when he had Patient M.B. sign a form stating ''I have no history of drug abuse, nor was I treated for drug or substance abuse in the past.'' GX 3 at 94. Patient M.B. was never asked about substance abuse again—something the California standard of care required Respondent to do. PFF ¶ 16; Tr. 261; *see generally* GX 3.

42. Respondent never documented an appropriate treatment plan with goals and objectives for Patient M.B., never documented an appropriate rationale for continued treatment of Patient M.B. with controlled substances, and failed to properly discuss the risks and benefits of the controlled substances he prescribed to Patient M.B. *See generally* GX 3; Tr. 288–89.

43. Respondent also prescribed Patient M.B. dangerous combinations of hydrocodone and Adderall approximately monthly from January 2018, until July 2019, and once again on November 20, 2019. ALJ Ex. 3 at 4–5. These combinations put Patient M.B. at serious risk of adverse medical consequences, including addiction, overdose, and death. Tr. 105–06, 281.

44. Respondent noted, on at least 11 occasions between March 6, 2018, and February 4, 2019, that Patient M.B. was opioid dependent, and refusing detoxification. GX 3 at 30, 32–36. Respondent never addressed this red flag, but simply continued to prescribe the patient hydrocodone on an as-needed basis. GX 3 at 30, 32–36; *see also* Tr. 286–87.

45. Indeed, Respondent frequently prescribed Patient M.B. hydrocodone as a treatment for the patient's opioid dependency, including on March 6, 2018, May 1, 2018, August 16, 2018, September 13, 2018, October 11, 2018, November 7, 2018, and January 2, 2019. GX 3 at 30, 32–36.

46. Opioid dependency does not create a legitimate medical purpose to prescribe hydrocodone. To the contrary, treating a patient's opioid dependency with hydrocodone is outside of the standard of care and outside the usual course of professional practice. Tr. 267–69.

47. Respondent never conducted a urine drug screen on Patient M.B., in violation of the California standard of care. Tr. 284; PFF ¶ 18; *see generally* GX 3.

48. None of the controlled substance prescriptions Respondent issued to Patient M.B. between January 5, 2018, and November 20, 2019, were issued for a legitimate medical purpose or by a practitioner acting within the usual course of professional practice. Tr. 289–90. According to Dr. Munzing, there is nearly no situation in which a patient should receive the drugs that Respondent prescribed to Patient M.B. from January 5, 2018, to November 20, 2019, in those dosages, durations, and combinations, and Patient M.B. did not present any such situation. Tr. 283–84.

C. Patient B.C.

49. Between January 25, 2017, and December 19, 2019, Respondent issued to Patient B.C. the controlled substance prescriptions listed in Joint Stipulation No. 16. See ALJ Ex. 3 at 5–7. During this time, Respondent diagnosed Patient B.C. with back pain, GAD, ADD, and opioid dependency. GX 5 at 17–33.

i. Patient B.C.'s Initial Visit and the First Diagnosis for ADD

50. Respondent's initial encounter with Patient B.C. took place on March 27, 2014. GX 5 at 48, 55; Tr. 293:1–16. At that visit, Respondent diagnosed Patient B.C. with GAD and back pain. GX 5 at 48; Tr. 294. Respondent prescribed Patient B.C. hydrocodone for back pain and 6 mg of Xanax for GAD. GX 5 at 48; Tr. 294. At this initial visit, Respondent failed to:

a. Take an appropriate medical history, GX 5 at 84; Tr. 295:7–296:15;

b. address Patient B.C.'s pain or functionality levels, GX 5 at 84; Tr. 297–98;

c. conduct an appropriate physical examination, GX 5 at 84; Tr. 296:16–297;

d. establish an appropriate diagnosis for back pain or GAD as necessary to establish a legitimate medical purpose to prescribe hydrocodone or Xanax, Tr. 298–99; or

e. establish and document a treatment plan with goals and objectives, GX 5 at 85; Tr. 299.

51. Respondent only inquired about Patient B.C.'s substance abuse on March 27, 2014. *See* GX 5 at 48, 57; Tr. 296, 299. Patient B.C. was never asked about substance abuse again—something the California standard of care required Respondent to do. PFF ¶ 16; Tr. 300; *see generally* GX 5.

52. Respondent first diagnosed Patient B.C. with ADD on May 20, 2014, and prescribed 60 mg of Adderall per day. GX 5 at 47. He took no history, and performed no evaluations, for ADD, other than a note saying ''Pt has ADD—give [A]dderall 30mg bid (SED).'' *Id.* Respondent's diagnosis for ADD was unsupported; he did not establish a legitimate medical purpose to prescribe Adderall, nor did he establish and document a treatment plan with goals and objectives. GX 5 at 47; Tr. 302.

ii. Continued Controlled Substance Violations

53. Throughout the entire course of treatment, Respondent never obtained a proper medical history of Patient B.C., never recorded Patient B.C.'s pain or functionality levels, failed to periodically update Patient B.C.'s medical history as treatment progressed, and never conducted a sufficient physical examination for pain. *See generally* GX 5; Tr. 335–36.

54. None of Respondent's diagnoses of Patient B.C. for which he prescribed controlled substances between January 25, 2017, and December 19, 2019, were based on sufficient medical evidence. Tr. 336.

55. Over the course of his treatment of Patient B.C., Respondent's diagnoses for pain, GAD, and ADD frequently came and went without comment or explanation. *See generally* GX 5; Tr. 316–19; 319–21; 322–25. Like chronic pain and GAD, ADD is a chronic condition. Tr. 167:13–16. These erratic diagnoses were outside of the standard of care, [especially since these

diagnoses,] including those made between January 25, 2017, and December 19, 2019, [were not supported by an adequate medical history and physical examination.] Tr. 318–19; 321–22; 325–26.

56. Respondent never documented an appropriate treatment plan with goals and objectives for Patient B.C., never documented an appropriate rationale for continued treatment of Patient B.C. with controlled substances, and failed to properly discuss the risks and benefits of the controlled substances he prescribed to Patient B.C. *See generally* GX 5; Tr. 337.

57. Respondent also prescribed Patient B.C. the following dangerous combinations of controlled substances, which put Patient B.C. at serious risk of adverse medical consequences, including addiction, overdose and death. Tr. 326–30:

a. Hydrocodone, Adderall, and Xanax on January 25, 2017, April 18, 2017, June 19, 2017, and July 31, 2018. ALJ Ex. 3 at 5–6.

b. Hydrocodone and Xanax on May 19, 2017, and approximately monthly from February 16, 2018, until July 3, 2018. ALJ Ex. 3 at 5–06.

c. Hydrocodone and Adderall on September 25, 2018, December 19, 2018, February 13, 2019, April 9, 2019, June 5, 2019, July 30, 2019, October 25, 2019, and December 19, 2019. ALJ Ex. 3 at 5–7.

58. Respondent's prescriptions to Patient B.C. for Xanax between January 25, 2017, and July 31, 2018, were all for 6 mg of Xanax per day. GX 5 at 28–33. Such high dosages of Xanax placed Patient B.C. at risk of potentially lethal withdrawal, and presented risks of diversion. Tr. 294–95. The fact that Respondent prescribed Xanax to Patient B.C. concurrently with opioids, *see* ALJ Ex. 3 at 5–6, dramatically increased his risk of overdose and death. Tr. 295.

59. Respondent noted, on 19 occasions between January 25, 2017, and February 13, 2019, that Patient B.C. was opioid dependent, and refusing detoxification. GX 5 at 23, 25–33. Respondent never addressed this red flag, but simply continued to prescribe the patient hydrocodone on an as-needed basis. GX 5 at 23, 25–33; *see also* Tr. 333–34.

60. Indeed, Respondent frequently improperly and illegally prescribed Patient B.C. hydrocodone as a treatment for the patient's opioid dependency, including on January 25, 2017, June 19, 2017, July 17, 2017, March 26, 2018, May 11, 2018, July 3, 2018, August 28, 2018, October 22, 2018, December 19, 2018, and February 13, 2019. GX 5 at 23, 25–33; Tr. 306–07.

61. Respondent never conducted a urine drug screen on Patient B.C., in violation of the California standard of care. Tr. 333; PFF ¶ 18; *see generally* GX 5.

62. None of the controlled substance prescriptions Respondent issued to Patient B.C. between January 25, 2017, and December 19, 2019, were issued for a legitimate medical purpose or by a practitioner acting within the usual course of professional practice. Tr. 289–90. According to Dr. Munzing, there is nearly no situation in which a patient should receive the drugs that Respondent prescribed to Patient B.C. from January 25, 2017, to December 19, 2019, in those dosages, durations, and combinations, and Patient B.C. did not present any such situation. Tr. 337–38.

D. Patient J.C.

63. Between January 16, 2018, and December 30, 2019, Respondent issued to Patient J.C. the controlled substance prescriptions listed in Joint Stipulation No. 19. *See* ALJ Ex. 3 at 7–8. During this time, Respondent diagnosed Patient J.C. with back pain, GAD, and opioid dependency. GX 7 at 168–180.

i. Patient J.C.'s Initial Visit and the First Diagnosis for Back Pain

64. Respondent's initial encounter with Patient J.C. took place on May 18, 2009. GX 7 at 216, 233; Tr. 383:1–384:5. At that visit, Respondent diagnosed Patient J.C. with migraine headaches and GAD. GX 7 at 216; Tr. 384. Respondent prescribed Patient J.C. hydrocodone for migraines and Xanax for GAD. GX 7 at 216; Tr. 384. At this initial visit, Respondent failed to:

a. Take an appropriate medical history, GX 7 at 216; Tr. 385–86;

b. address Patient J.C.'s pain or functionality levels, GX 7 at 216; Tr. 387;

c. conduct an appropriate physical examination, GX 7 at 216; Tr. 386:16–387:3;

d. establish appropriate diagnoses for migraines or GAD and so establish a legitimate medical purpose to prescribe hydrocodone or Xanax, Tr. 387–88; or

e. establish and document a treatment plan with goals and objectives, GX 7 at 216; Tr. 388.

65. Respondent first diagnosed Patient J.C. with back pain on July 21, 2016, and prescribed hydrocodone. GX 7 at 189. There was no history taken, or evaluations performed, for back pain, other than a note saying Patient J.C. presented as a ''39 yom with GAD, chronic back pain.'' *Id.* Respondent's diagnosis for back pain was unsupported; he did not establish a legitimate medical purpose to prescribe hydrocodone, nor did he establish and document a treatment plan with goals and objectives. Tr. 391, 392–93, 393–94.

ii. Continued Controlled Substance Violations

66. Throughout the entire course of treatment, Respondent never obtained a proper medical history of Patient J.C., never recorded Patient J.C.'s pain or functionality levels, never obtained prior medical records for Patient J.C.—nor does Patient J.C.'s medical file reflect Respondent requested such records—failed to periodically update Patient J.C.'s medical history as treatment progressed, and never conducted a sufficient physical examination for pain. See generally GX 7; Tr. 424–26.

67. None of Respondent's diagnoses of Patient J.C. for which he prescribed controlled substances between January 16, 2018, and December 30, 2019, were based on sufficient medical evidence. Tr. 426.

68. Over the course of his treatment of Patient J.C., Respondent frequently changed without comment the diagnoses for which he prescribed Patient J.C. opioids, as well as the opioids prescribed. See generally GX 7; Tr. 409–14. These erratic diagnoses were outside of the standard of care, [especially since those diagnoses,] including those made between January 16, 2018, and December 30, 2019, [were not supported by an adequate medical history and physical examination.] Tr. 414–15.

69. Other than inquiring into smoking and alcohol use at Patient J.C.'s initial visit, see GX 7 at 216, Respondent did not inquire about current or past substance abuse until August 17, 2009, when he had Patient J.C. sign a form stating, ''I have no history of drug abuse, nor was I treated for drug or substance abuse in the past.'' GX 7 at 227. Patient J.C. was never asked about substance abuse again—something the California standard of care required Respondent to do. PFF ¶ 16; Tr. 359–60; *see generally* GX 7.

70. Respondent never documented an appropriate treatment plan with goals and objectives for Patient J.C., never documented an appropriate rationale for continued treatment of Patient J.C. with controlled substances, and failed to properly discuss the risks and benefits of the controlled substances he prescribed to Patient J.C. *See generally* GX 7; Tr. 426–27.

71. Respondent also prescribed Patient J.C. dangerous combinations of hydrocodone and Valium approximately monthly from January 16, 2018, until January 18, 2019, and once again on

May 6, 2019. ALJ Ex. 3 at 7–8. These combinations put Patient J.C. at serious risk of adverse medical consequences, including addiction, overdose, and death. Tr. 417–18.

72. Respondent noted, on 14 occasions between January 16, 2018, and February 19, 2019, that Patient J.C. was opioid dependent, and refusing detoxification. GX 7 at 173, 175–180. Respondent never addressed this red flag, but simply continued to prescribe the patient hydrocodone on an as-needed basis. GX 7 at 173, 175–80; *see also* Tr. 423–24.

73. Indeed, Respondent frequently improperly and illegally prescribed Patient J.C. hydrocodone as a treatment for the patient's opioid dependency, including on February 16, 2018, April 16, 2018, June 15, 2018, August 15, 2018, October 17, 2018, and December 13, 2018. GX 7 at 175–80; Tr. 398–400.

74. Respondent never conducted a urine drug screen on Patient J.C., in violation of the California standard of care. Tr. 421; PFF ¶ 18; *see generally* GX 7.

75. None of the controlled substance prescriptions Respondent issued to Patient J.C. between January 16, 2018, and December 30, 2019, were issued for a legitimate medical purpose or by a practitioner acting within the usual course of professional practice. Tr. 427–28. According to Dr. Munzing, there is nearly no situation in which a patient should receive the drugs that Respondent prescribed to Patient J.C. from January 16, 2018, to December 30, 2019, in those dosages, durations, and combinations, and Patient J.C. did not present any such situation. Tr. 418–19.

E. Patient D.D.

76. Between January 4, 2018, and February 12, 2019, Respondent issued to Patient D.D. the controlled substance prescriptions listed in Joint Stipulation No. 22. *See* ALJ Ex. 3 at 9. During this time, Respondent diagnosed Patient D.D. with back pain, GAD, and opioid dependency. GX 9 at 37–43.

i. Patient D.D.'s Initial Visit

77. Respondent's initial encounter with Patient D.D. took place on July 9, 2008. GX 9 at 74, 80; Tr. 430–31. At that visit, Respondent diagnosed Patient D.D. with GAD and back pain. GX 9 at 74; Tr. 431. Respondent prescribed Patient D.D. hydrocodone and Soma for back pain, and Valium for GAD. GX 9 at 74; Tr. 431. At this initial visit, Respondent failed to:

a. Take an appropriate medical history, GX 9 at 74; Tr. 433–34;

b. address Patient D.D.'s pain or functionality levels, GX 9 at 74; Tr. 435–36;

c. conduct an appropriate physical examination, GX 9 at 74; Tr. 434–35;

d. establish appropriate diagnoses for back pain or GAD and so to establish a legitimate medical purpose to prescribe hydrocodone, Soma, or a benzodiazepine, Tr. 436:3–21; or

e. establish and document a treatment plan with goals and objectives, GX 9 at 74; Tr. 436:22–25.

ii. Continued Controlled Substance Violations

78. Throughout the entire course of treatment, Respondent never obtained a proper medical history of Patient D.D., never recorded Patient D.D.'s pain or functionality levels, never obtained prior medical records for Patient D.D.—nor does Patient D.D.'s medical file reflect Respondent requested such records—failed to periodically update Patient D.D.'s medical history as treatment progressed, and never conducted a sufficient physical examination for pain. *See generally* GX 9; Tr. 465–66.

79. None of Respondent's diagnoses of Patient D.D. for which he prescribed controlled substances between January 4, 2018, and February 12, 2019, were based on sufficient medical evidence. Tr. 467.

80. Over the course of his treatment of Patient D.D., Respondent frequently changed without comment the diagnoses for which he prescribed Patient D.D. opioids. *See generally* GX 9; Tr. 450–56. These erratic diagnoses were outside of the standard of care, [especially since these diagnoses,] including those made between January 4, 2018, [were not supported by an adequate medical history and physical examination.] Tr. 453–56.

81. Other than inquiring into smoking and alcohol use at Patient D.D.'s initial visit, *see* GX 9 at 74, Respondent did not inquire about current or past substance abuse until over one year later, on August 28, 2009, when he had Patient D.D. sign a form stating ''I have no history of drug abuse, nor was I treated for drug or substance abuse in the past.'' GX 9 at 77. Respondent never asked Patient D.D. about substance abuse again—something the California standard of care required Respondent to do. PFF ¶ 16; *see generally* GX 9.

82. Respondent never documented an appropriate treatment plan with goals and objectives for Patient D.D., never documented an appropriate rationale for continued treatment of Patient D.D. with controlled substances, and failed to properly discuss the risks and benefits of the controlled substances he prescribed to Patient D.D. *See generally* GX 9; Tr. 467.

83. Respondent also prescribed Patient D.D. the following dangerous combinations of controlled substances, which put Patient D.D. at serious risk of adverse medical consequences, including addiction, overdose, and death, Tr. 457–58:

a. Hydrocodone and Soma approximately monthly from January 4, 2018, through August 10, 2018, and October 16, 2018, through January 11, 2019. ALJ Ex. 3 at 9.

b. Hydrocodone and Xanax on September 19, 2018. ALJ Ex. 3 at 9.

84. Respondent noted, on 10 occasions between January 16, 2018, and February 12, 2019, that Patient D.D. was opioid dependent and refusing detoxification. GX 9 at 37, 39–43. Respondent never addressed this red flag, but simply continued to prescribe the patient hydrocodone on an as-needed basis. GX 9 at 37, 39–43.; see also Tr. 463–65.

85. Indeed, Respondent frequently illegally and improperly prescribed Patient D.D. hydrocodone as a treatment for the patient's opioid dependency, including on March 23, 2018, July 6, 2018, August 10, 2018, October 16, 2018, December 13, 2018, and February 12, 2019. GX 9 at 37, 39–43; Tr. 454. Moreover, on all of those occasions except February 12, 2019, Respondent also prescribed Patient D.D. Soma for his opioid dependency. Soma is not indicated as a treatment for opioid dependency, and prescribing it to treat opioid dependency is outside the usual course of professional practice. GX 9 at 39–43; Tr. 454–55.

86. Although Patient D.D. presented a risk of abuse or diversion, Respondent never conducted a urine drug screen on Patient D.D., in violation of the California standard of care. Tr. 461–62; PFF ¶ 18; *see generally* GX 9.

87. None of the controlled substance prescriptions Respondent issued to Patient D.D. between January 4, 2018, and February 12, 2019, were issued for a legitimate medical purpose or by a practitioner acting within the usual course of professional practice. Tr. 468:4–16. According to Dr. Munzing, there is nearly no situation in which any patient should receive the drugs that Respondent prescribed to Patient D.D. between January 4, 2018, and February 12, 2019, in those dosages, durations, and combinations, and Patient D.D. did not present any such situation. Tr. 460–61.

F. Patient J.M.

88. Between January 10, 2017, and December 31, 2019, Respondent issued to Patient J.M. the controlled substance prescriptions listed in Joint Stipulation No. 25. See ALJ Ex. 3 at 10–12. During this time, Respondent diagnosed Patient J.M. with back pain, GAD, and opioid dependency. GX 11 at 18–42.

i. Patient J.M.'s Initial Visit

89. Respondent's initial encounter with Patient J.M. took place on May 14, 2007. GX 11 at 104, 111; Tr. 471. At that visit, Respondent diagnosed Patient J.M. with, inter alia, back pain and GAD. GX 11 at 104; Tr. 472. Respondent prescribed Patient J.M. hydrocodone for back pain and 6 mg of Xanax per day for GAD. GX 11 at 104; 472. At this initial visit, Respondent failed to:

a. Take an appropriate medical history, GX 11 at 104; Tr. 473–74

b. address Patient J.M.'s pain or functionality levels, GX 11 at 104; Tr. 474–75;

c. conduct an appropriate physical examination, GX 11 at 104; Tr. 474;

d. establish an appropriate diagnosis for back pain and so establish a legitimate medical purpose to prescribe hydrocodone or Soma, Tr. 475; or

e. establish and document a treatment plan with goals and objectives, GX 11 at 104; Tr. 475–76.

ii. Controlled Substance Violations

90. Throughout the entire course of treatment, Respondent never obtained a proper medical history of Patient J.M., never recorded Patient J.M.'s pain or functionality levels, never obtained prior medical records for Patient J.M.—nor does Patient J.M.'s medical file reflect Respondent requested such records—failed to periodically update Patient J.M.'s medical history as treatment progressed, and never conducted a sufficient physical examination for pain. *See generally* GX 11; Tr. 564–66.

91. None of Respondent's diagnoses of Patient J.M. for which he prescribed controlled substances between January 10, 2017, and December 31, 2019, were based on sufficient medical evidence. Tr. 566.

92. Over the course of his treatment of Patient J.M., Respondent frequently changed without comment the diagnoses for which he prescribed Patient J.M. hydrocodone. *See generally* GX 11; Tr. 502–03, 504. These erratic diagnoses were outside of the standard of care, [especially since these diagnoses,] including those made between January 10, 2017, [were not supported by an adequate medical history and physical examination.] Tr. 503–04.

93. Other than inquiring into smoking and alcohol use at Patient J.M.'s initial visit, see GX 11 at 104; Tr. 475, Respondent did not inquire about substance abuse until over two years later, on September 21, 2009, when he had Patient J.M. sign a form stating ''I have no history of drug abuse, nor was I treated for drug or substance abuse in the past.'' GX 11 at 115. Respondent never asked Patient J.M. about substance abuse again as required by the California standard of care. PFF ¶ 16; Tr. 481–82; *see generally* GX 11.

94. Respondent never documented an appropriate treatment plan with goals and objectives for Patient J.M., never documented an appropriate rationale for continued treatment of Patient J.M. with controlled substances, and failed to properly discuss the risks and benefits of the controlled substances he prescribed to Patient J.M. *See generally* GX 11; Tr. 566–67.

95. Respondent also prescribed Patient J.M. the following dangerous combinations of controlled substances, which put Patient J.M. at serious risk of adverse medical consequences, including addiction, overdose, and death, Tr. 505–10:

a. Hydrocodone, Xanax, and Soma (a combination referred to by illicit users as ''the Holy Trinity,'' Tr. 506) in May of 2018, and November of 2018. ALJ Ex. 3 at 11.

b. Hydrocodone and Xanax on 26 occasions between January 25, 2017, and February 20, 2019. ALJ Ex. 3 at 10–11.

96. These combinations of drugs are highly sought after for abuse and diversion. Tr. 505–06, 510. Indeed, there is almost never any medical justification for prescribing a combination of hydrocodone, Xanax, and Soma. Tr. 507–08. Specifically, this combination was prescribed on January 25, 2017, June 19, 2017, August 14, 2017, September 14, 2017, October 17, 2017, November 6, 2017, November 20, 2017, January 25, 2018, February 7, 2018, February 23, 2018, March of 2018, April 9, 2018, April 25, 2018, May 23, 2018, June 11, 2018, June 27, 2018, July 11, 2018, July 25, 2018, August 29, 2018, September 17, 2018, October 17, 2018, December 5, 2018, December 21, 2018, January of 2019, February 6, 2019, and February 20, 2019.

97. Respondent's prescriptions to Patient J.M. for Xanax between January 10, 2017, and February 20, 2019, were repeatedly for at least 6 mg of Xanax per day. GX 11 at 26–42; ALJ Ex. 3 at 10–11. Prescribing such high dosages of Xanax placed Patient J.M. at risk of potentially lethal withdrawal, and presented risks of diversion. Tr. 217, 218–19. The fact that Respondent often prescribed Xanax to Patient J.M. concurrently with opioids, see ALJ Ex. 3 at 10–11, dramatically increased his risk of overdose and death. Tr. 217–18.

98. Indeed, between January 10, 2017, and November 2, 2018, Respondent repeatedly issued Patient J.M. substantially early prescriptions for Xanax—issuing Patient J.M. 40 prescriptions for 90 units of Xanax 2 mg, or a prescription approximately every 17 days. ALJ Ex. 3 at 10–11. This provided Patient J.M. with over 10.5 mg of Xanax per day, or more than double the maximum recommended daily dose of 4 mg. *Id.;* Tr. 513–15.

99. Further, between January 10, 2017, and November 2, 2018, Patient J.M. alternated filling his Xanax prescriptions at one of two different pharmacies. Tr. 520–21; GX 17; GX 18. This was a significant red flag or abuse and diversion, indicating that Patient J.M. was seeking to avoid the pharmacies detecting how much Xanax he was being prescribed, but Respondent did nothing to address this. Tr. 521–22.

100. Instead, Respondent actually assisted Patient J.M. in obtaining controlled substances Patient J.M. might not otherwise have been able to have filled.*[DD] Respondent frequently issued Patient J.M. a written prescription for hydrocodone which Patient J.M. would fill at one pharmacy, and that same day, Respondent would call in a prescription for Xanax to another pharmacy. Tr. 528–547, 550–58. Respondent did this on at least the following dates:

a. January 25, 2017, *see* GX 11 at 42; GX 12 at 1–2; GX 17 at rows 425, 575;

b. June 19, 2017, *see* GX 11 at 41; GX 12 at 5–6; GX 17 at rows 1,746, 1,825; 28

c. November 6, 2017, *see* GX 11 at 40; GX 12 at 10–11; GX 17 at rows 2,764, 2,788;

d. February 7, 2018, *see* GX 11 at 38; GX 12 at 14; GX 13 at 20; GX 18 at rows 473, 474;

e. May 11, 2018, *see* GX 11 at 36; GX 12 at 22; GX 13 at 25; GX 18 at rows 994, 1,120;

f. June 11, 2018, *see* GX 11 at 36; GX 12 at 24; GX 13 at 27; GX 18 at rows 1,228, 1,386;

g. July 11, 2018, *see* GX 11 at 35; GX 12 at 26–27; GX 18 at rows 1,472, 1,553;

*[DD] Whether or not Respondent was knowingly assisting J.M. in diversion was not material to my decision in this matter as the overwhelming evidence already established that Respondent issued the relevant prescriptions outside the usual course of professional practice and beneath the standard of care in California.

h. September 17, 2018, *see* GX 11 at 33; GX 12 at 33; GX 13 at 32; GX 18 at rows 2,102, 2,229; and

i. October 17, 2018, *see* GX 11 at 32; GX 12 at 34; GX 13 at 34; GX 18 at rows 2,341, 2,342.

101. This was a ''bright red flag'' indicating that Patient J.M. was seeking to avoid having a pharmacy potentially refuse to fill concurrent prescriptions for opioids and benzodiazepines. Tr. 558–59.

102. Between November 20, 2017, and February 20, 2019, Respondent noted 17 times in Patient J.M.'s medical file that Patient J.M. was opioid dependent, and refusing detoxification. GX 11 at 26–39. Respondent never addressed this red flag, but simply continued to prescribe the patient hydrocodone on an as-needed basis. GX 11 at 26–39; *see also* Tr. 561–64.

103. Indeed, Respondent frequently improperly and illegally prescribed Patient J.M. hydrocodone as a treatment for the patient's opioid dependency, including on at least April 25, 2018, May 23, 2018, June 27, 2018, August 29, 2018, October 17, 2018, and December 21, 2018. GX 11 at 30, 32, 34–37; Tr. 486–88.

104. Further, Respondent's prescribing of hydrocodone was sporadic. See, *e.g.,* GX 11 at 3942; Tr. 500:5–501:13. However, Respondent never documented any rationale for changing Patient J.M.'s course of medication with respect to hydrocodone. *See* GX 1 at 18–42; Tr. 501.

105. Although Patient J.M. presented significant risks of abuse or diversion, Respondent never conducted a urine drug screen on Patient J.M., in violation of the California standard of care. Tr. 560–61:12; PFF ¶ 18; *see generally* GX 11.

106. None of the controlled substance prescriptions Respondent issued to Patient J.M. between January 10, 2017, and December 31, 2019, were issued for a legitimate medical purpose or by a practitioner acting within the usual course of professional practice. Tr. 567–68. Dr. Munzing testified that there is no situation in which any patient should receive the drugs that Respondent prescribed to Patient J.M. between January 10, 2017, and December 31, 2019, in those dosages, durations, and combinations. Tr. 507–08.

G. Patient K.S.

107. Between January 19, 2018, and January 31, 2019, Respondent issued to Patient K.S. the controlled substance prescriptions listed in Joint Stipulation No. 29. See ALJ Ex. 3 at 12–13. During this time period, Respondent diagnosed Patient K.S. with back pain, GAD, ADD, and opioid dependency. GX 14 at 31–41.

i. Patient K.S.'s Initial Visit and the First Prescriptions for Xanax and Adderall

108. Respondent's initial encounter with Patient K.S. took place on June 21, 2007. GX 14 at 110, 117; Tr. 570:8–571:3. At that visit, Respondent diagnosed Patient K.S. with back pain. GX 14 at 110; Tr. 571. Respondent prescribed Patient K.S. hydrocodone and Soma for back pain. GX 14 at 110; Tr. 571. At this initial visit, Respondent failed to:

a. Take an appropriate medical history, GX 14 at 110; Tr. 572:4–23;

b. address Patient K.S.'s pain or functionality levels, GX 14 at 110; Tr. 573:1823;

c. conduct an appropriate physical examination, GX 14 at 110; Tr. 572–73

d. establish an appropriate diagnosis for back pain and so establish a legitimate medical purpose to prescribe hydrocodone or Soma, Tr. 574; or

e. establish and document a treatment plan with goals and objectives, GX 14 at 110; Tr. 574:16–21.

109. Respondent first diagnosed Patient K.S. with GAD on May 1, 2012, and prescribed 6 mg of Xanax per day. GX 14 at 80; Tr. 577. There was no history taken, or evaluations performed for GAD, other than an insufficient note saying Patient K.S. presented as a ''28 yom with GAD, neck pain.'' GX 14 at 80. Respondent's diagnosis for GAD was completely unsupported as he did not establish a legitimate medical purpose to prescribe Xanax, nor did he establish and document a treatment plan with goals and objectives. *Id.;* Tr. 579–81.

110. Respondent first prescribed Patient K.S. Adderall on November 18, 2013. GX 14 at 70. There was no history taken, evaluations performed, or even any diagnosis made; there was only a note saying ''Adderall 30 mg #60, [one] bid (SED).'' *Id.;* Tr. 581. Respondent did not establish a legitimate medical purpose to prescribe Adderall, nor did he establish and document a treatment plan with goals and objectives. Tr. 582:16–23. Respondent later diagnosed Patient K.S. with ADD, see *e.g.,* GX 14 at 41, but he had never obtained sufficient medical evidence for such a diagnosis. Tr. 583–84.

ii. Continued Controlled Substance Violations

111. Throughout the entire course of treatment, Respondent never obtained a proper medical history of Patient K.S., never recorded Patient K.S.'s pain or functionality levels, never obtained prior medical records for Patient K.S.—nor does Patient K.S.'s medical file reflect Respondent requested such records—failed to periodically update Patient K.S.'s medical history as treatment progressed, and never conducted a sufficient physical examination for pain. *See generally* GX 14; Tr. 617–19.

112. None of Respondent's diagnoses of Patient K.S. for which he prescribed controlled substances between January 19, 2018, and January 31, 2019, were based on sufficient medical evidence. Tr. 619:6–13.

113. Over the course of his treatment of Patient K.S., Respondent's diagnoses for pain, GAD, and ADD frequently came and went without comment or explanation. *See generally* GX 14; Tr. 598–601; 602–05; 605–08. These erratic diagnoses were outside of the standard of care, [especially since these diagnoses,] including those made between January 19, 2018, and January 31, 2019, [were not supported by an adequate medical history and physical examination.] Tr. 601–02; 604–05; 608–09.

114. Other than inquiring into smoking and alcohol use at Patient K.S.'s initial visit, *see* GX 14 at 110; Tr. 573–74, Respondent did not inquire about current or past substance abuse until over two years later, on August 5, 2009, when he had Patient K.S. sign a form stating, ''I have no history of drug abuse, nor was I treated for drug or substance abuse in the past.'' GX 14 at 119. Respondent never asked Patient K.S. about substance abuse again as required by the California standard of care. PFF ¶ 16; Tr. 574–75; *see generally* GX 14.

115. Respondent never documented an appropriate treatment plan with goals and objectives for Patient K.S., never documented an appropriate rationale for continued treatment of Patient K.S. with controlled substances, and failed to properly discuss the risks and benefits of the controlled substances he prescribed to Patient K.S. *See generally* GX 14; Tr. 619–20.

116. Respondent also prescribed Patient K.S. the following dangerous combinations of controlled substances, that put Patient K.S. at serious risk of adverse medical consequences, including addiction, overdose, and death, Tr. 609–11:

a. Hydrocodone, Adderall, and Xanax approximately monthly from January 19, 2018, through August of 2018, and again in November of 2018. ALJ Ex. 3 at 12–13.

b. Hydrocodone and Xanax on August 29, 2018, October 2, 2018, October 31, 2018, and November 28, 2018. ALJ Ex. 3 at 13.

117. Respondent's prescriptions to Patient K.S. for Xanax between January 19, 2018, and January 31, 2019, were all for 6 mg of Xanax per day. GX 14 at 33–41; ALJ Ex. 3 at 12–13. Prescribing such high dosages of Xanax placed Patient K.S. at risk of potentially lethal withdrawal, and presented risks of diversion. Tr. 577–78. The fact that Respondent prescribed Xanax to Patient K.S. concurrently with opioids, *see* ALJ Ex. 3 at 12–13, dramatically increased his risk of overdose and death. Tr. 579.

118. Respondent noted on 13 occasions between January 19, 2018, and January 31, 2019, that Patient K.S. was opioid dependent, and refusing detoxification. GX 14 at 31–41. Respondent never addressed this red flag, but simply continued to prescribe the patient hydrocodone on an as-needed basis. GX 14 at 31–41; *see also* Tr. 615–17.

119. Indeed, Respondent frequently improperly and illegally prescribed Patient K.S. hydrocodone as a treatment for the patient's opioid dependency, including on February 27, 2018, April 30, 2018, July 3, 2018, August 3, 2018, October 2, 2018, November 28, 2018, and January 2, 2019. GX 14 at 31, 33, 35–37, 39–40; Tr. 586–88.

120. Although Patient K.S. presented significant risks of abuse or diversion, Respondent never conducted a urine drug screen on Patient K.S. in violation of the California standard of care. Tr. 614; PFF ¶ 18; *see generally* GX 14.

121. None of the controlled substance prescriptions Respondent issued to Patient K.S. between January 19, 2018, and January 31, 2019, were issued for a legitimate medical purpose or by a practitioner acting within the usual course of professional practice. Tr. 620. According to Dr. Munzing, there is no situation in which a patient should receive the drugs that Respondent prescribed to Patient K.S. between January 19, 2018, and January 31, 2019, in those dosages, durations, and combinations. Tr. 613.

122. Respondent's prescribing of controlled substances to Patients S.B., M.B., B.C., J.C., D.D., J.M., K.S. constituted clearly excessive prescribing. Tr. 621.

Analysis

Findings as to Allegations

The Government alleges that the Respondent's COR should be revoked and any applications should be denied, because the Respondent violated federal and California law, by issuing numerous prescriptions for Schedule II through IV controlled substances outside the usual course of professional practice and not for a legitimate medical purpose to seven individuals as recently as December 31, 2019. [I find that each of the relevant prescriptions were issued outside of the usual course of professional practice and beneath the standard of care in California in violation of both federal and state law.] *[EE] In the adjudication of a revocation or suspension of a COR, DEA bears the burden of proving that the requirements for such revocation or suspension are satisfied. 21 CFR 1301.44(e). Where the Government has sustained its burden and established that a respondent has committed acts that render his registration inconsistent with the public interest, to rebut the Government's *prima facie* case, a respondent must both accept responsibility for his actions and demonstrate that he will not engage in future misconduct. *Patrick W. Stodola, M.D.,* 74 FR 20727, 20734 (2009).

Acceptance of responsibility and remedial measures are assessed in the context of the ''egregiousness of the violations and the [DEA's] interest in deterring similar misconduct by [the] Respondent in the future as well as on the part of others.'' *David A. Ruben, M.D.,* 78 FR 38363, 38364 (2013). Where the Government has sustained its burden and established that a respondent has committed acts inconsistent with the public interest, that respondent must present sufficient mitigating evidence to assure the Administrator that he can be entrusted with the responsibility commensurate with such a registration. *Medicine Shoppe-Jonesborough,* 73 FR 364, 387 (2008).

The Agency's conclusion that ''past performance is the best predictor of future performance'' has been sustained on review, *Alra Labs., Inc.* v. *DEA,* 54 F.3d 450, 452 (7th Cir. 1995), as has the Agency's consistent policy of strongly weighing whether a registrant who has committed acts inconsistent with the public interest has accepted responsibility and demonstrated that he or she will not engage in future misconduct. *Hoxie* v. *DEA,* 419 F.3d 477, 482–83 (6th Cir. 2005); *see also Ronald Lynch, M.D.,* 75 FR 78745, 78754 (2010) (holding that the Respondent's attempts to minimize misconduct undermined acceptance of responsibility); *George C. Aycock, M.D.,* 74 FR 17529, 17543 (2009) (finding that much of the respondent's testimony undermined his initial acceptance that he was ''probably at fault'' for some misconduct); *Jayam Krishna-Iyer, M.D.,* 74 FR 459, 463 (2009) (noting, on remand, that despite the respondent's having undertaken measures to reform her practice, revocation had been appropriate because the respondent had refused to acknowledge her responsibility under the law); *Medicine Shoppe-Jonesborough,* 73 FR at 387 (noting that the respondent did not acknowledge recordkeeping problems, let alone more serious violations of federal law, and concluding that revocation was warranted).*[FF]

California Law

The applicable California Codes are: *[GG]

1. Cal. Health & Safety Code § 11153(a), requiring that a ''prescription for a controlled substance shall only be issued for a legitimate medical purpose by an individual practitioner acting in the usual course of his or her professional practice'';

2. Cal. Health & Safety Code § 11154(a), directing that ''no person shall knowingly prescribe, administer, dispense, or furnish a controlled substance to or for any person . . . not under his or her treatment for a pathology or condition . . .'';

3. Cal. Bus. & Prof. Code § 2242, prohibiting the ''[p]rescribing, dispensing, or furnishing [of controlled substances] . . . without an appropriate prior examination and a medical indication,'' the violation of which constitutes unprofessional conduct;

4. Cal. Bus. & Prof. Code § 2234, defining unprofessional conduct to include: ''[g]ross negligence''; ''[r]epeated negligent acts''; ''[i]ncompetence''; or ''[t]he commission of any act involving dishonesty or corruption that is substantially related to the qualifications, functions, or duties of a physician and surgeon''; and

5. Cal. Bus. & Prof. Code § 725, further defining unprofessional conduct to include ''[r]epeated acts of clearly excessive prescribing, furnishing, dispensing, or administering of drugs. . . .''

ALJ Ex. 1.

Allegations Common to Multiple Patients

There were allegations common to many or all of the subject patients. They will be discussed here generally. They may be discussed in detail in the context of the particular patients as well, and as needed.

*[EE] Text modified for legal clarity.

*[FF] Remaining text omitted for brevity and clarity.

*[GG] However, see *supra* n. 1.

Failure To Maintain Accurate and Complete Patient Charts

There was a recurring theme throughout the Respondent's patient files that he failed to maintain accurate and complete patient charts. This failing itself is contrary to the ''Guide to the Laws Governing the Practice of Medicine by Physicians and Surgeons,'' Medical Board of California, 7th ed. 2013, which requires the practitioner to ''keep accurate and complete records, including but not limited to, records of the patient's medical history, physical examinations of the patient, the treatment plan objectives and the treatments given, and the rationale for any changes in treatment.'' *Id.* at 59. Not surprisingly, the failure to maintain accurate and complete patient records itself is outside the usual course of professional practice and represents a violation of the California standard of care.

Dr. Munzing also explained that this failure in documentation rendered any resulting treatment or diagnosis unjustified and inappropriate. Tr. 241–44. Without an appropriate diagnosis that is justified by the documentation, there is no legitimate medical purpose for the controlled substance prescriptions. Tr. 172, 207, 241–44.

The Respondent conceded repeatedly that matters allegedly discussed with the patients, information gathered from them, evaluation of treatment plans and changes in treatment, and determinations regarding treatment, were not recorded in the patient chart.[21] He gave various reasons for not documenting the missing information, including his 41-years of clinical experience, his busy practice, and his practice of maintaining paper records, which prevents the degree of detail permitted by electronic record-keeping, and results in him keeping his notes as brief as possible and only recording the ''main ideas.'' Tr. 809. The Respondent conceded that ''maybe'' it was ''inappropriate'' of him not to more thoroughly detail this information in the charts. Tr. 809. But with handwritten charts, he claimed that he was only able to include the ''main ideas.'' His notes are simply to remind him of the matters in the future, so he keeps his notes as brief as possible. Tr. 810–11, 815. Finally, he defended his limited documentation by claiming that more was unnecessary due to his photographic memory.[22] Although the Respondent sometimes displayed a seemingly extraordinary memory,[23] it was not always infallible. [*See infra* Credibility Analysis of the Respondent. Consistent with Dr. Munzing's opinions, the Respondent misperceives the purpose of these medical records. Not only do medical records remind the treating practitioner of the basis and ongoing treatment strategy; they also provide an accurate history of symptoms, ongoing treatment and medication protocol for other practitioners who may treat the patient in the future. Tr. 917.]

Moreover, as the Respondent indicated he was essentially testifying from memory regarding appointments and treatment from sometimes up to fourteen years ago, the Government was permitted to test the Respondent's memory. The Respondent's memory may not be as good as he believes.[24] [*See infra* Credibility Analysis of the Respondent.] Of course, even the extraordinary memory of the Respondent will not help another practitioner who may treat one of the Respondent's patients and expect to rely on the Respondent's chart.

Respondent's belief that all of the necessary patient information was accurately kept in his mind is no justification for Respondent's failure to maintain accurate and complete patient files. I find the Respondent violated the California professional standards and standard of care by failing to maintain complete and accurate medical charts as to each of the subject patients.*[HH]

In his Post-hearing Brief (PHB), the Respondent argues that Dr. Munzing's assertions that the deficient medical charts demonstrate treatment outside the standard of care is faulty, as Dr. Munzing failed to speak with the subject patients to determine if the prescriptions were justified. Only then, he argues, could Dr. Munzing convincingly opine regarding whether the actual treatment was consistent with the standard of care. The Respondent misses the point. Although certainly the extent of Dr. Munzing's review of relevant material is normally critical to the conclusions he draws, the focus of Dr. Munzing's opinions relate to whether the Respondent complied with his obligations under the standard of care prior to prescribing the subject medications, and documentation was part of his obligation. It is neither here nor there that Dr. Munzing could have resolved his own concerns regarding the subject prescriptions by speaking to the patients years later. Nor is it dispositive that Dr. Munzing might have determined, through his own investigation, that the prescriptions were justified at the time they were issued [but for the documentation failures.] The Respondent failed to satisfy his obligations, which include obligations to accurately document, at the time the prescriptions were issued. Accordingly, I do not view the fact that Dr. Munzing did not speak with the subject patients as diminishing the probity of his relevant opinions as to the Respondent's acts or omissions, at all. The instant evaluation relates to whether the Respondent provided appropriate controlled substance prescriptions on the basis of the information developed by the Respondent prior to issuing the prescriptions.

Although the Respondent argues in his PHB that he testified credibly that he fully complied with his obligations

[21] For example, the Respondent conceded he did not document the rationale for the change in medication for J.M. and K.S. Tr. 885. On February 2, 2017, the Respondent prescribed Soma to S.B. Tr. 875; GX 1 at 59. By March 1, 2017, Soma had been discontinued, yet the chart reflected no rationale for that change in medication regimen. Tr. 876–77. As the Respondent varied his prescribing between Soma and Xanax, he conceded he did not document the reason for the variation in medication. Tr. 878–83. Similarly, the Respondent conceded he did not document pain level, function level and quality of life in the seven charged patients. Tr. 885–87; GX 20 at 61. Although the Respondent testified he developed a treatment plan for each of his patients, the Government pointed out S.B.'s treatment plan and objectives were not documented in her chart. Tr. 813–14.

[22] The list of prior therapies was not in his progress notes. Tr. 805–06, 808. The Respondent explained its absence by stating that maybe he did not feel it was crucial to document them, because he memorizes what the patient tells him. Tr. 806. Respondent thought the documentation did not need to include references to prior, concluded treatment, because the patient had moved on to the new treatment. Tr. 807–08. The Respondent testified to S.B.'s prior treatment from memory. Tr. 808. [Some footnote text was omitted for brevity, and other portions were moved to the body of the discussion or to other footnotes where the information was more pertinent.]

[23] The Respondent could not remember if J.C. mentioned his prior surgeries at the first or second visit (in 2009). Tr. 840. The Respondent added that he probably prescribed Valium to J.C., as well, explaining he was remembering from 13 years ago. Tr. 850. The Respondent added that he may have also prescribed Xanax to K.S., but it is difficult to be sure with hundreds of patients and treatment dating back 15 years. Tr. 859. M.B. had physical therapy, and perhaps acupuncture, but the Respondent could not quite remember. Tr. 827. Even with a good memory, Respondent admitted that sometimes the he may just miss something. Tr. 859.

[24] The Government sought to test the Respondent's memory by asking to confirm that, consistent with his direct testimony, he only treated S.B. with hydrocodone, Xanax and Adderall. Tr. 810–13. The Respondent confirmed his direct testimony. Tr. 812. The Government reminded the Respondent that he prescribed Soma as well. Tr. 813. Although the Respondent testified he did not introduce any of his subject patients to controlled substances, the chart reflects he did prescribe Soma to S.B. for the first time. Tr. 816–17; GX 1 at 61, 62. The Respondent remembered during cross-examination that, although not in the chart, S.B. told him she had been on Soma previously. Tr. 817–19.

*[HH] Sentence modified for clarity.

under the standard of care, the Respondent was not fully credible as detailed in my credibility analysis of the Respondent. In the Government's Supplemental Pre-hearing Statement (GSPHS), the Government argues that the failure to document procedures or findings within the chart justifies a finding that the procedures, evaluation or findings did not occur. On the basis of the instant record, I concur. I further adopt Dr. Munzing's conclusions that without sufficient documentation of procedures or evaluation required by the standard of care, resulting diagnoses are deemed inappropriate, there is no legitimate medical purpose established for treatment and any resulting controlled substance prescriptions were outside the usual course of professional practice. [I have discussed this further *infra* at Factors Two and Four.]

Patients Were Left on Their Original Medication Protocols Despite Being Prescribed High MME and Dangerous Combinations

Patients were permitted to remain on the medications and dosages they were previously prescribed if the Respondent found them to be doing well, that their pain level was low enough that they could work full time, and they could complete their ADLs. [Respondent testified, ''[i]f the patient tells me, ''Look, I've already been with pain specialists; I've already seen a couple of specialists; I already had three-four MRIs; I already had surgery; I'm on this medication for years, and it's working for me,'' then it comes down to one of two options. Either I tell him I will fill his prescription or I kick him out of my office. And I don't think it is ethical to do that latter approach.'' Tr. 651.] This was the case even with patients at dangerous levels of medication and in dangerous combinations that are known to be popular for abuse and diversion. [Interestingly, despite Dr. Munzing's consistent testimony supported by CDC guidance and a FDA black box warning, Respondent testified that the prescribed combination of an opiate, muscle relaxant, and benzodiazepine, when ''used in the right dosages for the right indications, and used as prescribed by a knowledgeable M.D., . . . are safe to use in combination therapy.'' Tr. 797.]

The Respondent maintained this *laissez faire* attitude despite being confronted with significant red flags suggesting that his patients could have been abusing and/or diverting.[25] Even patients the Respondent acknowledged as opioid dependent and refusing detox were continued on these dangerous medications and combinations without even UDS monitoring.[26] In fact, the Respondent treated opioid dependence with opioids, which is clearly outside the California standard of care. In fact, Dr. Munzing testified that it is illegal in California. Tr. 267–68, 306, 398–400. The Respondent failed to make any attempt at titration, even for patients who attempted to titrate on their own and who skipped pain medication when they could tolerate it. As Dr. Munzing observed, the standard of care would require an attempt at titration.

I find the Respondent's failures to sufficiently monitor, and to attempt titration from dangerous levels of medication and in dangerous combinations were outside the California standard of care.

Discussion as to Patient S.B.[*II]

As per the parties' stipulations, between February 2, 2017, and January 30, 2019, S.B. was prescribed hydrocodone, carisoprodol, Adderall and alprazolam. Tr. 162–63; GDX 1. Patient S.B. remains a patient of Dr. Rabadi. Tr. 708–09.*[JJ] Dr. Rabadi believed his prescription practice concerning S.B. was within the California standard of care. Tr. 709. Dr. Rabadi began his treatment of S.B. on August 3, 2016. Tr. 718. She presented as a 29 year-old female with ongoing conditions of GAD, fibromyalgia and ADD. Tr. 719. Dr. Rabadi noted that patients with ADD are six times more likely to have other psychiatric conditions as people without ADD. Ultimately, Dr. Rabadi concurred with the previous physician's diagnoses of ADD, GAD, and fibromyalgia. Tr. 724, 728.

Respondent testified that, as per his policy, he took a complete history. Tr. 719–20. He testified that he performed a complete physical exam, reviewed her existing diagnoses of GAD and ADD, and her medication history in general, and specifically for those diagnoses. Tr. 720, 722–24. He testified, [from memory,] that he obtained her pain level with and without medication. Without medication her subjective pain level was eight. With medication, it was one to two, which permitted her to function and perform daily activities. Tr. 721. [In summary, Respondent testified that he did everything required by the California standard of care, except ''maybe'' it was ''inappropriate'' of him to not more thoroughly document the details in the charts. Tr. 809.]

Dr. Munzing disagreed with Respondent and characterized the controlled substance prescriptions as being issued outside the standard of care. Tr. 163, 207, 241–44. For S.B.'s initial visit on August 3, 2016, she was diagnosed with GAD, ADD, and fibromyalgia. Tr. 163–65; GX1 at 62, 66. However, there was no supporting findings or history for the fibromyalgia diagnosis, which typically is reached after a certain number of tender points are determined. Tr. 166. Similarly, there was no supporting findings or history to support the GAD or ADD diagnoses. Tr. 166–71, 241–44. There is no physical functioning level documented nor mental functioning level. Tr. 171. Without sufficient evaluation and supporting documentation for the three diagnoses, Dr. Munzing deemed the diagnoses inappropriate. Tr. 241–44. Without an appropriate diagnosis, there is no legitimate medical purpose for the controlled substance prescriptions. Tr. 172, 207, 241–44. The Respondent conceded that the detailed findings of the complete physical exam are not reflected in his chart, but noted he was a clinician with 41-years of experience, and not a medical student. Tr. 810.

In accordance with Dr. Munzing's credible and unrebutted expert testimony, the Respondent misperceives the purpose of these medical records. The documentation is necessary without regard to the skill level of the treating practitioner. It reminds the treating practitioner of the basis and ongoing treatment strategy. It also provides an accurate history of symptoms, ongoing treatment and medication protocol for other practitioners who may treat the patient in the future.

Dr. Munzing highlights that there is no documented treatment plan for this patient. Tr. 241–44. On February 2, 2017, S.B. presented to the clinic suffering from fibromyalgia and ADD. Tr. 173; GX 1 at 59. The Respondent diagnosed her with fibromyalgia-opioid

[25] For example, S.B. reported to Dr. F. that she was not then taking any medication for pain, which is contrary to the Respondent's medical records and prescription evidence. Tr. 231–32. Also, CURES records disclosed his patients were being prescribed Suboxone by another physician.

[26] *See Holloway Distrib.,* 72 FR 42118, 42124 (2007) (a policy of ''see no evil, hear no evil'' is fundamentally inconsistent with the obligations of a DEA registrant). Agency precedent has long recognized that ''[l]egally, there is absolutely no difference between the sale of an illicit drug on the street and the illicit dispensing of a licit drug by means of a physician's prescription.'' *EZRX, L.L.C.,* 69 FR 63178, 63181 (1988); *Floyd A. Santner, M.D.,* 55 FR 37581 (1988); *Michael J. Aruta, M.D.,* 76 FR 19420, 19434 (2011).

[*II] The RD included an extensive write up of the OSC's allegations pertaining to each of the seven individuals at issue prior to discussing each individual. The allegations are set forth clearly in the OSC, *see* ALJX 1, and are summarized above; therefore, for brevity, I have omitted each of the seven sections outlining the allegations pertaining to each of the seven individuals.

[*JJ] Text omitted for brevity and clarity.

dependent, refusing detox, and ADD. He prescribed hydrocodone, carisoprodol, and Adderall. Tr. 173–74. Again, there was no medical history justifying the diagnoses. The physical exam conducted on February 2, 2017, consisted of blood pressure, cardiovascular, heart and lung, which were normal, which is insufficient to justify the fibromyalgia and ADD diagnosis. Tr. 175. There was no documentation of the pain level, or functionality level, to justify continued controlled substance prescribing. Tr. 175–76. For the progress note dated June 28, 2017, the Respondent diagnosed her with fibromyalgia-opioid dependent, refusing detox, and ADD. He prescribed hydrocodone, carisoprodol, and Adderall. Tr. 177. Again, there was no medical history justifying the diagnoses. There was no documentation of the pain level, or functionality level, to justify continued controlled substance prescribing. Tr. 177–78; GX 1 at 57. Again, only blood pressure, heart, and lung exams were performed. Tr. 177. There was insufficient medical evidence to justify the three diagnoses. Tr. 177–78. For the progress note dated December 21, 2018, S.B. presented with eczema and fibromyalgia. Tr. 179; GX 1 at 49. The Respondent diagnosed her with Fibromyalgia-opioid dependent, refusing detox. She was prescribed hydrocodone. No history was recorded. Again, only blood pressure, heart, and lung exams were performed. Tr. 180. There was no documentation of the pain level, or functionality level, to justify continued controlled substance prescribing. Tr. 180. There was insufficient medical evidence to justify the fibromyalgia diagnosis. Tr. 181. In the progress notes for January 30, 2019, S.B. reported to the clinic with ADD and rhinitis. Tr. 181; GX1 at 47. She was prescribed Adderall for the ADD. No medical history was taken. ADD patient progress was reported as ''stable.'' There was insufficient medical evidence to justify the ADD diagnosis. Tr. 183. Dr. Munzing deemed the ADD diagnoses inappropriate. Without an appropriate diagnosis, there is no legitimate medical purpose for the controlled substance prescription. Tr. 185–86.

During the subject period of the Respondent's treatment of S.B., he never obtained any prior medical records. Tr. 184. He never recorded a history, which would justify his diagnoses for fibromyalgia, GAD or ADD. He never reported a sufficient physical or mental exam to justify the fibromyalgia, GAD or ADD diagnoses. He never reported a sufficient evaluation to justify his diagnoses for fibromyalgia, GAD or ADD. Tr. 184–85. The controlled substance prescriptions for S.B. were not issued within the California standard of care, nor were they issued within the usual course of professional practice. Tr. 187, 244.

Dr. Munzing observed that the diagnoses would come and go in the records and were inconsistently reported, which is atypical for chronic diagnoses. Tr. 188–97. A chronic disease with symptoms which appear to come and go would question whether the patient had the disease at all. Tr. 192. Even a lessening of symptoms should cause evaluation of whether tapering of medication was appropriate. Tr. 196.

Dr. Munzing noted that the Respondent prescribed S.B. both hydrocodone and Soma to treat fibromyalgia on numerous occasions. Tr. 197–98. On other occasions he prescribed hydrocodone alone without any explanation for changing the medication protocol, which was beneath the California standard of care for documentation. Tr. 198–201; GX 20 at 61. Dr. Munzing noted that S.B. was on a dangerous, highly addictive, combination of medications that was popular for abuse, namely hydrocodone and Soma, which are respiratory depressants, combined with Adderall. Tr. 202. Another dangerous combination, hydrocodone, Adderall and Xanax, was prescribed on March 1, 2017, in April 2017, and June 2017. Tr. 203; GDX 1. Dr. Munzing noted it is referred to by drug abusers as the ''new Holy Trinity.'' Tr. 204. It includes the depressants, hydrocodone and Soma, and is followed by the stimulant, Adderall, to counteract the effects of the depressants. Again, the combination of hydrocodone and Soma are the subject of the FDA ''black box'' warning. Tr. 205. The high dosage of Xanax, 6 mg per day, heightens the risk of this already dangerous combination. With Xanax and Adderall prescribed at their highest commercially available dosage units, the danger and risk of addiction are further increased. Tr. 205. Additionally, two mg tablets of Xanax are popular for abuse and diversion. Tr. 217–18. On September 29, 2017, and monthly from July 2018, to July, 2019, S.B. was prescribed hydrocodone and Adderall. Besides the serious risk of addiction posed by these two Schedule II medications, the hydrocodone was prescribed at a high daily dosage of 60 mg MME, which significantly increases the risk of overdose and death. This risk was increased by its combination with Adderall. Tr. 206–07. Dr. Munzing could not foresee a medical condition for which this combination would be appropriate. Tr. 211–12.

The Respondent defended his keeping S.B. on this medication protocol, noting that if the Respondent objected to every patient's choice of treatment, there would be no medical care. If a patient says they are on medication and it permits them to function, the Respondent will continue that treatment. Tr. 729–30. Respondent, [based on his memory alone,] testified that S.B. indicated she had been through several alternate treatments, including, occupational therapy, physical therapy, hydrotherapy, yoga and meditation. Tr. 731, 805.

Respondent, [testifying from memory,] said S.B. further reported that she had been on the same dosage of medications for several years to good effect. Tr. 731–32. To reduce her from those dosages would have to be done gradually, lest the patient have withdrawal symptoms or suffer severe pain. Tr. 732. Prior to each prescription, the Respondent testified that he discussed side effects, and changes in status. Tr. 733. However, the record discloses that the patient was not always taking the medications as prescribed. There were a number of notations that the patient refused detox.

The Respondent misperceives his role as an independent practitioner. In accordance with Dr. Munzing's testimony, Respondent has a responsibility to independently determine the course of treatment, even in patients he inherits from other prescribers. Completely deferring to his patients' wishes in determining appropriate treatment is contrary to his role within the California standard of care. He concedes titration would have to be done gradually. However, he kept this patient on high levels of dangerous medication, in dangerous combinations, for two years, without attempting titration. This [prescribing] is below the California standard of care. The Respondent's failure to obtain prior medical records and failure to document the patient's history, and to even order a single UDS, is consistent with this relinquishment of his responsibility to independently evaluate and to monitor the patient's condition and to develop an appropriate treatment plan.

The Respondent explained his process to obtain informed consent to prescribe controlled substances to S.B. The Respondent executed the ''pain management contract,'' which is documented in the record. Tr. 728–29. The patient reads it and signs it. The Respondent testified that he then goes over the contract in detail with the patient. The Respondent testified that

he then explains that the medications are meant to help the patient, not to cause side effects or addiction, although they tend to cause chemical dependence. Tr. 729. The Respondent testified that he then goes over all the alternative treatments, but in the end, it is the patient's decision as to the treatment he will receive. Tr. 729.

Dr. Munzing noted that the medical records failed to disclose any indication that the Respondent warned S.B. regarding the risks associated with these dangerous combinations of medications. This failure precludes any informed consent by S.B. Tr. 207. The Declaration of Pain Medication Use document in the file, dated August 3, 2016, which requires the patient to alert the Respondent if the patient takes additional medications that could result in drug interactions, does not put the patient on notice of the dangerous combinations prescribed by the Respondent. Tr. 207–10; GX 1 at 67. Similarly, Dr. Munzing noted the repeated notation within the patient records of ''SED,'' which Dr. Munzing assumed meant, ''side effects discussed,'' was insufficient documentation within the standard of care to document discussion of the various risks of these medication combinations. Tr. 210–11; GX 1 at 59.

I agree with Dr. Munzing's assessment that, on the basis of the above lapses, the Respondent failed to obtain informed consent under the California standard. The Respondent's failure to document the details of his informed consent process itself renders his process below the California standard of care.

In March, April, and June of 2017, the Respondent prescribed S.B. Xanax at 6 mg per day, in excess of the FDA recommended daily limit of 4 mg per day. Tr. 212–15; GX 1 at 57, 58, 59; GX 22 at 40, 59–61. In May of 2017, the Xanax was abruptly stopped, Tr. 216–17; GDX 1, and abruptly restarted in June of 2017, and again stopped, Tr. 217. According to Dr. Munzing, this was very dangerous as the abrupt stoppage of Xanax, especially at this high dosage, can cause seizures, and restarting at this high dosage can trigger an overdose, especially in conjunction with the prescribed opioid. Tr. 212–18.

Regarding the monitoring of S.B., there were no urine drug screens evident in the records, which Dr. Munzing testified the standard of care would have required at least quarterly. Tr. 218–21; GX 1 at 44. In the progress notes for February, March, April 2017, all the way to January 30, 2019, the Respondent noted ''refusal to detox.'' Tr. 220–21, 227–29; GX 1 at 58, 59. According to Dr. Munzing, this is a huge red flag for opioid use disorder and for diversion. However, the chart suggests the Respondent did not take any necessary action, such as CURES monitoring, UDS, counseling, or titration. Rather, he simply prescribed the same levels of medications she was on, PRN. Tr. 222–23. The Respondent's course of action was outside the California standard of care. Tr. 223, 229.

In a June 2017 report from Dr. F., an orthopedic surgeon who saw S.B. for reported neck and back pain, S.B. reported her past medical history as only ''anxiety.'' Tr. 229; GX 1, p. 30, 32, 36–42, 56. She did not report fibromyalgia, ADD or GAD. Tr. 229–30. S.B. further reported to Dr. F. that she was not then taking any medication for pain, which is contrary to the Respondent's medical records and prescription evidence. Tr. 231–32. Dr. F.'s report was part of S.B.'s disability application, claiming disability as of June 15, 2017. A report from Chiropractor, Dr. B.H. is included in the disability packet. Tr. 235. Dr. B.H. reports the disability was caused by ''accident or trauma,'' which is inconsistent with what the patient reported to Dr. F. and to the Respondent. Tr. 236. There is no indication in the Respondent's records for S.B. that he ever discussed, with S.B. or with Dr. F., the discrepancies revealed by Dr. F.'s report. Tr. 233–37.

Contemporaneous to the preparation of the disability claim, Dr. Rabadi ordered a series of radiologic tests for S.B., none of which were related to the Respondent's diagnosis of fibromyalgia. The progress notes from August 17, 2017, state that S.B. presented with ''overactive thyroid, gait disturbance.'' Tr. 237–40; GX 1 at 5, 7, 9, 11, 13, 16, 17, 56. Respondent ordered an MRI of the brain to rule out MS, a thyroid ultrasound to rule out hyperthyroidism, an MRI of the lumbar spine, and an MRI of the thoracic spine. The MRI of the cervical spine was ordered by Dr. F. Tr. 241. In the context of S.B.'s disability claim, the Respondent ordered a series of tests in support of the disability claim, but neglected to order any tests related to the fibromyalgia, for which the Respondent was treating S.B. According to Dr. Munzing, this further calls the Respondent's [prescribing for fibromyalgia] into question.

I find, as alleged, that the Respondent's controlled substance prescriptions to Patient S.B. from at least February 2, 2017, through January 30, 2019, were not issued ''for a legitimate medical purpose by an individual practitioner acting in the usual course of his professional practice''; [they were issued outside the usual course of professional practice and beneath the standard of care in violation of 21 CFR 1306.04(a).]

Discussion as to Patient M.B.

The Respondent testified that Patient M.B. presented on April 19, 2006, with severe back pain, left knee pain, and history of dyslipidemia. Tr. 782. The Respondent testified that he obtained a full medical history, medication history, pain level, and performed a complete head to toe physical exam. Tr. 783. The Respondent claimed that M.B. had chronic back pain related to an injury, a knee injury, which was manageable, and dyslipidemia. Tr. 784. Although the Respondent maintains he obtained a complete medical history as to the back pain, and chronic knee pain, he concedes it is not detailed in the chart. Tr. 820–23. M.B. was already on hydrocodone, previously prescribed, when he first saw the Respondent. The Respondent testified that he obtained informed consent in the same manner as described for his earlier patients. Tr. 784. [Testifying from memory alone,] Respondent said he discussed alternative forms of treatment with M.B., however M.B. had exhausted those. Respondent testified that M.B. had physical therapy, and perhaps acupuncture, but the Respondent could not quite remember. Tr. 827. The Respondent conceded he did not document these therapies in the chart. Tr. 828.

Dr. Munzing observed that between January 5, 2018, and November 20, 2019, the Respondent prescribed hydrocodone and Adderall. Tr. 245. As with patient S.B., Dr. Munzing characterized the patient file as meager. Tr. 245–47. The Respondent never obtained prior medical records of M.B. Tr. 288. Dr. Munzing observed that none of the subject prescriptions were within the California standard of care. Tr. 248, 289. On April 19, 2006, M.B. presented for his first visit. Tr. 248–49; GX 3 at 88, 91. In his ''Comprehensive History and Physical Examination,'' the Respondent reported that M.B. presented with symptoms of ''chronic back pain, left knee pain, dyslipidemia.'' Tr. 249–50. However, there are no diagnoses relating to the back and knee pain. Tr. 250–51, 258. To address the reported pain, the Respondent prescribed hydrocodone. Tr. 252. The file fails to evidence sufficient history to justify the pain prescriptions under the standard of care. Tr. 252–54. The file fails to evidence any physical exam to justify the pain prescriptions under the standard of care. Tr. 254–55, 258, 287. The file fails to evidence any treatment plan or goals,

past drug abuse to justify the pain prescriptions under the standard of care. Tr. 254–55, 258, 287. Although M.B. declared on a ''Declaration of Pain medication Use'' form that he had no prior drug abuse in August 2009, which was three years after his first visit, such static declaration does not satisfy the physician's ongoing responsibility under the standard of care to monitor this issue. Tr. 259–61; GX 3 at 93.

On July 9, 2013, M.B. presented with ADD and neck pain. Tr. 261–62; GX 3 at 46. He was prescribed Adderall for the ADD. Tr. 262. Again, the records reveal there was no history taken to support the diagnosis or prescriptions for Adderall. Tr. 262. There was no evident evaluation done by the Respondent. Tr. 287. There was no treatment plan. Tr. 263. Although there was a written diagnosis related to the neck pain, there was no history or physical exam evident in the file to support it. Tr. 263–64. The Respondent never established a legitimate medical purpose for hydrocodone. Tr. 264. On September 6, 2013, M.B. presented with ADD. Tr. 264–65; GX 3 at 46. He was prescribed Adderall for the ADD, but at double the dosage of the previous visit, yet without any reported justification. Tr. 264–65. On January 5, 2018, M.B. presented to the clinic. Tr. 265–66; GX 3 at 37. He was prescribed hydrocodone and Adderall. There was no medical history, no discussion of M.B.'s response to treatment, evaluation of pain or functioning, substance abuse history, diagnoses, or rationale for establishing a legitimate medical purpose to justify continuing the medication regimen. Tr. 265–66. On March 6, 2018, M.B. presented to the clinic with ''ADD and opioid dependency.'' Tr. 266–67; GX 3 at 36. Absent was any report of pain. He was diagnosed with ''Opioid dependency, refusing detox.'' Tr. 267. Hydrocodone as treatment for opioid dependency is not a legitimate medical purpose and is outside the usual course of professional practice. Tr. 267–68. Dr. Munzing observed that the Respondent prescribed hydrocodone repeatedly to address his diagnosis of opioid dependency until November 20, 2019. Tr. 268–69. On November 20, 2019, M.B. presented with ADD and back pain. Tr. 269; GX 3 at 27. He was prescribed Adderall and his hydrocodone was increased. Tr. 270. No medical history was taken or updated. No response to treatment or patient functionality was included. Although vital signs were taken, no physical exam was performed. Tr. 270–71. There was no appropriate diagnosis for the back pain. Tr. 272. There was no evaluation for ADD, such as mental functioning. Tr. 271, 274, 287–88. The Respondent never obtained a sufficient history to support the diagnosis for ADD. Tr. 273. There was no appropriate diagnosis for ADD. Tr. 272. The Respondent never established a legitimate medical purpose to prescribe either hydrocodone or Adderall to M.B. throughout the reported treatment. Tr. 274. Such prescriptions were not in the usual course of professional practice, were not for a legitimate medical purpose, and were outside the standard of care. Tr. 274–75.

Dr. Munzing noted the inconsistency of the various diagnoses. Diagnoses would come and go within the records. Tr. 275–278; GX 3 at 35, 37, 43, 67. Although the reported pain was always treated with hydrocodone, the source of the pain varied greatly without any explanation in the file, as required by the standard of care. Tr. 278–80.

Dr. Munzing noted the serious dangers occasioned by the combination of Adderall and hydrocodone, by reference to his testimony regarding S.B.'s similar prescriptions.[27] Tr. 281. Dr. Munzing deemed this combination of medications for over ten years inappropriate and unsafe. Tr. 284. The only semblance of a warning to M.B. regarding these dangerous combinations appeared in a 2009 ''Controlled Substance Therapy Agreement.'' For the same reasons voiced as to Patient S.B., Dr. Munzing deemed the signed form wholly insufficient to satisfy the California standard of care in this regard. Tr. 281–82; GX 3 at 92. Similarly, the notation within the file, ''SED'' was insufficient to satisfy the standard of care. Tr. 283. There was never a UDS ordered for M.B., which is necessary under the standard of care for any patient receiving opioids, but especially for a patient who has refused opioid detox. Tr. 284–85. A patient diagnosed with opioid dependency and refusing detox is also a red flag of abuse and diversion. Such red flag was not addressed by the Respondent repeatedly as to M.B. Tr. 285–87; GX 3 at 36.

The Respondent defended his treatment of M.B. by noting that he monitored M.B. throughout his treatment. Tr. 785. The Respondent believed his prescribing was justified on the basis of M.B.'s medical conditions, level of chronic pain and present level of functioning, working in a welding factory, and in the movie business. Tr. 786, 832. The Respondent conceded that he did not document M.B.'s degree of pain and he minimized the value of the subjective pain scale. Tr. 823–24. The Respondent conceded there were no imaging reports in M.B.'s chart, but explained that these patients were from the movie business. They were treated by an HMO, from which it is almost impossible to obtain records. Tr. 829.

[While it may be] true that the Respondent [did some] monitoring of M.B. during treatment, not all this monitoring found its way into M.B.'s chart. Alarming evidence revealed the Respondent was or should have been aware that M.B. was receiving Suboxone from Dr. B.S. during the period the Respondent was prescribing high levels of dangerous medications and in dangerous combinations. DI identified GX 25, which is a CURES Audit Report run on the DEA Registration of Dr. B.S., which included the patient M.B., a patient common to the Respondent. Tr. 904. Between October 10, 2018, and September 11, 2020, Dr. B.S. prescribed Suboxone[28] to M.B. Tr. 909; GX 24, 25, 25B. On March 15, 2019, the Respondent accessed CURES and would have observed M.B. was receiving Suboxone from Dr. B.S. Tr. 910; GX 24. Despite having evidence of the Suboxone prescriptions, the Respondent continued prescribing these dangerous medications, and like his other patients, without any UDS.

I find, as alleged, that the Respondent's controlled substance prescriptions to Patient M.B. from at least January 5, 2018, through November 2019, were not issued ''for a legitimate medical purpose by an individual practitioner acting in the usual course of his professional practice''; [they were issued outside the usual course of professional practice and beneath the standard of care in violation of 21 CFR 1306.04(a).]

Discussion as to Patient B.C.

The Respondent explained his treatment of Patient B.C. He has been a patient of the Respondent since March 27, 2014. Tr. 750–51. Patient B.C. has been prescribed hydrocodone, Xanax and Adderall. Tr. 749. The Respondent testified that he obtained a complete history, a complete physical exam and then probed the complaint which brought him to the Respondent, which was right shoulder and chronic back

[27] On September 29, 2017, and monthly from July 2018, to July, 2019, S.B. was prescribed hydrocodone and Adderall. Besides the serious risk of addiction posed by these two Schedule II medications, the hydrocodone was prescribed at a daily dosage of 60 mg MME, which significantly increases the risk of overdose and death. This risk was increased by its combination with Adderall. Tr. 206–07. Dr. Munzing could not foresee a medical condition in which this combination would be appropriate. Tr. 211–12.

[28] Buprenorphine.

pain. Tr. 751. [Based on his memory alone, Respondent testified that] without medication, B.C. reported pain at seven or eight; and with medication, the pain was one or two. Tr. 752. As far as his medication history, [Respondent testified based on his memory that] B.C. had been on pain medication for years following a neurosurgical procedure to treat a herniated disc with radiculopathy.[29] Tr. 752.

To obtain informed consent, the Respondent testified that he verbally discussed the pain management contract, which B.C. read and signed. Tr. 752–53. The Respondent then discussed side effects of the medication. B.C. is a married man with three children. He works full time. He gave the Respondent no indication he was a risk of diversion. Tr. 753. Regarding prior alternate treatment, [Respondent testified from memory that] B.C. reported that he had tried surgery, physical therapy and acupuncture, but that only pain medication therapy alleviates his pain to the extent he can function. Tr. 754. At each visit, the Respondent reviewed B.C.'s progress and believed B.C.'s condition warranted the medication he was prescribed. Tr. 754, 757. Although the Respondent testified that he remembered discussing B.C.'s pain levels on March 27, 2014, which was a one or two on medication, he conceded it was not documented in the chart. Tr. 832–34; GX 5 at 48. Although the Respondent testified that he remembered B.C. reporting he had a herniated disc, this report was not documented in the chart. Tr. 836. Neither were B.C.'s reported prior therapies documented. Tr. 837.

Dr. Munzing reviewed the subject prescriptions, patient file and CURES report for Patient B.C, which he described as lean. Tr. 290–92; GDX 3. He opined that the subject controlled substance prescriptions issued for hydrocodone, Xanax and Adderall, from January 25, 2017, to December 19, 2019, were all issued outside the California standard of care. Tr. 290–92, 335–38. B.C. presented on March 27, 2014, with GAD and back pain. Tr. 293–94; GX 5 at 48, 55. B.C. was diagnosed with GAD and back pain, refusing detox. He was prescribed Xanax (6 mg per day) for the GAD, and hydrocodone for the back pain, refusing detox. Tr. 294. Dr. Munzing reiterated the risks involved in prescribing 6 mg of Xanax per day. Tr. 295.

The records failed to include the minimum history necessary under the standard of care to appropriately diagnose back pain and GAD [or to prescribe controlled substances to treat those conditions.]. Tr. 295–96. Other than limited vital signs, the records failed to disclose the minimum physical examination necessary under the standard of care to appropriately diagnose back pain, or to justify a hydrocodone prescription. Tr. 296–97. Dr. Munzing could not remember seeing any prior medical records in the Respondent's subject files. Tr. 297. There were no entries in B.C.'s file indicating physical or mental functioning. Tr. 298, 335–38. There is no treatment plan indicated. The Declaration of Pain Medication Use, signed by B.C. at his first visit, as discussed *supra,* is insufficient to evaluate B.C., and to establish informed consent for the controlled substances prescribed. Tr. 299–300. There was insufficient medical evidence to support either diagnosis. Tr. 298, 335–38. So, there was no legitimate medical purpose for either controlled substance prescription. Tr. 299, 335–38.

B.C. presented on May 20, 2014, with ADD and was prescribed Adderall. Tr. 301–02; GX 5 at 47. The ADD diagnosis was deficient, as no history was developed, no mental functioning was assessed, the medical evidence was deficient, and a treatment plan was lacking. The Respondent failed to establish a legitimate medical purpose for the Adderall. Tr. 302. Additionally, starting B.C. on 30 mg of Adderall twice daily is a very high dosage, and extremely inappropriate for an Adderall naive patient, which is not justified within the patient file. Tr. 302–03. B.C. presented on January 25, 2017, with ADD, opioid dependency and GAD. Tr. 303; GX 5 at 33. He was diagnosed with ADD for which he was prescribed Adderall, and GAD for which he was prescribed Xanax (6 mg per day). Tr. 304. Pain levels were not recorded at this visit. The diagnoses were unsupported by sufficient, medical history, medical evaluation, response to treatment, patient functionality, and medical evidence. Tr. 304–06. He failed to establish a legitimate medical purpose for both Adderall and Xanax. Tr. 306, 335–38. The Respondent further diagnosed, ''Opioid dependency, refusing detox'' for which the Respondent again prescribed hydrocodone. Tr. 306. Prescribing hydrocodone for opioid dependence is not only outside the standard of care, but it is illegal in California according to Dr. Munzing. Tr. 307. Hydrocodone is not a legitimate medical treatment for opioid dependency and thus the prescription was outside the usual course of professional practice. Tr. 307. A patient diagnosed with opioid dependency and refusing detox is also a red flag of abuse and diversion. Such red flag was repeatedly left unaddressed by the Respondent as to B.C. Tr. 306–07; GX 5 at 33.

On July 31, 2018, B.C. presented with ADD, back pain and GAD. Tr. 308; GX 5 at 28. He was diagnosed with ADD for which he was prescribed Adderall (60 mg per day), ''back pain, opiate dependent, refusing detox'' for which he was prescribed hydrocodone, and GAD for which he was prescribed Xanax (6 mg per day). Tr. 308. There was no medical history supporting the prescriptions. There was no indication how the patient was responding to treatment and no indication a physical exam was performed to support the diagnoses or justify the prescriptions. Tr. 308–09, 335–38. There was no reference to pain levels or physical functionality. Tr. 309–10. There was no reference to mental functioning with respect to the ADD and GAD diagnoses. There was no appropriate or documented support for the three diagnoses. Tr. 309–10.

Neither did he establish a legitimate medical purpose for the three controlled substance prescriptions. Tr. 311. B.C. presented on December 19, 2019, with ADD and back pain, which were also his diagnoses, and for which he was prescribed Adderall (60 mg per day) and hydrocodone. Tr. 311–12; GX 5 at 20. The record is absent medical history, any updated medical history, the patient's state of health, how he is responding to treatment, a physical exam, pain levels, mental or physical functioning, appropriate rationale for continued treatment, and information relating to drug abuse. Tr. 312–13, 335–38. As a result, the three diagnoses are without sufficient medical evidence. Tr. 313. Accordingly, the subject charged prescriptions are without a legitimate medical purpose, are outside the usual course of professional practice, and are beneath the standard of care. Tr. 313–16, 335–38.

Dr. Munzing noted the inconsistency of diagnoses throughout B.C.'s records and the dual prescribing of hydrocodone for opioid abuse and for skeletal pain, without explanation in the record. Tr. 316–19; GX 5, p. 31, 32, 33. Dr. Munzing noted the GAD and ADD diagnoses appear and disappear within the record, as did their treatment medications. Tr. 319–24; GX 5 at 27, 31, 32, 33. Dr. Munzing deemed it highly unlikely that ADD and GAD were appropriate diagnoses. Tr. 322, 324. The Respondent prescribed B.C. a combination of hydrocodone, Adderall and Xanax. Tr. 327; GDX 3. Dr. Munzing

[29] [Repeated text omitted for brevity.]

could not conceive of a medical condition warranting this dosage, duration, and combination of medications, noting that Adderall is counter-indicated for GAD and that combining Xanax with an opioid represents a dangerous combination addressed in a FDA black box warning and CDC guidance. Tr. 327–29, 332–33; GDX 3. A further concern, as detailed earlier in his testimony, is reflected by the repeated combination of hydrocodone and Adderall prescribed by the Respondent. Tr. 329–30; GDX 3. These dangerous combinations were prescribed without an established legitimate medical purpose, outside the usual course of professional practice, without sufficient warnings and informed consent, without sufficient patient monitoring, and without regard to obvious red flags. Tr. 330–35.

I find, as alleged, that the Respondent's controlled substance prescriptions to Patient B.C. from at least January 25, 2017, through December 19, 2019, were not issued ''for a legitimate medical purpose by an individual practitioner acting in the usual course of his professional practice''; [they were issued outside the usual course of professional practice and beneath the standard of care in violation of 21 CFR 1306.04(a).]

Discussion as to Patient J.C.

The Respondent discussed his treatment of Patient J.C. He presented on May 18, 2009, with chronic back pain, ulcerative colitis, and GAD. Tr. 759–60, 761–62. [Respondent testified from memory that J.C.] was prescribed hydrocodone and Xanax, which was sometimes substituted with Valium. Tr. 759. The Government prompted the Respondent to visits in which several other controlled substances were also prescribed. Tr. 842–46; GX 7 at 181, 214, 215.

The Respondent explained that J.C. had suffered multiple injuries and had been immobile for some time. However, the Respondent did not document the injuries nor the immobility in the chart, nor did the file contain any prior medical records.[30] Tr. 839, 842; GX 7 at 216. [Respondent, testifying from memory,] stated that J.C. had undergone physical therapy, occupational therapy, and finally pain management, which permitted him to resume working full-time. These alternate treatments, therapies, and prior surgeries were not documented within the chart. Tr. 840. The Respondent could not remember if J.C. mentioned his prior surgeries at the first or second visit. Tr. 840. The Respondent testified that he performed a full exam on J.C. Tr. 760–61. His GAD resulted from his ulcerative colitis. Tr. 762. The Respondent testified that he obtained informed consent to prescribe controlled substances by explaining the pain contract, and afterwards, J.C. read it and signed it. Tr. 763. The Respondent testified that he verbally explained the dangers of overdose to J.C. Tr. 764. The Respondent had no concerns over J.C. diverting his medication. Tr. 764–65. On the basis of J.C.'s considerable injuries and condition, the Respondent felt J.C.'s medication protocol was fully justified. Tr. 765. Although the Respondent remembered J.C. reporting that he had seen two previous doctors, including a pain physician, that report was not reflected in the chart. Tr. 841–42. Although the Respondent remembered performing a complete mental health evaluation on J.C., it is not documented in the chart. Tr. 842. The Respondent denied ever intentionally misspelling J.C.'s first name.*[KK] Tr. 765–66.

Dr. Munzing reviewed the subject prescriptions issued from January 16, 2018, to December 30, 2019, patient records and CURES data relating to Patient J.C. Tr. 381–82; GDX 4. Dr. Munzing opined that none of the subject prescriptions issued to J.C. were within the California standard of care. Tr. 381–82; GDX 4. J.C. presented to the Respondent's clinic on May 18, 2009, with a headache and GAD. Tr. 383–384; GX 7, at 216, 233. He was prescribed hydrocodone for migraines and Xanax for GAD, and he remained on this medication regimen for a long period. As to the migraines, insufficient medical history was obtained, symptom evaluation was absent, no neurological exam was conducted, no evaluation of functioning level, no treatment plan evident, and no evaluation of possible drug abuse. Tr. 384–90. In short, there was insufficient medical evidence to support the diagnosis of migraines and GAD, nor was there a legitimate medical purpose to prescribe hydrocodone and Xanax. TR. 386–88.

[On August 17, 2009, J.C. signed a ''Declaration of Pain Medication Use'' form indicating that he had no prior drug abuse, and Dr. Munzing testified that there is no record of J.C. ever being asked about illicit substance abuse again. Tr. 389–90. Dr. Munzing testified that the 2009 Declaration was an insufficient inquiry to cover prescribing occurring in 2018. *Id.*]

J.C. presented on July 21, 2016, with ''GAD, chronic back pain, consented for H&P.'' Tr. 390; GX 7, p. 189. He was diagnosed with GAD, ''back pain—refusing detox'' for which he was prescribed Xanax and hydrocodone, respectively. Tr. 390–91. There was no updated history taken for either diagnosis, no physical exam, no treatment plan, no response to treatment, no pain or functioning level evaluations, no discussion regarding drug abuse, and no rationale for continued treatment, as was required by the standard of care. Tr. 390–94. According there was insufficient medical evidence to support either diagnosis. The Respondent did not establish a legitimate medical purpose to prescribe the controlled substances. Tr. 393–94. J.C. presented on January 16, 2018, with GAD and back pain for which he was diagnosed with GAD and back pain, opiate dependent, refused detox. Tr. 394–95; GX 7 at 180. He was prescribed Valium for the GAD to replace Klonopin, and hydrocodone for back pain, although no explanation was giving for substituting the Valium for the Klonopin. Tr. 395. There was no medical history included in the records, no response to treatment, no physical exam, no pain or functioning evaluation, no drug abuse history, rendering each diagnosis inappropriate. Tr. 395–97. Without a legitimate medical purpose, there was no appropriate rationale for continued treatment with controlled substances. Tr. 396–98. J.C. presented on February 16, 2018, with ''opioid dependency, GAD,'' yet without the previously noted back pain. Tr. 198; GX 7, 9. There is no reference to pain. He was diagnosed with ''Opioid dependency, refusing detox'' for which he was prescribed hydrocodone, which again, is outside the standard of care and usual course of professional practice, and illegal in California. Tr. 398–400. The diagnosis for opioid dependency being treated with hydrocodone appeared repeatedly in the records. Tr. 399. J.C. presented on May 6, 2019, however no treatment notes for this visit are evident in the file. Tr. 401; GDX 4, GX 7 at 168.

On April 9, 2019, J.C. presented with GERD, and back pain for which he was prescribed hydrocodone. Tr. 402. However, there was no medical history included in the records, no response to treatment, no physical exam, no pain or functioning evaluation, no mental health history, no drug abuse history, rendering the back pain diagnosis inappropriate. Tr. 402–04. Without a legitimate medical purpose, there was no appropriate rationale for continued treatment with controlled substances. Tr. 402–04. On December 30, 2019, J.C.

[30] The Respondent again explained the difficulty in obtaining prior medical records. Tr. 842.

[*KK] *See supra,* n.*V.

presented with GERD and GAD. Tr. 404; GX 7 at 171. He was prescribed Valium for the GAD. However, there was no appropriate medical history included in the records, no response to treatment, no evaluation for GAD, or functioning evaluation, no mental health history, no drug abuse history, rendering the GAD diagnosis inappropriate from January 16, 2018, to December 30, 2019. Tr. 404–08, 425–28. Without legitimate medical purpose, there was no appropriate rationale for continued treatment with controlled substances. Tr. 408, 425–28. Such prescriptions, from January 16, 2018, to December 30, 2019, were outside the standard of care, without legitimate medical purpose, and outside the usual course of professional practice. Tr. 408, 425–28.

Dr. Munzing noted the inconsistency of diagnoses throughout J.C.'s records, and the dual prescribing of hydrocodone for opioid abuse, migraines and for skeletal pain, without explanation in the record. Tr. 410–14; GX 7 at 188, 189, 205, 214, 215. Dr. Munzing noted the skeletal pain diagnosis appears and disappears within the record. Tr. 414–15. Dr. Munzing suspected the skeletal pain complaints were not legitimate. Tr. 415; GX 7 at 188, 189, 205, 214, 215. Dr. Munzing noted the Respondent had prescribed the combination of hydrocodone and Valium monthly between January 2018, and January 2019, without a legitimate medical purpose. Tr. 416–17; GX 4. Combining Valium with an opioid represents a dangerous combination and is contrary to a FDA black box warning and to CDC guidance, especially with the Valium at its highest available strength. Tr. 417. Dr. Munzing could not envision a condition in which this medication regimen would be appropriate. Tr. 418. These dangerous combinations were prescribed without an established legitimate medical purpose, outside the usual course of professional practice, without sufficient warnings and informed consent, without sufficient patient monitoring, and without regard to obvious red flags. Tr. 418–23; GX 7 at 19, 25, 27, 180, 225.

I find, as alleged, that the Respondent's controlled substance prescriptions to Patient J.C. from at least January 16, 2018, through December 2019, were not issued ''for a legitimate medical purpose by an individual practitioner acting in the usual course of his professional practice''; [they were issued outside the usual course of professional practice and beneath the standard of care in violation of 21 CFR 1306.04(a).]

Discussion as to Patient D.D.

The Respondent explained his treatment of Patient D.D. He first presented on July 9, 2008, with GAD and severe back pain, although the source of the back injury was not documented. Tr. 767–68, 850; GX 9 at 74. Over the course of treatment, the Respondent prescribed hydrocodone, Xanax, and Soma. Tr. 850. The Respondent added that he probably prescribed Valium, as well, explaining he was remembering from 13 years ago. Tr. 850. The Respondent remembered D.D. was prescribed Valium, hydrocodone, and Soma at the first visit. Tr. 851–52. The Respondent believes his treatment was within the standard of care in California. The Respondent testified that he took a complete medical history, family history, personal history and medication history. Tr. 768. The family history was not documented in the chart. Tr. 848. The Respondent explained that the family history was not documented because it was non-contributory to his assessment. Tr. 848. [Based on Respondent's memory, he testified that] there were no heart conditions in his family, etc. Tr. 849. The Respondent did document that D.D. was married, which he deemed contributory. Tr. 849. Respondent testified that D.D. had a dirt bike accident, which shattered his shoulder and fractured several ribs, although the accident as the source of the injury was not documented. Tr. 850. [Based on his memory, Respondent testified that] D.D. underwent prior physical therapy and occupational therapy after treatment by an orthopedic surgeon, although it was not documented within the chart. Tr. 769, 771, 850–51. [Again from memory, Respondent testified that] it was several years before D.D. reached the medication regimen he was on when he first reported to the Respondent. The Respondent testified that he performed a full physical exam. He testified that he established informed consent with the pain contract and discussion of side effects and overdose, as with all his patients. Tr. 770. He verbally cautioned D.D. regarding diversion and other red flags. Again, Respondent testified that D.D. gave no indication of diversion. Tr. 771.

Dr. Munzing reviewed the subject prescriptions issued from January 4, 2018, to February 12, 2019, patient records and CURES data relating to Patient D.D. Tr. 428–29; GDX 5. Dr. Munzing opined that none of the subject prescriptions issued to D.D., which were for hydrocodone, Soma, and Xanax, were within the California standard of care. Tr. 430. Again, the records were very lean. D.D. presented on July 9, 2008, with GAD and back pain. Tr. 430–31 GX 9 at 74. For the GAD, he was prescribed Valium, and for back pain, hydrocodone and Soma. Tr. 431. The medical records reflect that D.D. refused an MRI and referral to an orthopedist or pain specialist. Tr. 431. Each refusal was a red flag and was suggestive of drug-seeking behavior. Tr. 432. Instead of addressing the red flags, the Respondent prescribed opioids. Tr. 432. The Respondent's response was the same throughout the subject treatment of D.D., a total of nine and a half years. Tr. 433.

There was no appropriate medical history included in the records, no response to treatment, no physical exam, insufficient patient monitoring, no evaluation for GAD, or functioning evaluation, no mental health history, no drug abuse history, no discussion of risk factors and informed consent, and no patient monitoring, which rendered the GAD and back pain diagnoses inappropriate from July 9, 2008, to January 4, 2019. Tr. 433–38; GX 9 at 37, 39, 41, 43, 44. Without a legitimate medical purpose, there was no appropriate rationale for continued treatment with controlled substances. Tr. 434–48. Such prescriptions, from July 9, 2008, to January 4, 2019, were beneath the standard of care, without a legitimate medical purpose, and outside the usual course of professional practice. Tr. 434–48. [On January 11, 2019, D.D. was diagnosed with GERD and back pain—opiate dependent refusing detox. Tr. 439. This is the last time Respondent prescribed D.D. both hydrocodone and Soma, but the medical records again reflected a lack of appropriate medical history, response to treatment, an appropriate physical examination, assessment of pain or physical functionality, an appropriate diagnosis, or an established legitimate medical purpose for the prescriptions. Tr. 439–40. On February 12, 2019, Respondent prescribed D.D. hydrocodone to treat opioid dependency—refusing detox without there being any mention of pain, and Dr. Munzing testified that this was problematic for all of the reasons he had previously testified to. Tr. 441–42. Dr. Munzing testified that at no point during the treatment period did Respondent ever obtain a sufficient history to establish a diagnosis for back pain or support prescribing of hydrocodone, and that the prescriptions for hydrocodone and Soma were not issued within the usual course of professional practice and were beneath the standard of care. Tr. 443–44.]

Dr. Munzing noted a period of over a year, from May 10, 2017, to September 19, 2018, when no diagnosis for GAD appeared in D.D.'s records and the 30 mg daily dose of Valium was stopped. Tr. 447–48. Then on September 19, 2018, the Respondent prescribed 6 mg of Xanax, a very high dosage, especially for the beginning dosage. [Dr. Munzing testified that Respondent failed to obtain sufficient medical evidence upon which to base a GAD diagnosis. Tr. 446.] Compounding this dangerous dosage, D.D. was prescribed hydrocodone in combination, which heightened the risk of overdose [without any documented warning from Respondent regarding the dangers of the controlled substances being prescribed.] Tr. 446, 448–50, 458. [Dr. Munzing testified that there was no established legitimate medical purpose for prescribing Xanax to D.D. Tr. 446.]

Dr. Munzing noted the inconsistency of diagnoses throughout D.D.'s records, and the dual prescribing of hydrocodone and Soma for Fibromyalgia, opioid abuse, migraines, and for skeletal pain, without explanation in the record. Tr. 450–56; GX 9, p. 43, 51, 64, 70, GDX 5. Dr. Munzing noted the skeletal pain diagnosis appears and disappears within the record. Tr. 450–56. Dr. Munzing suspected the skeletal pain complaints were not legitimate. Tr. 456; GX 9 at 43, 51, 64, 70. Prescribing Soma with hydrocodone presents considerable risks to the patient. Each are respiratory depressants, which present a significant risk of overdose [and addiction.] Tr. 458. [Dr. Munzing also reiterated the risks of prescribing both hydrocodone and Xanax together. Tr. 458. Dr. Munzing testified that in 2009, D.D. signed ''the same controlled substance therapy agreement we've seen with the previous four patients,'' and it was insufficient notice of the risks of using controlled substances for the reasons already discussed. Tr. 458–59. Dr. Munzing further testified that the record is lacking any documentation that Respondent adequately warned D.D. of the risks of the controlled substances he was taking, particularly in light of the various combinations and high dosages. Tr. 459–60.]

D.D. presented on March 23, 2019, with opioid dependency, refusing detox. He was again prescribed hydrocodone and Soma. Tr. 463; GX 9 at 42, 43. The Respondent failed to address this red flag repeatedly, and instead inappropriately prescribed Soma and hydrocodone. Tr. 465.

I find, as alleged, that the Respondent's controlled substance prescriptions to Patient D.D. from at least January 4, 2018, through February 12, 2019, were not issued ''for a legitimate medical purpose by an individual practitioner acting in the usual course of his professional practice''; [they were issued outside the usual course of professional practice and beneath the standard of care in violation of 21 CFR 1306.04(a).]

Discussion as to Patient J.M.

The Respondent explained his treatment of J.M. He has been a patient for 13 years. Tr. 734. The Respondent has prescribed him Xanax, Soma, and hydrocodone. The Respondent believed his treatment of J.M. was within the California standard of care. J.M. first presented on May 14, 2007, with chronic pain syndrome, which sometimes manifests as back pain, and neck pain, and GAD. Tr. 735; GX 11 at 104. The Respondent testified that he took a history. [Testifying based on his memory, Respondent said] J.M. had been involved in a motor vehicle accident injuring his back, neck and lumbar spine. The motor vehicle accident as the source of the injury was not documented. Additionally, he suffered from GAD and hypertension. Tr. 736. Tr. 853. Respondent testified that J.M. had seen an orthopedic surgeon, although it was not documented in the chart. Tr. 853. [Testifying based on memory, Respondent said that without medication, J.M. reported severe pain of 10 or 11 out of 10. With medication, he reported three of ten, permitting him to function and to work full time, although the pain levels were not documented in the chart. Tr. 736, 854–55. J.M. reported prior treatments and medication. Based on his memory, Respondent testified] J.M. had received physical therapy, occupational therapy, hypnosis, and acupuncture to no avail prior to turning to chronic pain management, although these previous therapies were not documented in the chart. Tr. 737, 854. His present medication protocol delivered the best results with the least side effects he had. Tr. 737. The Respondent testified that he probed J.M.'s psychological history, which included an all-consuming fear.

The Respondent testified that he performed a comprehensive physical exam. Tr. 739. To obtain informed consent to prescribe J.M. controlled substances, the Respondent said he went over the pain management contract, which J.M. also read and signed. The Respondent testified that he verbally cautioned J.M. about diversion and the red flags of doctor shopping and pharmacy hopping, which would result in discharge. Tr. 739–40.[31] The Respondent then testified that he discussed the beneficial aspects of the pain medication and potential negative effects if abused. According to Respondent, J.M. never gave any indication he represented a risk of diversion. Tr. 741. Prior to seeing the Respondent, Respondent testified that J.M. was on a higher MME of opioids. He was able to reduce the dosages to the level he was on when he first saw the Respondent. He remains on that dosage. Again, he is able to function and work full-time on this dosage. Tr. 742. The Respondent noted that J.M. would sometimes try to avoid taking his medication, even if he suffered pain, as explanation for the breaks in prescribing. Tr. 743.

Dr. Munzing reviewed the subject prescriptions and fill stickers issued from January 10, 2017, to December 31, 2019, patient records and CURES data relating to Patient J.M. Tr. 469–70; GDX 6. [Again Dr. Munzing testified there was ''very little information'' in the medical records. Tr. 470.] Dr. Munzing opined that none of the subject prescriptions issued to J.M. were within the California standard of care. Tr. 470–71.

On May 13, 2007, J.M. presented with hypertension, back pain, GAD, dyslipidemia and insomnia. Tr. 470–72; GX 7 at 104, 111. He was diagnosed with hypertension, back pain, GAD, dyslipidemia and insomnia. He was prescribed hydrocodone for back pain and Xanax (6 mg per day) for GAD. Tr. 472. Xanax and hydrocodone were recurring prescriptions. As discussed earlier, the high dosage of Xanax was a concern, as well as its combination with an opioid. Tr. 473.

There was no appropriate medical history included in the records, no response to treatment, no physical exam, insufficient patient monitoring, no evaluation for GAD, no treatment plan, no pain or functioning evaluation, no mental health history, no ongoing drug abuse history or monitoring, no discussion of risk factors and informed consent, and no patient monitoring, rendering the GAD and back pain diagnoses inappropriate from May 13, 2007, to January 13, 2017. Tr. 473–76, 478, 481–83, 485–500. Per Dr. Munzing, the MRI of May 30, 2007, and its mild findings, did not independently satisfy the Respondent's related obligations or justify the subject prescriptions. Tr. 479–80, 485–87; GX 11 at 14, 16, 17, 22, 26, 31, 37, 41, 42, 115. [Dr. Munzing testified that for the five visits between

[31] [This footnote and the preceding text are omitted for brevity and relevance.]

January 10, 2017, through March 27, 2017, there is so little documentation that Dr. Munzing cannot tell whether the records reflect ''actual visits'' or just ''documentation of a refill of the medication,'' because there are no examination or history notations, no documentation of the dose or strength prescribed, no diagnoses, nothing to meet the standard of care for prescribing hydrocodone and Xanax for that period. Tr. 482–85. The first prescription for Soma during the relevant time period was on April 13, 2017, and according to Dr. Munzing, the medical note said ''Xanax number 90, Soma number 50SED, and then a signature'' with absolutely nothing else recorded and none of the elements of the standard of care met. Tr. 485–86. Dr. Munzing testified specifically about selected office visits. On April 25, 2018, Respondent's records for J.M. contain information suggesting an office visit occurred, but they continue to have the same deficiencies. That day, J.M. was not diagnosed with pain, but with GAD and opioid dependence—refusing detox which was treated with hydrocodone. Tr. 487. Dr. Munzing reiterated his concerns that hydrocodone was not appropriate treatment for opioid dependence and was inappropriate each time it was prescribed for that purpose. Tr. 488. Dr. Munzing testified about the November 19, 2018 visit where J.M. was prescribed Xanax for GAD and Soma for back pain; the February 20, 2019 visit where he was prescribed Xanax for GAD and hydrocodone for back pain; and the December 31, 2019 visit where he was prescribed Xanax for GAD and was not diagnosed with back pain. Tr. 489, 492–93, 495. Dr. Munzing again testified, amongst other things, that for each of these visits there was an insufficient medical history or physical examination to make the diagnoses, there is no information regarding the response to treatment, pain level, or functionality, and there was no legitimate medical purpose established for the prescriptions at issue. Tr. 489–91, 493–97.] Without a legitimate medical purpose, there was no appropriate rationale for the controlled substance prescriptions, or to continue treatment with controlled substances. Tr. 473–76, 478, 485–500, 505; GDX 7.

There were also red flags left unaddressed by the Respondent. J.M. refused to see a pain specialist, which gives rise to the suspicion that he is not concerned about getting better, but just getting medicated. Tr. 476–77. [Omitted for relevance.] Dr. Munzing noted that there were gaps in the hydrocodone and Soma prescriptions without any required explanation for changes to the medication regimen. Tr. 500–04; GX 11 at 36, 37, 40, 41, 42, 76. He observed that the hydrocodone was prescribed either for back pain or for opioid dependence. Tr. 504. However, the required evaluation for the diagnoses coming and going and explanation for treatment is lacking. This further diminishes any medical legitimacy for the hydrocodone. Tr. 504.

Additionally, the Respondent prescribed a very addictive and dangerous combination of medications, an opioid and a benzodiazepine. Tr. 558–60. Even more concerning, he added a muscle relaxant to this already dangerous combination to form the ''Holy Trinity,'' a favorite drug combination for abuse by the drug-abusing community. Tr. 505–10. Dr. Munzing could not conceive of a medical condition in which the trinity combination would represent appropriate treatment. Tr. 512. This trinity of medications was prescribed to J.M. repeatedly. GDX 6. The file fails to reveal that appropriate warnings were given to J.M. in connection with these dangerous combinations. Tr. 511; GX 11 at 113. The CURES report reveals 40 Xanax prescriptions (3600 dosage units and 7200 mgs) were issued to J.M. between January 2017, and November 2018, a period of 22 months, which averages 10.5 mgs per day. Tr. 512–17; GX 7, 17, 18. This averaged a prescription every 16 days. Tr. 527–28. Ten and a half mgs per day is considerably greater than the maximum 4 mg per day recommended for treatment of anxiety.

DI identified GX 26, an additional CURES Audit Report, one for Dr. B.S.2, which spanned from January 2017, to September 2020, and which shared a common patient with the Respondent, J.M. Tr. 911–13; GX 26, 26B. Dr. B.S.2 prescribed Suboxone to J.M. from January 2017, to August 2020. Tr. 913. The CURES Audit of the Respondent demonstrated that Respondent accessed the CURES database during the period J.M. was prescribed Suboxone by Dr. B.S.2, which would have been evident by this review. Tr. 914. The Respondent testified he cautioned J.M. regarding diversion and other red flags and J.M. gave no indication of diversion. Tr. 771. But the CURES report belies the Respondent's assurances. The Respondent was or should have been aware J.M. was obtaining Suboxone from Dr. B.S.2, yet the Respondent did not mention that critical fact in J.M.'s chart. [Dr. Munzing testified that he had ''great concerns with continuing to prescribe hydrocodone despite the fact that he's on Suboxone and had been identified . . . as [having] opiate use disorder.'' Tr. 948.] Yet, the Respondent continued prescribing controlled substances to J.M. This action likely exceeds the bounds of benign neglect and crosses into the realm of intentional diversion. [Either way, I find that Respondent's prescribing was outside the usual course of professional practice and beneath the standard of care.]

The Respondent denied ever using a different first name for J.M. or using a different birth date for him [and attributed any mistake to the pharmacy.] Tr. 778–82. However, the CURES report lists two different dates of birth for J.M., as well as two different spellings of his first name. Tr. 517–18, 547–49; GX 18. A CURES search would be name and date of birth specific. So that a search by one name and date of birth would not reveal prescriptions filed under the alternate name and date of birth. Tr. 526. The main sources of the CURES report information are two pharmacies, Reliable Rexall and Northridge Pharmacy. Tr. 518–19. Despite the fact that J.M. was using different names and dates of birth at different pharmacies, a considerable red flag suggesting abuse or diversion, the Respondent did not address these issues. Tr. 519–20, 525–26. Even if J.M. or the pharmacies were the source of the alternate dates of birth and alternate first names, with due diligence, the Respondent would have discovered that a search by a single name and date of birth would only include half of the Xanax prescriptions the Respondent issued to J.M. Tr. 521–26, 549–50. Additionally, a review of two prescriptions, one written by the Respondent and one called in by the Respondent on the same day contain two different dates of birth. Tr. 533–34.

Of further suspicion, the CURES report reveals J.M. is alternating the filling of the Xanax prescriptions between the two pharmacies, apparently trying to hide the bi-monthly frequency of the prescriptions. Tr. 520; GX 17, 18. Dr. Munzing noted this was a suspicious prescribing practice by the Respondent. Tr. 530; GX 17, #s 425 & 575.[32] He would issue two prescriptions on the same day to J.M., one for hydrocodone and one for Xanax. He would issue a written prescription for hydrocodone, which J.M. would invariably fill at Northridge Pharmacy, but call in to Reliable Pharmacy the prescription for Xanax. Tr. 531–33, 535–45, 550–58; GX 11 at 32, 33, 35, 36, 38, 40, 41, GX 12 at 5, 6, 10, 11, 14, 22, 24, 27, 33, 34; GX 13, at 20, 25, 27, 32, 34; GX 17, 18 #s 473, 474, 994, 1120, 1228, 1386, 1472, 1553, 2102, 2229, 2341, 2342. In

[32] These are prescription numbers.

accordance with Dr. Munzing's testimony, this appears to be an attempt by J.M. to avoid the suspicion generated by the opioid/benzodiazepine combination if filled at a single pharmacy. Tr. 532–33, 557–60. There was an additional suspicious circumstance related to a Xanax prescription. The Respondent wrote in his medical notes that the medication should be taken once every eight hours, while the call-in information to the pharmacy was once every six hours. Tr. 543–45, 554, 556–57.

In light of the fact that Respondent knew or should have known about the Suboxone prescriptions by Dr. B.S.2 and this prescribing strategy, which was unaddressed or unexplained by the Respondent in his testimony, and on the basis of this record, drawing all rational inferences warranted by the evidence, it is more believable than not that the Respondent was involved in J.M.'s sophisticated attempt to avoid detection by the pharmacies.*[LL]

The red flag of refusing to detox was repeatedly evident within J.M.'s patient file. Tr. 562; GX 11 at 37. He was diagnosed with ''Opioid dependency, refusing detox'' for which he was prescribed hydrocodone, which again, is beneath the standard of care, outside the usual course of professional practice, and illegal in California. Tr. 563–64. The diagnosis for opioid dependency being treated with hydrocodone appeared repeatedly in the records. The Respondent never addressed this red flag. Tr. 564.

A review of the entirety of J.M.'s file and related records revealed there was no appropriate medical history included in the records, no response to treatment, no physical exam, insufficient patient monitoring, no evaluation for GAD, or pain level/functioning evaluation, no mental health history, no drug abuse history, no discussion of risk factors and informed consent, no patient monitoring, no resolution of the multiple red flags noted, rendering the GAD and back pain diagnoses inappropriate from January 10, 2017, to December 31, 2019, and beneath the California standard of care. Each was without a legitimate medical purpose and outside the usual course of professional practice. Tr. 565–68.

I find, as alleged, that the Respondent's controlled substance prescriptions to Patient J.M. from at least January 10, 2017, through December 31, 2019, were not issued ''for a legitimate medical purpose by an individual practitioner acting in the usual course of his professional practice''; [they were issued outside the usual course of professional practice and beneath the standard of care in violation of 21 CFR 1306.04(a).]

Discussion as to Patient K.S.

The Respondent explained Patient K.S.'s treatment. K.S. presented on June 21, 2007, with chronic back pain. He was later diagnosed with ADD. He was prescribed hydrocodone, Soma, and sometimes Adderall. Tr. 788–89, 861; GX 14 at 110. The Respondent added that he may have also prescribed Xanax, but it is difficult to be sure with hundreds of patients and treatment dating back 15 years. Tr. 859. He testified that even with a ''good memory, sometimes [the Respondent] just miss[es] something.'' Tr. 859. Additionally, he noted that patients do not always disclose all of their medications at the initial visit if they have plenty and do not then need them to be refilled. So, he is not always aware of all of their medications at the initial visit. Tr. 860–62.

The Respondent believed his prescribing was within the standard of care for California. The Respondent testified that he obtained a full medical history, medication history, pain level, and performed a complete head to toe physical exam. Tr. 789. [Based on memory alone,] the Respondent testified that he discovered K.S. had chronic back pain related to a bike accident for which he had been treated by several doctors for several years, although the bike accident as the source of the injury and treatment by other doctors was not documented. Tr. 856–57, 859. Additionally, there were no records from prior treatment in the patient's records. Tr. 857. Although the Respondent explained that he requested the prior medical records, none were provided. The Respondent explained that his request for records is simply faxed to the previous physician's office. Tr. 857–58. Respondent speculated that the absence of a documented request for records in K.S.'s file was probably due to a staffer forgetting to file it. Tr. 858. The Respondent did not contest the Government's observation that no requests for previous medical records were in any of the seven patient files. Tr. 859. According to Respondent, K.S. was already on hydrocodone when K.S. first saw the Respondent. The Respondent testified that he obtained informed consent in the same manner as described for his earlier patients. Tr. 790. He discussed alternative forms of treatment with K.S., and [based on his memory] K.S. was obtaining physical therapy prior to seeing the Respondent. K.S. continued physical therapy after beginning treatment with the Respondent. Tr. 791. The Respondent testified that he monitored K.S. throughout his treatment. Tr. 791. Respondent believed that K.S. presented no indications of diversion. The Respondent has treated K.S. for thirteen years, during which time K.S. got married and had three children. Tr. 790–91.

Dr. Munzing reviewed the subject prescriptions and fill stickers issued from January 19, 2018, to January 31, 2019, patient records, and CURES data relating to Patient K.S. Tr. 469–70; GDX 8. [Again Dr. Munzing testified there was ''very little'' information in the medical records. Tr. 569.] Dr. Munzing opined that none of the relevant prescriptions issued to K.S. were within the California standard of care. Tr. 568–70. K.S. presented on June 21, 2007, with ''back pain'' for which he was prescribed hydrocodone and Soma. Tr. 570; GX 13 at 117. Although the Respondent noted he would get an MRI for the lumbar spine, no such MRI appears in the records. Tr. 271. There was also no medical history included in this record regarding back pain, no treatment plan, no response to treatment, no physical exam, no pain or functioning evaluation, no ongoing drug abuse history, rendering the back pain diagnosis inappropriate. Tr. 570. Without a legitimate medical purpose, there was no appropriate rationale for continued treatment with controlled substances for back pain. Tr. 571–76.

[On August 5, 2009, K.S. signed a ''Declaration of Pain Medication Use'' form indicating that he had no prior drug abuse, and Dr. Munzing testified that there is no record of K.S. ever being asked about illicit substance abuse again. Tr. 575. Dr. Munzing testified that the 2009 Declaration was an insufficient inquiry to cover prescribing occurring at any point in time when Respondent was treating K.S. Tr. 576.]

On May 1, 2012, K.S. presented with GAD and neck pain. Tr. 576; GX 14 at 80. He was diagnosed with GAD and neck pain, and prescribed Xanax for GAD and hydrocodone for the neck pain, refusing detox. Tr. 577. K.S. was prescribed the combination of hydrocodone and Xanax frequently throughout his treatment. This

*[LL] While I do not disagree with the ALJ's analysis here, it is unnecessary and immaterial to my decision. There is plenty of evidence supporting revocation on the grounds that Respondent's prescribing was outside the usual course of professional practice and beneath the standard of care in California, and Respondent has failed to take any responsibility for his actions. Thus, while I have left the ALJ's discussions and findings that Respondent assisted J.M. in a diversion scheme intact throughout this decision, I have ultimately not based my decision on those findings. *See also supra* n. *DD.

combination of an opioid and a benzodiazepine is dangerous, beneath the standard of care and represents a red flag that went unresolved by the Respondent throughout the records. Tr. 578–79. There was no medical history supporting the prescriptions. There was no indication of how the patient was responding to treatment. There was no treatment plan, and no indication that a physical exam was performed to support the diagnoses or justify the prescriptions. Tr. 579–81. There was no reference to pain levels or physical functionality. There was no reference to mental functioning with respect to the GAD diagnosis. There was no appropriate diagnosis for the GAD and neck pain. Neither did he establish a legitimate medical purpose for the controlled substance prescriptions. Tr. 580–81.

K.S. presented on November 18, 2013, and was prescribed Adderall (60 mg per day) with no documented evaluation for or diagnosis of any condition which Adderall may treat. Tr. 581–82; GX 14 at 70. There is also no medical history, physical exam, or treatment plan, and accordingly, the subject prescription is without a legitimate medical purpose.*MM Tr. 582.

On January 19, 2018, K.S. presented with GAD, back pain, and ADD. Tr. 583, 599; GX 14 at 41. For GAD, the Respondent prescribed Xanax. For back pain—opioid dependent, refusing detox, the Respondent prescribed hydrocodone, and for ADD, Adderall was prescribed. Tr. 584. The record is missing a medical history, any updated medical history, an explanation of why back pain has returned, the patient's state of health, how he's responding to treatment, a physical exam, pain levels, mental or physical functioning, appropriate rationale for continued treatment, and information relating to drug abuse. As a result, the treatment is without sufficient medical evidence. Tr. 584–86. Accordingly, the subject charged prescriptions are without a legitimate medical purpose, are outside the usual course of professional practice, and are beneath the standard of care. Tr. 586.

On February 27, 2018, K.S. presented with ADD, opioid dependency, and GAD. Tr. 586–87, 599–600; GX 14 at 39, 40. He was diagnosed with ADD, opioid dependency-refusing detox, and GAD. Back pain was not reported, nor was any report of pain made. At the April 30, 2018 visit, again, back pain was not reported, nor was any report of pain made. Tr. 601. Throughout the records, the Respondent failed to explain the appearance and disappearance of back pain. Tr. 601–02. Again, beneath the standard of care and contrary to the law in California, K.S. was prescribed hydrocodone for opioid dependency. Tr. 587–88. On November 28, 2018, K.S. presented with opioid dependency-refusing detox and GAD, and for which he was prescribed hydrocodone and Xanax respectively. Tr. 588–589; GX 14 at 33; GDX 8. Again, beneath the standard of care and contrary to the law in California, K.S. was prescribed hydrocodone for opioid dependency. Tr. 588–89. And again the medication regimen included the dangerous combination of an opioid and benzodiazepine. The record is missing any medical history, any updated medical history, the patient's state of health, how he was responding to treatment, a physical exam, pain levels, mental or physical functioning, any evaluation for GAD, appropriate rationale for continued treatment, and information relating to drug abuse. As a result, the treatment is without sufficient medical evidence. Tr. 588–89. Accordingly, the subject charged prescriptions are without a legitimate medical purpose, are outside the usual course of professional practice, and are beneath the standard of care. Tr. 590.

On December 11, 2018, K.S. presented with ADD and eczema for which he was diagnosed with ADD and eczema. Tr. 591; GX 14 at 33. For ADD he was prescribed Adderall. [Dr. Munzing testified that the Adderall prescription lacked a legitimate medical purpose for the same reasons as the prior prescriptions he had just discussed. Tr. 591–93.] On January 31, 2019, K.S. presented with back pain and stomatitis. Tr. 593–94; GX 14 at 31. For the back pain he was prescribed hydrocodone. [Again, Dr. Munzing testified that the hydrocodone prescription lacked a legitimate medical purpose for the same reasons as the prior prescriptions he had just discussed. Tr. 594–95.]

A review of the entirety of K.S.'s subject medical records reveals that the Respondent never obtained any prior medical records. Tr. 596, 619. The record is missing an adequate medical history, any updated medical history, the patient's state of health, how he was responding to treatment, a physical exam, pain levels, mental or physical functioning, any evaluation for GAD, appropriate rationale for continued treatment, and information relating to drug abuse. As a result, the treatment is without sufficient medical evidence. Tr. 598–99, 620. Accordingly, the subject charged prescriptions are without a legitimate medical purpose, are outside the usual course of professional practice, and are beneath the standard of care. Tr. 598, 619–20.

[Dr. Munzing testified that, similar to the other patients, Respondent prescribed hydrocodone to K.S. for back pain, then neck pain, then for opioid dependency, and sometimes for a combination of these reasons, without any documentation regarding these changes or the coming and going of the pain issues as would be required by the standard of care. Tr. 598–602.] Dr. Munzing also noted the inconsistency of the GAD diagnoses throughout the records. Tr. 602–05; GX 14 at 31, 42, 47, 48. With the GAD diagnoses appearing and disappearing within the records without any explanation, Dr. Munzing observed there is no medical evidence it was a medically legitimate diagnosis. Tr. 605–09; GX 8. Similarly, ADD was inconsistently diagnosed and Adderall was inconsistently prescribed. Tr. 605–06; GX 14 at 34, 35; GX 8. With the ADD diagnoses appearing and disappearing within the records without any explanation, Dr. Munzing observed there is no medical evidence it was a medically legitimate diagnosis. Tr. 609.

Dr. Munzing noted the Respondent prescribed a dangerous combination of medications, including hydrocodone, Adderall and Xanax, which was prescribed from January 2018, through August 2018. Tr. 609–10. Dr. Munzing noted it is referred to by drug abusers as the ''new Holy Trinity.'' Tr. 610. Additionally, the combination of an opioid and a benzodiazepine is present in August, October, and November 2018. Tr. 610–11. The records do not establish that the appropriate warnings were conveyed to K.S., or that informed consent was obtained. Tr. 611–13; GX 8. Dr. Munzing could not conceive of a medical condition warranting the dangerous combinations of medications prescribed. Tr. 614. [Dr. Munzing also noted that Respondent failed to properly monitor medication compliance, and conducted no urine drug screens, as was required by the standard of care in California. Tr. 614.]

Dr. Munzing noted the Respondent's failure to resolve red flags, including, K.S.'s refusal to detox, the dangerous combinations of medications, and high dosages of controlled medications. Tr. 615–18, 620; GX 14 at 39, 40, 41. The refusal to detox is a major red flag for opioid use disorder and for diversion. However, the Respondent did not take any necessary action, such as CURES monitoring, UDS, counseling, or titration. Rather, he simply prescribed the same levels of medications she was on, PRN. Tr. 615–17. The Respondent's prescribing was beneath the California standard of care.

*MM This sentence was modified for clarity.

Additionally, as noted above, during this time period the Respondent repeatedly prescribed hydrocodone to Patient K.S. as ''treatment'' for Patient K.S.'s opioid dependency, in violation of 21 CFR 1306.04(c).

I find, as alleged, that the Respondent's controlled substance prescriptions to Patient K.S. from at least January 19, 2018, through January 31, 2019, were not issued ''for a legitimate medical purpose by an individual practitioner acting in the usual course of his professional practice''; [they were issued outside the usual course of professional practice and beneath the standard of care in violation of 21 CFR 1306.04(a).]

The Respondent's General Denial

The Respondent testified that, to the best of his knowledge, none of his thousands of patients have suffered any harm from his medication treatment. Tr. 793. The Respondent also disagreed with Dr. Munzing's assertion that there was likely no medical condition justifying the dangerous combinations of medications identified herein. Tr. 794–800. [Respondent testified that combinations of opiates, muscle relaxants, and benzodiazepines, when ''used in the right dosages for the right indications, and used as prescribed by a knowledgeable M.D., . . . are safe to use in combination therapy.'' Tr. 797.] The Respondent conceded the potential danger of individual pain medications, and the potential increase in risk when combined with other medications. However, he stated that, if patients are responsible and take the medications as prescribed for the indications intended, these combinations are fairly safe. Tr. 800.[33]

The Respondent recognized his obligation to follow all federal and state rules concerning the practice of medicine, including the directives of the California Board of Medicine. Tr. 862. California's Compliance with Controlled Substance Laws and Regulations includes a provision on records. Tr. 864; GX 20 at 61. It mandates that, ''[t]he physician and surgeon should keep accurate and complete records according to the items above, [including] the medical history and physical examination, other evaluations and consultations, treatment plan objectives, informed consent, treatments, medications, rationale for changes in the treatment plan or medications, agreements with the patient, and periodic reviews of the treatment plan.'' Tr. 864–65. The provision further requires, ''[a] medical history and physical examination must be accomplished . . . this includes an assessment of the pain, physical and psychological function.'' Tr. 866; GX 20 at 59. The Respondent assured the tribunal that the necessary assessments were made, but admitted they were not fully documented. Tr. 866–67. The Respondent made the same assurances for the requirement as to ''Treatment Plan Objectives,'' ''Informed Consent,'' ''Periodic Review,'' noting that these Guidelines were published in 2013.[34] Tr. 867–72.

The Respondent reiterated that, to his knowledge, none of his patients exhibited red flags, or violated the pain agreement. Tr. 888–89.

Credibility Analysis of the Respondent

In his testimony, the Respondent [initially] came off as very sincere and credible. Accepting his testimony as true and accurate (although his perception of the standard of care was, in several instances, unfounded, and his treatment was, in many cases, outside the standard of care), his explanations seemed to present that of a caring, dedicated practitioner, who may be guilty of benign neglect in his [prescribing] and failure to maintain complete and accurate records.

However, the discovery during rebuttal that Respondent had accessed the CURES report for S.B. and J.M. and made no changes to his prescribing practices thereafter, dramatically changed that perception.*[NN] The Respondent was [or should have been] fully aware that those patients were being prescribed Suboxone, an opioid commonly prescribed for abuse, by other physicians in violation of Respondent's own controlled substance agreements with those patients. Yet the Respondent failed to note that significant fact in the charts, and even more alarmingly, continued the patients on opioids and other controlled substances. Not only was this information missing from the patient charts, the Respondent failed to address the results of his CURES monitoring in his testimony. The Respondent has lost a great deal of credibility.

I was [originally] willing to give the Respondent the benefit of the doubt regarding the alias used by J.M. in filling opioid/benzodiazepine prescriptions, the unexplained simultaneous dispensing of the opioid and benzodiazepine prescriptions to two separate pharmacies by the Respondent, and the inconsistent instructions for usage of the benzodiazepine. But, [in light of the credibility issues], it appears more believable than not that the Respondent was a knowing participant in what appears to be a sophisticated attempt to divert medication by J.M.[35] *[OO]

The Respondent's testimony that he performed all of the procedures, undocumented in the charts, and [but for documentation failures] fully complied with the California standard of care suffers from the same loss of credibility.

[In his Exceptions, Respondent ''disagree[d] with the weight that the ALJ assigned to the Government's rebuttal evidence regarding the CURES audit report, and [argued] that such rebuttal evidence is insufficient to overcome [Respondent's] testimony.''

[33] [Omitted repetitious text for brevity.]

[34] *See* Tr. 950–52. [Though this Decision discusses Respondent's early treatment of the seven individuals, which often predates 2013, Respondent is not being held responsible for any acts or omissions prior to the relevant time period which begins in January 2017. Any discussion of events prior to January 2017, are only relevant to establishing that the subject prescriptions issued during the relevant time period were issued outside the usual course of professional practice and beneath the standard of care.] Dr. Munzing testified credibly that the 2013 version was the 7th edition and the basic requirement have not changed over the years.

*[NN] On direct and cross, Respondent agreed that it would ''be a problem'' and a ''red flag of abuse or diversion'' for a patient to be receiving two opioids at once. Tr. 888–89. He also testified that he tells his patients ''that they cannot run to different doctors for medications,'' and he testified that all of his patients abided by the terms of the agreement ''to the best of [his] knowledge, yes, because if not, then [they would] have to be discharged from the practice.'' Tr. 659, 888. Similarly, the Controlled Substances Therapy Agreement states that ''[a]ll controlled substances must come from [Respondent,]'' and that the patient's ''failure to adhere to these policies may result in cessation of therapy with controlled substances.'' GX 11 at 114. The CURES reports that were introduced on rebuttal revealed that at least two patients were receiving controlled substances from other physicians, notably opioids when they were already getting opioids from Respondent, and there is no indication that this agreement violation was addressed by Respondent, let alone that the patients were discharged from the practice.

[35] ''While proof of intentional or knowing diversion is highly consequential in these proceedings, the Agency's authority to act is not limited to those instances in which a practitioner is shown to have engaged in such acts. . . . Accordingly, under the public interest standard, DEA has authority to consider those prescribing practices of a physician, which, while not rising to the level of intentional or knowing misconduct, nonetheless create a substantial risk of diversion.'' *Dewey C. Mackay, M.D.,* 75 FR 49956, 49974–75 n.35 (2010) (citing *Paul J. Caragine, Jr.,* 63 FR at 51601 (''Just because misconduct is unintentional, innocent or devoid of improper motivation, does not preclude revocation or denial [of a registration]. Careless or negligent handling of controlled substances creates the opportunity for diversion and could justify revocation or denial.'')).

*[OO] *See supra* n. *DD and n. *LL. While I have left the ALJ's discussions and findings that Respondent assisted J.M. in a diversion scheme intact throughout this decision, I have ultimately not based my decision on those findings.

Resp Exceptions, at 3–4 (internal citations omitted). This is because, Respondent argued, the substance of Respondent's testimony was that ''he overlooked some details during his treatment of [the seven] patients,'' and that the rebuttal evidence affirms that testimony, ''to wit: due to the same benign negligence he overlooked S.B.'s and J.M.'s prescription by other physicians when accessing the CURES database.'' *Id.* at 4. In summary, all of Respondent's Exceptions challenge that ALJ's credibility finding because it is ''solely based on [the Government's] questionable rebuttal evidence.'' *Id.* at 5.

I find, in agreement with the ALJ, that Respondent's testimony lacked credibility where it was inconsistent with, or provided additional information not included in, the patient files and documentary evidence in the record. However, I base my finding on Respondent's questionable credibility as demonstrated throughout the entirety of the hearing, not just on the Government's rebuttal evidence. The ALJ is best situated to observe the testimony of the Respondent, and I note that he appeared to be describing Respondent's demeanor when he stated that Respondent ''came off as very sincere and credible.'' I credit the ALJ's description of Respondent's demeanor, but in spite of his described sincerity, both the ALJ *[PP] and I found many instances of objective issues with the credibility of Respondent's direct testimony. Specifically, when Respondent was asked questions about a specific patient, he often answered with testimony about his general practices or regarding his patients collectively. Secondly, Respondent's memory was shown to be less than fully reliable, which calls into question those actions that he testified he remembered taking, but that he did not document in the patient files.

First, throughout Respondent's testimony about his prescribing, it was difficult to tell whether he was actually testifying specifically as to each individual. It often seemed that he was testifying generally as to the policies and procedures he purportedly followed in the regular course of his practice, and was just assuming that those policies and procedure were followed with regard to the named patients. Even where Respondent seemed to be testifying about a specific patient, his testimony quickly would morph into testimony about his patients collectively. *See supra* n. *X for an illustration of how difficult it was to pin down whether Respondent was testifying about a specific individual or his patients collectively. This sort of collective focus that appears throughout Respondent's testimony causes me to question Respondent's credibility—specifically whether he remembered the events that occurred at each specific visit for each specific patient that he discussed in the absence of medical records documenting these events. Indeed, Respondent testified that ''[o]ver [his] career, [he] worked [with] about 5,000 patients,'' that he had ''close to 550–600 patients'' at the time of the hearing, and that prior to the order to show cause he ''had between 175–200 [pain] patients.'' *[QQ] Tr. 792. With that many patients, Respondent surely would have been required to keep track of a lot of specific undocumented information. This concern about collective testimony and Respondent's specific memory was highlighted when during Respondent's entire testimony about J.M., Respondent and his counsel both called J.M. by the initials M.B. (a different individual at issue in the case). *See supra* n. 12; Tr. 734–43. The error was not discovered until sometime later when Respondent was questioned about J.M. again and responded that he had already discussed J.M. (though referring to him as M.B. the whole time). Tr. 772–76. This exchange did not fill me with confidence that Respondent's testimony reflected his true recollection of the specific actions he took with regard to the specific patient being discussed.

Secondly, Respondent's credibility is diminished where he testified based on his memory. Respondent repeatedly testified that we should trust him and his photographic memory. For example, he testified, ''I rely on my photographic memory.'' Tr. 808–09. ''As soon as the patient disclosed [the prior treatments] to me, I memorize it. I remember it. You've seen how several years later I still remember it. . . . I did not feel I have to clutter my charts with, you know, this information.'' Tr. 806–07. He also testified, ''[W]hat's pertinent, what's your diagnosis, what's your main exam, and what's your treatment is reflected [in the notes]. The rest I remember. I don't need to write it.'' Tr. 807–08. But Respondent testified with equal frequency that we should not rely on his memory. For example, he testified, that even with a ''good memory, sometimes you just miss something.'' Tr. 859. He testified that he could not always provide a specific response because the information was not in his notes. ''Whether [J.C.] mentioned the surgery the very first visit, that I cannot tell you yes or no at this point because it's not in my notes. So I'm just second guessing myself.'' Tr. 841; *supra* n. *U. And when directed to identify specifically which forms of alternative treatment M.B. had tried, Respondent testified, ''I don't want to misspeak. I'm not sure if he had . . . acupuncture or not. But I know for a fact he had physical therapy.'' Tr. 827; *supra* n. *X. He also testified that the passage of time had impacted his memory. When asked what he prescribed to D.D., Respondent initially answered and then added, ''[a]nd probably Valium. So I mean, I cannot testify exactly to you, depending on the visit, but yes, probably over the course, and again, this was in what, 2007 and now we are [in] 2020, 13 years.'' Tr. 851; see also, Tr. 853 (''I mean, again, this was 13, 14 years ago.'').

There were also examples when Respondent's memory appears to have failed him and he seems to have provided a speculative response. For example, when asked where he had documented prior treatments tried by S.B., he testified ''the record is probably missing these things, because maybe at the time of the documentation I did not feel that was crucial to be documented.'' Tr. 806; *see also* Tr. 870–71 (''Maybe I did not feel it was necessary because this is my patent, I am caring for the patient, I am doing the best job.''). Ultimately, Respondent's memory was demonstrated to be less than fully credible.

It is for these reasons that I find that Respondent's testimony lacked credibility where it was inconsistent with, or provided additional information not included in, the patient files and documentary evidence in the record. I have credited Respondent's testimony where it was supported by and consistent with the documentary record. In light of Respondent's failure to document almost any of the relevant and necessary information required by the standard of care, most of Respondent's testimony cannot be credited.

Ultimately, because of Respondent's extreme failure to document, Respondent's credibility has almost no

*[PP] Although not included in the section dedicated to analyzing Respondent's credibility, the ALJ noted several instances of Respondent's memory failures and found that Respondent's memory was ''not always infallible.'' RD, at 99; *see also supra* n. 23 and n. 24.

*[QQ] But see *supra* n. 9 which documents confusion in the record regarding how many patients Respondent was actually seeing at any given point. There I noted that while the exact number of patients that Respondent was treating at any given time has little relevance to my decision in this matter, it is one another small thing that contributes to me questioning Respondent's ability to accurately recall the undocumented details of each medical visit to which he testified.

bearing on my final decision in this case. Even if I fully credited Respondent's testimony regarding his treatment of the individuals at issue and found that Respondent otherwise acted within the standard of care, his repeated and severe documentation failures and failure to accept responsibility would have still led me to revoke his registration. DEA has previously made clear that ''a physician may not expect to vindicate himself through oral representations at the hearing about his compliance with the standard of care that were not documented in appropriately maintained patient records.''[*RR] *Lesly Pompy, M.D.,* 84 FR 57749, 57760 (2019).]

Dr. Munzing's Credibility

Conversely, Dr. Munzing was fully credible. His opinion regarding the California standard of care was consistent with the relevant California regulations, the practitioner Guides issued by the California Medical Board and guidance issued by federal agencies, such as the CDC, FDA and DEA. His specific opinions that the Respondent's subject treatment fell below the minimum California standard of care were factually well-founded, and were based on clear edicts of the standard. As the Government notes in its PHB, the Respondent did not credibly contest Dr. Munzing's opinions regarding the specific parameters of the standard of care. [As Dr. Munzing's expert opinion was unrebutted regarding the application of the standard of care to the facts in this case, I defer to Dr. Munzing on all issues related to the standard of care.]

Accordingly, I adopt each of Dr. Munzing's opinions regarding the Respondent's prescribing falling below the California standard of care.

[*RR] Respondent's credibility also does not impact my findings based on Dr. Munzing's unrebutted expert testimony that Respondent's acts were beneath the standard of care. For example, Respondent does not contest that there was information missing from the patient files; he argues that the standard of care did not require him to document further. Similarly, Respondent does not contest that he prescribed the ''Holy Trinity'' and other combinations of dangerous drugs; he simply argues that the combinations were permitted by the standard of care. He does not contest the lack of urine drug screens; he argues his monitoring was proper under the standard of care. Here, Dr. Munzing is the unrebutted expert regarding the standard of care in California. Accordingly, Respondent's credibility issues aside, where Respondent and Dr. Munzing reached a different conclusion regarding whether uncontested acts were performed within the standard of care, I credit Dr. Munzing's opinion.

Government's Burden of Proof and Establishment of a Prima Facie Case

Based upon my review of each of the allegations brought by the Government, it is necessary to determine if it has met its *prima facie* burden of proving the requirements for a sanction pursuant to 21 U.S.C. 824(a)(4). At the outset, I find that the Government has demonstrated and met its burden of proof in support of its allegations relating to the prescribing of controlled substances to patients S.B., M.B., B.C., J.C., D.D., J.M., and K.S.

Public Interest Determination: The Standard

[Under Section 304 of the CSA, ''[a] registration . . . to . . . dispense a controlled substance . . . may be suspended or revoked by the Attorney General upon a finding that the registrant . . . has committed such acts as would render his registration under section 823 of this title inconsistent with the public interest as determined by such section.'' 21 U.S.C. 824(a)(4).] [36] Evaluation of the following factors have been mandated by Congress in determining whether maintaining such registration would be inconsistent with the ''the public interest'':

(1) The recommendation of the appropriate State licensing board or professional disciplinary authority.

(2) The [registrant's] experience in dispensing, or conducting research with respect to controlled substances.

(3) The [registrant's] conviction record under Federal or State laws relating to the manufacture, distribution, or dispensing of controlled substances.

(4) Compliance with applicable State, Federal, or local laws relating to controlled substances.

(5) Such other conduct which may threaten the public health and safety.

21 U.S.C. 823(f). ''These factors are . . . considered in the disjunctive.'' *Robert A. Leslie, M.D.,* 68 FR 15227, 15230 (2003).

Any one or a combination of factors may be relied upon, and when exercising authority as an impartial adjudicator. *Id.* (citation omitted); *David H. Gillis, M.D.,* 58 FR 37507, 37508 (1993); *see also Morall* v. *DEA,* 412 F.3d at 173–74; *Henry J. Schwarz, Jr., M.D.,* 54 FR 16422, 16424 (1989). Moreover, the Agency is ''not required to make findings as to all of the factors,'' *Hoxie* v. *DEA,* 419 F.3d 477, 482 (6th Cir. 2005); *see also Morall,* 412 F.3d at 173. [Omitted for brevity.] The balancing of the public interest factors ''is not a contest in which score is kept; the Agency is not required to mechanically count up the factors and determine how many favor the Government and how many favor the registrant. Rather, it is an inquiry which focuses on protecting the public interest . . . .'' *Jayam Krishna-Iyer, M.D.,* 74 FR 459, 462 (2009).

The Government's case invoking the public interest factors of 21 U.S.C. 823(f) seeks revocation of the Respondent's COR based primarily on conduct most aptly considered under Public Interest Factors Two, and Four.[37]

[Factors Two and Four: The Respondent's Experience in Dispensing Controlled Substances and Compliance With Applicable Laws Related to Controlled Substances [*SS]

According to the Controlled Substances Act's implementing regulations, a lawful controlled substance order or prescription is one that is ''issued for a legitimate medical purpose by an individual practitioner acting in the usual course of his professional practice.'' 21 CFR 1306.04(a). The Supreme Court has stated, in the context of the CSA's requirement that schedule II controlled substances may be dispensed only by written prescription, that ''the prescription requirement . . . ensures patients use controlled substances under the supervision of a doctor so as to prevent addiction and recreational abuse . . . [and] also bars doctors from peddling to patients who crave the drugs for those prohibited uses.'' *Gonzales* v. *Oregon,* 546 U.S. 243, 274 (2006).

[36] [This text replaces the ALJ's original text and omits his original footnote for clarity.]

[37] [There is nothing in the record to suggest that a state licensing board made any recommendation regarding Respondent's prescribing practices (Factor One). Where the record contains no evidence of a recommendation by a state licensing board that absence does not weigh for or against revocation. *See Roni Dreszer, M.D.,* 76 FR 19434, 19444 (2011) (''The fact that the record contains no evidence of a recommendation by a state licensing board does not weigh for or against a determination as to whether continuation of the Respondent's DEA certification is consistent with the public interest.'') As to Factor Three, there is no evidence in the record that Respondent has a ''conviction record under Federal or State laws relating to the manufacture, distribution, or dispensing of controlled substances.'' 21 U.S.C. 823(f)(3). However, as Agency cases have noted, there are a number of reasons why a person who has engaged in criminal misconduct may never have been convicted of an offense under this factor, let alone prosecuted for one. *Dewey C. MacKay, M.D.,* 75 FR 49956, 49973 (2010). Agency cases have therefore held that ''the absence of such a conviction is of considerably less consequence in the public interest inquiry'' and is therefore not dispositive. *Id.*] The Government does not allege Factor Five as relevant.

[*SS] The ALJ evaluated Factors 2 and 4 in separate sections and I have combined and expanded on his analysis herein. This change also addresses the Government's Exceptions.

Respondent has demonstrated substantial experience as a licensed California doctor since 1998 who has been operating his own practice for over 20 years. Tr. 627–27. Regarding his experience, Respondent testified that he is ''an astute clinician who's been in the medical field for 41 years without a blemish to [his] reputation and career'', and points out that ''the Government seized more than 223 charts, . . . [but] they returned more than 200'' and only seven patients are at issue in the case. Tr. 648–49. The Agency assumes that Respondent has prescribed legally except where the Government has established that the prescriptions at issue violated the law. Here, Respondent's treatment of the patients as alleged in the OSC demonstrates that his prescribing practices fell short of the applicable standard of care.

I found above that the Government's expert credibly testified as supported by California law and California's Guide to the Laws and Guidelines for Prescribing, that the standard of care in California for prescribing controlled substances requires a physician to, amongst other things, obtain a detailed medical history, perform and document a physical examination, assign a diagnosis, develop and document a customized treatment plan, monitor the patient including monitoring for medication compliance, and have complete and accurate records documenting all of the above steps in detail. *See supra* The Standard of Care for Prescribing Controlled Substances in California. I also found above, in accordance with Dr. Munzing's testimony, that Respondent issued each of the relevant controlled substance prescriptions at issue to the seven patients at issue without taking a proper medical or mental health history, conducting a sufficient physical and/or mental examination, making a supportable diagnosis, recording pain and functionality levels, documenting an appropriate treatment plan, documenting discussion of the risks of the prescribed controlled substances, monitoring for medication compliance, and/or resolving red flags of diversion. *See supra* Respondent's Improper Prescribing of Controlled Substances. I further found that each of the relevant prescriptions Respondent issued to the seven individuals were issued without a legitimate medical purpose, and outside the usual course of professional practice and beneath the standard of care in California. Accordingly, I find that Respondent violated 21 CFR 1306.04(a).

Indeed, Respondent repeatedly issued prescriptions without complying with the applicable standard of care and state law, thus demonstrating that his conduct was not an isolated occurrence, but occurred with multiple patients. *See Kaniz Khan Jaffery,* 85 FR 45667, 45685 (2020). For each of the seven individuals, Respondent failed to perform and document a physical and/or mental examination that was sufficient to inform a diagnosis for which the controlled substances at issue could be prescribed. Additionally, I have found that for each of the seven individuals, Respondent prescribed dangerous combinations of controlled substances without properly discussing their risks.

Agency decisions highlight the concept that ''[c]onscientious documentation is repeatedly emphasized as not just a ministerial act, but a key treatment tool and vital indicator to evaluate whether the physician's prescribing practices are 'within the usual course of professional practice.' '' *Cynthia M. Cadet, M.D.,* 76 FR 19450, 19464 (2011). DEA's ability to assess whether controlled substances registrations are consistent with the public interest is predicated upon the ability to consider the evidence and rationale of the practitioner at the time that he prescribed a controlled substance—adequate documentation is critical to that assessment. *See Kaniz-Khan Jaffery,* 85 FR at 45686. Dr. Munzing testified that ''[t]rue, and accurate, and thorough documentation is vitally important for patient safety. It's also part of the standard of care.'' Tr. 917. But, as Dr. Munzing testified, ''practically none of the information that Respondent mentioned [during his testimony] was documented.'' Tr. 916. The extreme failures in Respondent's documentation extended to each of the seven individuals.

DEA decisions have found that ''just because misconduct is unintentional, innocent, or devoid of improper motive, [it] does not preclude revocation or denial. Careless or negligent handling of controlled substances creates the opportunity for diversion and [can] justify the revocation of an existing registration . . .'' *Bobby D. Reynolds, N.P., Tina L. Killebrew, N.P., & David R. Stout, N.P.,* 80 FR 28643, 28662 (2015) (quoting *Paul J. Caragine, Jr.* 63 FR 51592, 51601 (1998). ''Diversion occurs whenever controlled substances leave 'the closed system of distribution established by the CSA . . . .' '' *Id.* (citing *Roy S. Schwartz,* 79 FR 34360, 34363 (2014)). In this case, I have found that Respondent issued controlled substance prescriptions without complying with his obligations under the CSA and California law. *See George Mathew, M.D.,* 75 FR 66138, 66148 (2010)).

With regard to California law, just as I found a violation of 21 CFR 1306.04(a), I find that Respondent repeatedly issued controlled substance prescriptions what were not ''for a legitimate medical purpose by an individual practitioner acting in the usual course of his or her professional practice,'' in violation of Cal. Health & Safety Code § 11153(a). California law also prohibits ''[p]rescribing, dispensing, or furnishing'' controlled substances ''without an appropriate prior examination.'' Cal. Bus. & Prof. Code § 2242(a). Crediting Dr. Munzing's testimony, I have found above that the Respondent failed to conduct an appropriate prior physical and/or mental examination with regard to his prescribing to each of the seven individuals at issue, which I find violates Cal. Bus. & Prof. Code § 2242(a). Finally, California law prohibits ''[r]epeated acts of clearly excessive prescribing, furnishing, dispensing, or administering of drugs.'' Cal. Bus. & Prof. Code § 725(a). At the hearing Dr. Munzing unequivocally testified that Respondent's prescribing of high dosages of controlled substances to the seven individuals at issue, often in dangerous combinations, without a legitimate medical purpose constituted ''clear excessive prescribing.'' Tr. 621. Accordingly, I find that Respondent's prescribing also violated Cal. Bus. & Prof. Code § 725(a). Crediting Dr. Munzing's testimony, I found above that Respondent acted outside the bounds of these laws with regard to his prescribing to each of the seven patients.] The Respondent has violated the charged federal and California regulations related to controlled substances. He has violated the California standard of care, as alleged. Thus [Factors Two and Four] weigh heavily in favor of revocation.

[Summary of Factors Two and Four and Imminent Danger

As found above, the Government's case establishes by substantial evidence that Respondent issued controlled substance prescriptions outside the usual course of the professional practice. I, therefore, conclude that Respondent engaged in misconduct which supports the revocation of his registration. *See Wesley Pope,* 82 FR 14944, 14985 (2017).

For purposes of the imminent danger inquiry, my findings also lead to the conclusion that Respondent has ''fail[ed] . . . to maintain effective controls against diversion or otherwise comply with the obligations of a registrant'' under the CSA. 21 U.S.C.

824(d)(2). The substantial evidence that Respondent issued controlled substance prescriptions outside the usual course of the professional practice establishes ''a substantial likelihood of an immediate threat that death, serious bodily harm, or abuse of a controlled substance . . . [would] occur in the absence of the immediate suspension'' of Respondent's registration. *Id.* The risk of death was established in this case. There was ample evidence introduced to establish that combined use of opioid medicines with benzodiazepines or other drugs that depress the central nervous system has resulted in serious side effects including slowed or difficult breathing, comas, and deaths. GX 22, at 1.

Respondent testified that none of his patients had suffered any harm, such as overdose, as a result of his prescribing practices. Tr. 792. However, I credit Dr. Munzing's repeated testimony that not only did Respondent prescribe ''incredibly high doses'' of individual dangerous drugs, but that many of the prescriptions at issue were issued in dangerous combinations including the ''holy trinity'' the ''new holy trinity'' and other dangerous combinations as have been discussed. As Dr. Munzing testified, ''inherently [the controlled substances] each . . . have their own inherent dangers, but putting them together, it even escalated that much more dangerously, both for addictive issues for overdose and overdose death issues.'' Tr. 506; *see also id.* at 933–34. Even if I credit Respondent's testimony that none of his patients overdosed, I cannot rule out addiction issues. Two of the individuals at issue were prescribed Suboxone by other providers, which Dr. Munzing testified was typically prescribed for opioid use disorder or addiction, Tr. 943; and Respondent himself diagnosed almost all of the individuals at issue with opioid dependency. Accordingly, I cannot fully credit Respondent's testimony that none of them were harmed. Even the individuals' exposure to the increased risks caused by the dangerous combinations of the controlled substances Respondent prescribed could be harmful.

Thus, as I have found above, at the time the Government issued the OSC/ISO, the Government had clear evidence of violations of law based on the many controlled-substance prescriptions Respondent issued without complying with the California standard of care. *See supra* Respondent's Improper Prescribing of Controlled Substances.]

[Sanctions *[TT]

Where, as here, the Government has met its *prima facie* burden of showing that Respondent's continued registration is inconsistent with the public interest, the burden shifts to the Respondent to show why he can be entrusted with a registration. *Garrett Howard Smith, M.D.,* 83 FR 18882, 18910 (2018) (collecting cases). Respondent has made no effort to establish that he can be entrusted with a registration.

The CSA authorizes the Attorney General to ''promulgate and enforce any rules, regulations, and procedures which he may deem necessary and appropriate for the efficient execution of his functions under this subchapter.'' 21 U.S.C. 871(b). This authority specifically relates ''to 'registration' and 'control,' and 'for the efficient execution of his functions' under the statute.'' *Gonzales* v. *Oregon,* 546 U.S. 243, 259 (2006). A clear purpose of this authority is to ''bar[ ] doctors from using their prescription-writing powers as a means to engage in illicit drug dealing and trafficking.'' *Id.* at 270.

In efficiently executing the revocation and suspension authority delegated to me under the CSA for the aforementioned purposes, I review the evidence and arguments Respondent submitted to determine whether or not he has presented ''sufficient mitigating evidence to assure the Administrator that he can be trusted with the responsibility carried by such a registration.'' *Samuel S. Jackson, D.D.S.,* 72 FR 23848, 23853 (2007) (quoting *Leo R. Miller, M.D.,* 53 FR 21931, 21932 (1988)). '' 'Moreover, because ''past performance is the best predictor of future performance,'' *ALRA Labs, Inc.* v. *DEA,* 54 F.3d 450, 452 (7th Cir. 1995), [the Agency] has repeatedly held that where a registrant has committed acts inconsistent with the public interest, the registrant must accept responsibility for [the registrant's] actions and demonstrate that [registrant] will not engage in future misconduct.' '' *Jayam Krishna-Iyer,* 74 FR 459, 463 (2009) (quoting *Medicine Shoppe,* 73 FR 364, 387 (2008)); *see also Jackson,* 72 FR at 23853; *John H. Kennedy, M.D.,* 71 FR 35705, 35709 (2006); *Prince George Daniels, D.D.S.,* 60 FR 62884, 62887 (1995).

The issue of trust is necessarily a fact-dependent determination based on the circumstances presented by the individual respondent; therefore, the Agency looks at factors, such as the acceptance of responsibility and the credibility of that acceptance as it relates to the probability of repeat violations or behavior, and the nature of the misconduct that forms the basis for sanction, while also considering the Agency's interest in deterring similar acts. *See Arvinder Singh, M.D.,* 81 FR 8247, 8248 (2016).

Here, the Respondent did not accept responsibility for any of his misconduct and instead excused his deficiencies and provided unsupportable explanations for why he should not have to comply with California's laws. For example, Respondent testified, ''[n]ow, is it deficient on my part not to have written all that [in the medical record]? I'm not going to say deficiency, but maybe it was, you know, inappropriate. Maybe I should have written that. But it is too much. . . . I don't have the luxury of writing every single thing that transpires.'' Tr. 808–09. In no way is this an unequivocal acceptance of responsibility. He excused his lack of documentation by claiming documentation was unnecessary because of his ''photographic memory,'' which was clearly not infallible, because he was a clinician with 41-years of experience not a medical student, and because ''maybe'' he did not feel it was crucial information to document. Moreover, based on Respondent's testimony, I am not confident that he has any desire to improve his conduct in the future. He testified, ''I am not going to just say, okay, write in the chart I told the patient hello, they said hello, I said, okay, what did you have for breakfast? I am not going to document all that, there is no reason. It is just excessive [wreaking] havoc on the documentation . . . . [E]verything was addressed, everything was talked about, and every exam, every consent, everything was done by the book. I am a perfectionist. I am a perfectionist.'' Tr. 871.]

The following testimony by Respondent further supports my finding that Respondent failed to accept responsibility for his actions: ''[S]o, [the Government is] just looking at the charts and some notes and immediately demonizing an astute clinician who's been in the medical field for 41 years without a blemish to my reputation and career. And now, I'm just portrayed as I'm just feeding the addicts; I'm just distributing his medications.'' Tr. 648–49.]

Additionally, as I have found, the Respondent's testimony was less than credible [for a wide variety of

*[TT] I am replacing portions of the Sanction section in the RD with preferred language regarding prior Agency decisions; however, the substance is primarily the same.

reasons,[*UU] including] as evidenced by the Government's rebuttal evidence. The Respondent cannot credibly claim that he forgot the alarming discoveries he made as to Patients S.B. and J.M. when he monitored their CURES reports. The Respondent's failure to discuss this critical information in describing the justification for their treatment during testimony constitutes a significant lack of candor.[38]

I therefore find that the Respondent has not unequivocally accepted responsibility.[39]

Egregiousness and Deterrence

[The Agency also looks to the egregiousness and extent of the misconduct, which are significant factors in determining the appropriate sanction. *Garrett Howard Smith, M.D.,* 83 FR at 18910 (collecting cases).] I find that the proven misconduct is egregious and that deterrence considerations weigh in favor of revocation. In addition to the myriad of prescribing events falling below the California standard of care, the proven misconduct involved being directly aware of two patients' apparent abuse or diversion of controlled substances, and being an apparent party to one of those patient's abuse or diversion. Respondent treated opioid abuse with hydrocodone which is not a legitimate medical purpose for prescribing hydrocodone and is outside the usual course of professional practice, therefore it was an illegal action under state regulations. Beyond that, his actions unnecessarily exposed his patients to dangerous levels of medication and to dangerous combinations of those medications.[*VV]

[In sanction determinations, the Agency has historically considered its interest in deterring similar acts, both with respect to the respondent in a particular case and the community of registrants. *See Joseph Gaudio, M.D.,* 74 FR 10083, 10095 (2009); *Singh,* 81 FR at 8248. I find that considerations of both specific and general deterrence weigh in favor of revocation in this case.] Allowing the Respondent to retain his COR despite the proven misconduct would send the wrong message to the regulated community. Imposing a sanction less than revocation would create the impression that registrants can maintain DEA registration despite ongoing treatment below the California standard of care, knowledge and acquiescence of the abuse or diversion demonstrated herein, the repeated prescribing of dangerous combinations of medications, and the wholesale failure to maintain complete and accurate medical charts. Revoking the Respondent's COR communicates to registrants that DEA takes all failings under the CSA seriously and that severe violations will result in severe sanctions.

[There is simply no evidence that Respondent's behavior is not likely to recur in the future such that I can entrust him with a CSA registration; in other words, the factors weigh in favor of revocation as a sanction.]

Recommendation

Considering the entire record before me, the conduct of the hearing, and observation of the testimony of the witnesses presented, I find that the Government has met its burden of proof and has established a *prima facie* case for revocation. In evaluating Factors Two and Four of 21 U.S.C. 823(f), I find that the Respondent's COR is inconsistent with the public interest. Furthermore, I find that the Respondent has failed to overcome the Government's *prima facie* case by unequivocally accepting responsibility.

Therefore, I recommend that the Respondent's DEA COR No. BR6081018 should be revoked, and that any pending applications for modification or renewal of the existing registration, and any applications for additional registrations, be denied.

Mark M. Dowd,

U.S. Administrative Law Judge.

Order

Pursuant to 28 CFR 0.100(b) and the authority vested in me by 21 U.S.C. 824(a) and 21 U.S.C. 823(f), I hereby revoke DEA Certificate of Registration No. BR6081018 issued to Fares Jeries Rabadi, M.D. Pursuant to 28 CFR 0.100(b) and the authority vested in me by 21 U.S.C. 824(a) and 21 U.S.C. 823(f), I further hereby deny any other pending applications for renewal or modification of this registration, as well as any other pending application of Fares Jeries Rabadi, M.D., for registration in California. This Order is effective June 21, 2022.

Anne Milgram
Administrator.

[FR Doc. 2022–10592 Filed 5–18–22; 8:45 am]
BILLING CODE 4410–09–P

[*UU] Respondent, in his Exceptions, argues that the ALJ's finding that the Respondent did not unequivocally accept responsibility was flawed because it was based entirely on the ALJ's credibility analysis, which as discussed above, was the subject to another exception. Resp Exceptions, at 5; *Supra* Credibility Analysis of the Respondent. My finding that Respondent failed to unequivocally accept responsibility is based primarily on Respondent's own testimony. He testified at times that ''maybe'' his documentation could be better, but never without excuses and equivocation. He refused to take any responsibility for his prescribing of high dosages of controlled substances or dangerous combinations of controlled substances. I find Respondent's second exception to be without merit.

[38] The degree of candor displayed by a registrant during a hearing is ''an important factor to be considered in determining . . . whether [the registrant] has accepted responsibility'' and in formulating an appropriate sanction. *Hills Pharmacy, LLC,* 81 FR 49816, 49845 (2016) (citing *Michael S. Moore,* 76 FR 45867, 45868 (2011)).

[39] A registrant's acceptance of responsibility must be unequivocal, or relief for sanction is not available, and where there is equivocation any evidence of remedial measures is irrelevant. *Daniel A. Glick, D.D.S.,* 80 FR 74800, 74801, 74810 (2015).

[*VV] Remaining analysis of egregiousness omitted for relevance.

FEDERAL REGISTER

Vol. 87 Thursday,
No. 97 May 19, 2022

Part III

Department of Energy

10 CFR Part 431
Energy Conservation Program: Energy Conservation Standards for Commercial Water Heating Equipment; Proposed Rule

DEPARTMENT OF ENERGY

10 CFR Part 431

[EERE–2021–BT–STD–0027]

RIN 1904–AD34

Energy Conservation Program: Energy Conservation Standards for Commercial Water Heating Equipment

AGENCY: Office of Energy Efficiency and Renewable Energy, Department of Energy.

ACTION: Notice of proposed rulemaking and announcement of public meeting.

SUMMARY: The Energy Policy and Conservation Act, as amended (''EPCA''), prescribes energy conservation standards for certain commercial and industrial equipment, including commercial water heaters, hot water supply boilers, and unfired hot water storage tanks (hereinafter referred to as ''commercial water heating (CWH) equipment''). EPCA requires the U.S. Department of Energy (''DOE'') to periodically determine whether more-stringent standards for CWH equipment would be technologically feasible and economically justified, and would result in significant energy savings. In this notice of proposed rulemaking (''NOPR''), DOE proposes to amend the standards for certain classes of CWH equipment for which DOE has tentatively determined there is clear and convincing evidence to support more-stringent standards. Additionally, DOE is proposing to codify standards for electric instantaneous CWH equipment from EPCA into the Code of Federal Regulations (''CFR''). DOE also announces a public meeting to receive comment on these proposed standards and the associated analyses and results.

DATES:

Comments: DOE will accept comments, data, and information regarding this NOPR no later than July 18, 2022.

Comments regarding the likely competitive impact of the proposed standard should be sent to the Department of Justice contact listed in the **ADDRESSES** section on or before July 18, 2022.

Meeting: DOE will hold a public meeting via webinar on June 23, 2022, from 1:00 p.m. to 5:00 p.m. See section VII, ''Public Participation,'' for webinar registration information, participant instructions and information about the capabilities available to webinar participants.

ADDRESSES: Interested persons are encouraged to submit comments using the Federal eRulemaking Portal at *www.regulations.gov*. Follow the instructions for submitting comments. Alternatively, interested persons may submit comments, identified by docket number EERE–2021–BT–STD–0027 and/or regulatory information number (RIN) 1904–AD34, by any of the following methods:

(1) *Federal eRulemaking Portal: www.regulations.gov*. Follow the instructions for submitting comments.

(2) *Email: Mail to: CommWater Heaters2021STD0027@ee.doe.gov*. Include the docket number EERE–2021–BT–STD–0027 in the subject line of the message.

No telefacsimiles (faxes) will be accepted. For detailed instructions on submitting comments and additional information on the rulemaking process, see section VII of this document.

Although DOE has routinely accepted public comment submissions through a variety of mechanisms, including the Federal eRulemaking Portal, email, postal mail and hand delivery/courier, the Department has found it necessary to make temporary modifications to the comment submission process in light of the ongoing coronavirus 2019 (''COVID–19'') pandemic. DOE is currently suspending receipt of public comments via postal mail and hand delivery/courier. If a commenter finds that this change poses an undue hardship, please contact Appliance Standards Program staff at (202) 586–1445 to discuss the need for alternative arrangements. Once the COVID–19 pandemic health emergency is resolved, DOE anticipates resuming all of its regular options for public comment submission, including postal mail and hand delivery/courier.

Docket: The docket for this rulemaking, which includes **Federal Register** notices, comments, and other supporting documents/materials, is available for review at *www.regulations.gov*. All documents in the docket are listed in the *www.regulations.gov* index. However, some documents listed in the index, such as those containing information that is exempt from public disclosure, may not be publicly available.

The docket webpage can be found at *www.regulations.gov/docket/EERE-2021-BT-STD-0027*. The docket webpage contains instructions on how to access all documents, including public comments, in the docket. See section VII, ''Public Participation,'' for information on how to submit comments through *www.regulations.gov*.

Written comments regarding the burden-hour estimates or other aspects of the collection-of-information requirements contained in this proposed rule may be submitted to Office of Energy Efficiency and Renewable Energy following the instructions at *www.reginfo.gov*.

EPCA requires the Attorney General to provide DOE a written determination of whether the proposed standard is likely to lessen competition. The U.S. Department of Justice (''DOJ'') Antitrust Division invites input from market participants and other interested persons with views on the likely competitive impact of the proposed standard. Interested persons may contact the Division at *energy.standards@usdoj.gov* on or before the date specified in the **DATES** section. Please indicate in the ''Subject'' line of your email the title and Docket Number of this proposed rulemaking.

FOR FURTHER INFORMATION CONTACT:

Ms. Julia Hegarty, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Office, EE–5B, 1000 Independence Avenue SW, Washington, DC 20585–0121. Telephone: (240) 597–6737. Email: *ApplianceStandards Questions@ee.doe.gov*.

Mr. Matthew Ring, U.S. Department of Energy, Office of the General Counsel, GC–33, 1000 Independence Avenue SW, Washington, DC 20585–0121. Telephone: (202) 586–2555. Email: *Matthew.Ring@hq.doe.gov*.

DOE has submitted the collection of information contained in the proposed rule to OMB for review under the Paperwork Reduction Act, as amended. (44 U.S.C. 3507(d)) Comments on the information collection proposal shall be directed to the Office of Information and Regulatory Affairs, Office of Management and Budget, Attention: Sofie Miller, OIRA Desk Officer by email: *sofie.e.miller@omb.eop.gov*.

For further information on how to submit a comment, or review other public comments and the docket, contact the Appliance and Equipment Standards Program staff at (202) 287–1445 or by email: *ApplianceStandards Questions@ee.doe.gov*.

SUPPLEMENTARY INFORMATION: DOE proposes to update previously approved incorporations by reference of the following industry standards in part 431:

ASTM C177–13, ''Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus,'' approved September 15, 2013.

ASTM C518–15, ''Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus,'' approved September 1, 2015.

Copies of ASTM C177–13 and ASTM C518–15 can be obtained from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428–2959, (610) 832–9585, or go to *www.astm.org*.

For a further discussion of these standards, see section VI.M of this document.

Table of Contents

I. Synopsis of the Proposed Rule
A. Benefits and Costs to Consumers
B. Impact on Manufacturers
C. National Benefits and Costs
D. Conclusion
II. Introduction
A. Authority
B. Background and Rulemaking History
C. Deviation From Appendix A
III. General Discussion
A. Test Procedures
B. Scope of Rulemaking
1. Residential-Duty Commercial Water Heaters
2. Oil-Fired Commercial Water Heating Equipment
3. Unfired Hot Water Storage Tanks
4. Electric Instantaneous Water Heaters
5. Commercial Heat Pump Water Heaters
6. Electric Storage Water Heaters
7. Instantaneous Water Heaters and Hot Water Supply Boilers
C. Technological Feasibility
1. General
2. Maximum Technologically Feasible Levels
D. Energy Savings
1. Determination of Savings
2. Significance of Savings
E. Economic Justification
1. Specific Criteria
a. Economic Impact on Manufacturers and Commercial Consumers
b. Savings in Operating Costs Compared to Increase in Price (Life-Cycle Costs)
c. Energy Savings
d. Lessening of Utility or Performance of Products
e. Impact of Any Lessening of Competition
f. Need for National Energy Conservation
g. Other Factors
2. Rebuttable Presumption
F. Revisions to Notes in Regulatory Text
G. Certification, Compliance, and Enforcement Issues
H. General Comments
IV. Methodology and Discussion of Related Comments
A. Market and Technology Assessment
1. Definitions
2. Equipment Classes
a. Residential-Duty Electric Instantaneous Water Heaters
b. Storage-Type Instantaneous Water Heaters
c. Condensing Gas-Fired Water Heating Equipment
d. Tankless Water Heaters and Hot Water Supply Boilers
e. Gas-Fired and Oil-Fired Storage Water Heaters
f. Grid-Enabled Water Heaters
g. Input Capacity for Instantaneous Water Heaters and Hot Water Supply Boilers
3. Review of the Current Market for CWH Equipment
4. Technology Options
B. Screening Analysis
1. Screened-Out Technologies
2. Remaining Technologies
C. Engineering Analysis
1. Efficiency Analysis
2. Cost Analysis
3. Representative Equipment for Analysis
4. Efficiency Levels for Analysis
a. Thermal Efficiency Levels
b. Standby Loss Levels
c. Uniform Energy Efficiency Levels
5. Standby Loss Reduction Factors
6. Teardown Analysis
7. Manufacturing Production Costs
8. Manufacturer Markup and Manufacturer Selling Price
9. Shipping Costs
D. Markups Analysis
1. Distribution Channels
2. Comments on Withdrawn May 2016 CWH ECS NOPR
3. Markups Used in This NOPR
E. Energy Use Analysis
F. Life-Cycle Cost and Payback Period Analysis
1. Approach
2. Life-Cycle Cost Inputs
a. Equipment Cost
b. Installation Costs
c. Annual Energy Consumption
d. Energy Prices
e. Maintenance Costs
f. Repair Costs
g. Product Lifetime
h. Discount Rate
i. Energy Efficiency Distribution in the No-New-Standards Case
3. Payback Period
G. Shipments Analysis
1. Commercial Gas-Fired and Electric Storage Water Heaters
2. Residential-Duty Gas-Fired Storage and Instantaneous Water Heaters
3. Available Products Database and Equipment Efficiency Trends
4. Shipments to Residential Consumers
5. NOPR Shipments Model
H. National Impact Analysis
1. Equipment Efficiency Trends
2. Fuel and Technology Switching
3. National Energy Savings
4. Net Present Value Analysis
I. Consumer Subgroup Analysis
1. Residential Sector Subgroup Analysis
J. Manufacturer Impact Analysis
1. Overview
2. Government Regulatory Impact Model and Key Inputs
a. Manufacturer Production Costs
b. Shipments Projections
c. Product and Capital Conversion Costs
d. Manufacturer Markup Scenarios
K. Emissions Analysis
1. Air Quality Regulations Incorporated in DOE's Analysis
L. Monetizing Emissions Impacts
1. Monetization of Greenhouse Gas Emissions
a. Social Cost of Carbon
b. Social Cost of Methane and Nitrous Oxide
2. Monetization of Other Air Pollutants
M. Utility Impact Analysis
N. Employment Impact Analysis
V. Analytical Results and Conclusions
A. Trial Standard Levels
B. Economic Justification and Energy Savings
1. Economic Impacts on Individual Consumers
a. Life-Cycle Cost and Payback Period
b. Consumer Subgroup Analysis
c. Rebuttable Presumption Payback
2. Economic Impacts on Manufacturers
a. Industry Cash Flow Analysis Results
b. Impacts on Direct Employment
c. Impacts on Manufacturing Capacity
d. Impacts on Subgroups of Manufacturers
e. Cumulative Regulatory Burden
3. National Impact Analysis
a. Significance of Energy Savings
b. Net Present Value of Consumer Costs and Benefits
c. Indirect Impacts on Employment
4. Impact on Utility or Performance of Products
5. Impact of Any Lessening of Competition
6. Need of the Nation To Conserve Energy
7. Other Factors
8. Summary of National Economic Impacts
C. Conclusion
1. Benefits and Burdens of TSLs Considered for CWH Equipment Standards
2. Annualized Benefits and Costs of the Proposed Standards
VI. Procedural Issues and Regulatory Review
A. Review Under Executive Orders 12866 and 13563
B. Review Under the Regulatory Flexibility Act
1. Description of Reasons Why Action Is Being Considered
2. Objectives of, and Legal Basis for, Rule
3. Description on Estimated Number of Small Entities Regulated
4. Description and Estimate of Compliance Requirements
5. Duplication, Overlap, and Conflict With Other Rules and Regulations
6. Significant Alternatives to the Rule
C. Review Under the Paperwork Reduction Act
D. Review Under the National Environmental Policy Act of 1969
E. Review Under Executive Order 13132
F. Review Under Executive Order 12988
G. Review Under the Unfunded Mandates Reform Act of 1995
H. Review Under the Treasury and General Government Appropriations Act, 1999
I. Review Under Executive Order 12630
J. Review Under the Treasury and General Government Appropriations Act, 2001
K. Review Under Executive Order 13211
L. Information Quality
M. Materials Incorporated by Reference
VII. Public Participation
A. Participation in the Webinar
B. Procedure for Submitting Prepared General Statements for Distribution
C. Conduct of the Webinar
D. Submission of Comments
E. Issues on Which DOE Seeks Comment
VIII. Approval of the Office of the Secretary

I. Synopsis of the Proposed Rule

Title III, Part C [1] of EPCA,[2] established the Energy Conservation Program for Certain Industrial Equipment. (42 U.S.C. 6311–6317) Such equipment includes CWH equipment, the subject of this NOPR. (42 U.S.C. 6311(1)(K))

Pursuant to EPCA, DOE must consider amending the energy efficiency standards for certain types of commercial and industrial equipment, including the equipment at issue in this document, whenever the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (''ASHRAE'') amends the standard levels or design requirements prescribed in ASHRAE Standard 90.1, ''Energy Standard for Buildings Except Low-Rise Residential Buildings,'' (''ASHRAE Standard 90.1''), and at a minimum, every six 6 years. (42 U.S.C. 6313(a)(6)(A)–(C))

In accordance with these and other statutory provisions discussed in this document, DOE proposes amended energy conservation standards for certain classes of CWH equipment. The proposed standards, which are expressed in terms of thermal efficiency, standby loss, and uniform energy factor (''UEF''), are shown in Table I.1 and Table I.2. These proposed standards, if adopted, would apply to all CWH equipment listed in Table I.1 and Table I.2, manufactured in, or imported into the United States starting on the date 3 years after the publication of the final rule for this rulemaking. DOE is also proposing to codify standards for electric instantaneous CWH equipment from EPCA into the CFR. Finally, DOE is proposing several changes to the footnotes to tables of energy conservation standards at 10 CFR 431.110 to clarify existing regulations for CWH equipment. The proposed standards for electric instantaneous CWH equipment and changes to the footnotes are also shown in Table I.1.

TABLE I.1—PROPOSED ENERGY CONSERVATION STANDARDS FOR COMMERCIAL WATER HEATING EQUIPMENT EXCEPT FOR RESIDENTIAL-DUTY COMMERCIAL WATER HEATERS

Equipment	Size	Energy conservation standards *	
		Minimum thermal efficiency (%)	Maximum standby loss †
Gas-fired storage water heaters	All	95	$0.86 \times [Q/800 + 110(V_r)^{1/2}]$ (Btu/h).
Electric instantaneous water heaters ‡	<10 gal	80	N/A.
	≥10 gal	77	$2.30 + 67/V_m$ (%/h).
Gas-fired instantaneous water heaters and hot water supply boilers	<10 gal	96	N/A.
	≥10 gal	96	$Q/800 + 110(V_r)^{1/2}$ (Btu/h).

* V_m is the measured storage volume, and V_r is the rated volume, both in gallons. Q is the rated input rate in Btu/h, as determined pursuant to 10 CFR 429.44.

† Water heaters and hot water supply boilers having more than 140 gallons of storage capacity need not meet the standby loss requirement if: (1) The tank surface area is thermally insulated to R–12.5 or more, (2) a standing pilot light is not used, and (3) for gas or oil-fired storage water heaters, they have a flue damper or fan-assisted combustion.

‡ Energy conservation standards for electric instantaneous water heaters are included in EPCA. (42 U.S.C. 6313(a)(5)(D)–(E)) The compliance date for these energy conservation standards is January 1, 1994. In this NOPR, DOE proposes to codify these standards for electric instantaneous water heaters in its regulations at 10 CFR 431.110. Further discussion of standards for electric instantaneous water heaters is included in section III.B.4 of this NOPR.

TABLE I.2—PROPOSED AMENDED ENERGY CONSERVATION STANDARDS FOR GAS-FIRED RESIDENTIAL-DUTY COMMERCIAL WATER HEATERS

Equipment	Specification *	Draw pattern **	Uniform energy factor †
Gas-fired Residential-Duty Storage	>75 kBtu/h and	Very Small	$0.5374 - (0.0009 \times V_r)$.
	≤105 kBtu/h and	Low	$0.8062 - (0.0012 \times V_r)$.
	≤120 gal and	Medium	$0.8702 - (0.0011 \times V_r)$.
	≤180 °F	High	$0.9297 - (0.0009 \times V_r)$.

* Additionally, to be classified as a residential-duty water heater, a commercial water heater must meet the following conditions: (1) If requiring electricity, use single-phase external power supply; and (2) the water heater must not be designed to heat water at temperatures greater than 180 °F.

** Draw pattern is a classification of hot water use of a consumer water heater or residential-duty commercial water heater, based upon the first-hour rating. The draw pattern is determined using the *Uniform Test Method for Measuring the Energy Consumption of Water Heaters* in appendix E to subpart B of 10 CFR part 430.

† V_r is the rated storage volume (in gallons), as determined pursuant to 10 CFR 429.44.

A. Benefits and Costs to Consumers

Table I.3 presents DOE's evaluation of the economic impacts of the proposed standards on consumers of CWH equipment, as measured by the average life-cycle cost (''LCC'') savings and the simple payback period (''PBP'').[3] The average LCC savings are positive for all equipment classes, and the PBP is less than the average lifetime of CWH equipment, which is estimated to range from 10 years for commercial gas-fired storage water heaters to 25 years for instantaneous water heaters and hot water supply boilers (see section IV.F.2.g of this document).

[1] For editorial reasons, upon codification in the U.S. Code, Part C was re-designated Part A–1.

[2] All references to EPCA in this document refer to the statute as amended through the Energy Act of 2020, Public Law 116–260 (Dec. 27, 2020).

[3] The average LCC savings refer to consumers that are affected by a standard and are measured relative to the efficiency distribution in the no-new-standards case, which depicts the market in the compliance year in the absence of new or amended standards (see section IV.F.2.i of this document). The simple PBP, which is designed to compare specific efficiency levels, is measured relative to the baseline product (see section IV.F.3 of this document).

TABLE I.3—IMPACTS OF PROPOSED ENERGY CONSERVATION STANDARDS ON CONSUMERS OF CWH EQUIPMENT

Equipment	Average LCC savings (2020$)	Simple payback period (years)
Commercial Gas-Fired Storage and Storage-Type Instantaneous	301	5
Residential-Duty Gas-Fired Storage	90	9
Gas-Fired Instantaneous Water Heaters and Hot Water Supply Boilers	599	9
—Instantaneous, Gas-Fired Tankless	63	9
—Instantaneous Water Heaters and Hot Water Supply Boilers	1,047	9

DOE's analysis of the impacts of the proposed standards on consumers is described in section IV.F of this document.

B. Impact on Manufacturers

The industry net present value (''INPV'') is the sum of the discounted cash flows to the industry from the base year through the end of the analysis period (2020–2055). Using a real discount rate of 9.1 percent, DOE estimates that the INPV for manufacturers of CWH Equipment in the case without amended standards is $183.1 million in 2020$. Under the proposed standards, the change in INPV is estimated to range from −12.8 percent to −5.9 percent, which is approximately equivalent to a decrease of $23.4 million to a decrease of $10.8 million, respectively. In order to bring products into compliance with amended standards, it is estimated that the industry would incur total conversion costs of $34.6 million.

DOE's analysis of the impacts of the proposed standards on manufacturers is described in section IV.J of this document. The analytic results of the manufacturer impact analysis (''MIA'') are presented in section V.B.2 of this document.

C. National Benefits and Costs[4]

DOE's analyses indicate that the proposed energy conservation standards for CWH equipment would save a significant amount of energy. Relative to the case without amended standards, the lifetime energy savings for CWH Equipment purchased in the 30-year period that begins in the anticipated year of compliance with the amended standards (2026–2055) amount to 0.70 quadrillion British thermal units (''Btu''), or quads.[5] This represents a savings of 4.9 percent relative to the energy use of these products in the case without amended standards (referred to as the ''no-new-standards case'').

The cumulative net present value (''NPV'') of total consumer benefits of the proposed standards for CWH equipment ranges from $0.48 billion (at a 7-percent discount rate) to $1.49 billion (at a 3-percent discount rate). This NPV expresses the estimated total value of future operating-cost savings minus the estimated increased product and installation costs for CWH equipment purchased in 2026–2055.

In addition, the proposed standards for CWH equipment are projected to yield significant environmental benefits. DOE estimates that the proposed standards would result in cumulative emission reductions (over the same period as for energy savings) of 38 million metric tons (''Mt'')[6] of carbon dioxide (''CO_2''), −0.02 thousand tons of sulfur dioxide (''SO_2''), 95 thousand tons of nitrogen oxides (''NO_X''), 471 thousand tons of methane (''CH_4''), 0.07 thousand tons of nitrous oxide (''N_2O''), and −0.001 tons of mercury (''Hg'').[7]

DOE estimates climate benefits from a reduction in greenhouse gases using four different estimates of the ''social cost of carbon'' (''SC-CO_2''), the social cost of methane (''SC-CH_4''), and the social cost of nitrous oxide (''SC-N_2O''). Together these represent the social cost of greenhouse gases (''SC-GHG''). DOE used interim estimates of SC-GHG values developed by an Interagency Working Group on the Social Cost of Greenhouse Gases (IWG).[8] The derivation of these values is discussed in section IV.L.1. of this document. For presentational purposes, the climate benefits associated with the average SC-GHG at a 3-percent discount rate is $1.96 billion. DOE does not have a single central SC-GHG point estimate and it emphasizes the importance and value of considering the benefits calculated using all four SC-GHG estimates.[9]

DOE also estimates the health benefits from SO_2 and NO_X emissions reduction.[10] DOE estimates the present value of the health benefits would be $0.99 billion using a 7-percent discount rate, and $2.62 billion using a 3-percent discount. DOE is currently only monetizing fine particulate matter (''$PM_{2.5}$'') and (for NO_X) ozone precursor health benefits, but will continue to assess the ability to monetize other effects such as health benefits from reductions in direct $PM_{2.5}$ emissions.

Table I.4 summarizes the economic benefits and costs expected to result from the proposed standards for CWH equipment. In the table, total benefits for both the 3-percent and 7-percent cases are presented using the average GHG social costs with 3-percent discount rate. DOE does not have a

[4] All monetary values in this document are expressed in 2020 dollars.

[5] The quantity refers to full-fuel-cycle (''FFC'') energy savings. FFC energy savings include the energy consumed in extracting, processing, and transporting primary fuels (*i.e.,* coal, natural gas, petroleum fuels), and, thus, presents a more complete picture of the impacts of energy efficiency standards. For more information on the FFC metric, see section IV.H.3 of this document.

[6] A metric ton is equivalent to 1.1 short tons. Results for emissions other than CO_2 are presented in short tons.

[7] DOE calculated emissions reductions relative to the no-new-standards case, which reflects key assumptions in the *Annual Energy Outlook 2021* (''*AEO2021*''). *AEO2021* represents current Federal and State legislation and final implementation of regulations as of the time of its preparation. See section IV.K for further discussion of *AEO2021* assumptions that effect air pollutant emissions.

[8] *See* Interagency Working Group on Social Cost of Greenhouse Gases, *Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide. Interim Estimates Under Executive Order 13990,* Washington, DC February 2021. *www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf?source=email.*

[9] On March 16, 2022, the Fifth Circuit Court of Appeals (No. 22–30087) granted the Federal Government's emergency motion for stay pending appeal of the February 11, 2022, preliminary injunction issued in *Louisiana* v. *Biden,* No. 21–cv–1074–JDC–KK (W.D. La.). As a result of the Fifth Circuit's order, the preliminary injunction is no longer in effect, pending resolution of the Federal Government's appeal of that injunction or a further court order. Among other things, the preliminary injunction enjoined the defendants in that case from ''adopting, employing, treating as binding, or relying upon'' the interim estimates of the social cost of greenhouse gases—which were issued by the Interagency Working Group on the Social Cost of Greenhouse Gases on February 26, 2021—to monetize the benefits of reducing greenhouse gas emissions. In the absence of further intervening court orders, DOE will revert to its approach prior to the injunction and present monetized benefits where appropriate and permissible under law.

[10] DOE estimated the monetized value of SO_2 and NO_X emissions reductions associated with site and electricity savings using benefit per ton estimates from the scientific literature. See section IV.L.2 of this document for further discussion.

single central SC-GHG point estimate and it emphasizes the importance and value of considering the benefits calculated using all four SC-GHG estimates. The estimated total net benefits using each of the four SC-GHG estimates are presented in section V.B.6. of this document.

TABLE I.4—SUMMARY OF ECONOMIC BENEFITS AND COSTS OF PROPOSED ENERGY CONSERVATION STANDARDS FOR CWH EQUIPMENT

[TSL 3]

	Billion 2020$
3% Discount Rate	
Consumer Operating Cost Savings	2.4
Climate Benefits *	2.0
Health Benefits **	2.6
Total Benefits †	7.0
Consumer Incremental Product Costs ‡	1.0
Net Benefits	6.1
7% Discount Rate	
Consumer Operating Cost Savings	1.0
Climate Benefits * (3% discount rate)	2.0
Health Benefits **	1.0
Total Benefits †	4.0
Consumer Incremental Product Costs ‡	0.6
Net Benefits	3.4

Note: This table presents the costs and benefits associated with commercial water heaters shipped in 2026–2055. These results include benefits to consumers which accrue after 2055 from the products shipped in 2026–2055. Numbers may not add due to rounding.

* Climate benefits are calculated using four different estimates of the social cost of carbon ($SC\text{-}CO_2$), methane ($SC\text{-}CH_4$), and nitrous oxide ($SC\text{-}N_2O$) (model average at 2.5 percent, 3 percent, and 5 percent discount rates; 95th percentile at 3 percent discount rate), as shown in Table V.37 through Table V.39. Together these represent the global social cost of greenhouse gases (SC-GHG). For presentational purposes of this table, the climate benefits associated with the average SC-GHG at a 3 percent discount rate are shown, but the Department does not have a single central SC-GHG point estimate. See section IV.L of this document for more details.

** Health benefits are calculated using benefit-per-ton values for NO_X and SO_2. DOE is currently only monetizing $PM_{2.5}$ and (for NO_X) ozone precursor health benefits, but will continue to assess the ability to monetize other effects such as health benefits from reductions in direct $PM_{2.5}$ emissions. The health benefits are presented at real discount rates of 3 and 7 percent. See section IV.L of this document for more details.

† Total and net benefits include consumer, climate, and health benefits. For presentation purposes, total and net benefits for both the 3-percent and 7-percent cases are presented using the average SC-GHG with 3-percent discount rate, but the Department does not have a single central SC-GHG point estimate. DOE emphasizes the importance and value of considering the benefits calculated using all four SC-GHG estimates. See Table V.42 for net benefits using all four SC-GHG estimates. On March 16, 2022, the Fifth Circuit Court of Appeals (No. 22–30087) granted the federal government's emergency motion for stay pending appeal of the February 11, 2022, preliminary injunction issued in *Louisiana* v. *Biden,* No. 21–cv–1074–JDC–KK (W.D. La.). As a result of the Fifth Circuit's order, the preliminary injunction is no longer in effect, pending resolution of the federal government's appeal of that injunction or a further court order. Among other things, the preliminary injunction enjoined the defendants in that case from ''adopting, employing, treating as binding, or relying upon'' the interim estimates of the social cost of greenhouse gases—which were issued by the Interagency Working Group on the Social Cost of Greenhouse Gases on February 26, 2021—to monetize the benefits of reducing greenhouse gas emissions. In the absence of further intervening court orders, DOE will revert to its approach prior to the injunction and present monetized benefits where appropriate and permissible under law.

‡ Costs include incremental equipment costs as well as installation costs.

The benefits and costs of the proposed standards can also be expressed in terms of annualized values. The monetary values for the total annualized net benefits are (1) the reduced consumer operating costs, minus (2) the increase in product purchase prices and installation costs, plus (3) the value of the benefits of GHG, NO_X, and SO_2 emission reductions, all annualized.[11]

The national operating savings are domestic private U.S. consumer monetary savings that occur as a result of purchasing the covered products and are measured for the lifetime of CWH equipment shipped in 2026–2055. The climate benefits associated with reduced GHG emissions achieved as a result of the proposed standards are also calculated based on the lifetime of CWH equipment shipped in 2026–2055.

Estimates of annualized benefits and costs of the proposed standards are shown in Table I.5. The results under the primary estimate are as follows.

Using a 7-percent discount rate for consumer benefits and costs and health benefits from reduced SO_2 and NO_X emissions, and the 3-percent discount rate case for climate benefits from reduced GHG emissions, the estimated cost of the standards proposed in this rulemaking is $59 million per year in increased equipment costs, while the estimated annual benefits are $110 million in reduced equipment operating costs, $113 million in climate benefits, and $104 million in health benefits. In this case, the net benefit would amount to $267 million per year.

Using a 3-percent discount rate for all benefits and costs, the estimated cost of the proposed standards is $55 million per year in increased equipment costs, while the estimated annual benefits are $140 million in reduced operating costs, $113 million in climate benefits, and $150 million in health benefits. In this case, the net benefit would amount to $349 million per year.

[11] To convert the time-series of costs and benefits into annualized values, DOE calculated a present value in 2021, the year used for discounting the NPV of total consumer costs and savings. For the benefits, DOE calculated a present value associated with each year's shipments in the year in which the shipments occur (*e.g.,* 2030), and then discounted the present value from each year to 2021. The calculation uses discount rates of 3 and 7 percent for all costs and benefits except for the value of CO_2 reductions, for which DOE used case-specific discount rates, as shown in Table I.3. Using the present value, DOE then calculated the fixed annual payment over a 30-year period, starting in the compliance year, that yields the same present value.

TABLE I.5—ANNUALIZED BENEFITS AND COSTS OF PROPOSED ENERGY CONSERVATION STANDARDS FOR CWH EQUIPMENT

[TSL 3]

Category	Million 2020$/year		
	Primary estimate	Low-net-benefits estimate	High-net-benefits estimate
3% Discount Rate			
Consumer Operating Cost Savings	140.3	130.3	151.7
Climate Benefits*	112.8	107.2	117.8
Health Benefits**	150.4	143.5	170.0
Total Benefits†	404	381	439
Consumer Incremental Product Costs‡	54.7	52.6	56.6
Net Benefits	349	328	383
7% Discount Rate			
Consumer Operating Cost Savings	109.6	103.3	116.7
Climate Benefits* (3% discount rate)	112.8	107.2	117.8
Health Benefits**	104.3	100.4	117.2
Total Benefits†	327	311	352
Consumer Incremental Product Costs‡	59.2	57.5	60.9
Net Benefits	267	253	291

Note: This table presents the annualized costs and benefits associated with CWH equipment shipped in 2026–2055. These results include benefits to consumers which accrue after 2055 from the products purchased in 2026–2055.

*Climate benefits are calculated using four different estimates of the social cost of carbon (SC-CO_2), methane (SC-CH_4), and nitrous oxide (SC-N_2O) (model average at 2.5 percent, 3 percent, and 5 percent discount rates; 95th percentile at 3 percent discount rate). Together these represent the global social cost of greenhouse gases (SC-GHG). For presentational purposes of this table, the climate benefits associated with the average SC-GHG at a 3 percent discount rate are shown, but the Department does not have a single central SC-GHG point estimate, and it emphasizes the importance and value of considering the benefits calculated using all four SC-GHG estimates. See section IV.L of this document for more details.

**Health benefits are calculated using benefit-per-ton values for NO_X and SO_2. DOE is currently only monetizing $PM_{2.5}$ and (for NO_X) ozone precursor health benefits, but will continue to assess the ability to monetize other effects such as health benefits from reductions in direct $PM_{2.5}$ emissions. The health benefits are presented at real discount rates of 3 and 7 percent. See section IV.L of this document for more details.

† Total and net benefits include consumer, climate, and health benefits. For presentation purposes, total and net benefits for both the 3-percent and 7-percent cases are presented using the average SC-GHG with 3-percent discount rate, but the Department does not have a single central SC-GHG point estimate. DOE emphasizes the importance and value of considering the benefits calculated using all four SC-GHG estimates. On March 16, 2022, the Fifth Circuit Court of Appeals (No. 22–30087) granted the federal government's emergency motion for stay pending appeal of the February 11, 2022, preliminary injunction issued in *Louisiana* v. *Biden,* No. 21–cv–1074–JDC–KK (W.D. La.). As a result of the Fifth Circuit's order, the preliminary injunction is no longer in effect, pending resolution of the federal government's appeal of that injunction or a further court order. Among other things, the preliminary injunction enjoined the defendants in that case from ''adopting, employing, treating as binding, or relying upon'' the interim estimates of the social cost of greenhouse gases—which were issued by the Interagency Working Group on the Social Cost of Greenhouse Gases on February 26, 2021—to monetize the benefits of reducing greenhouse gas emissions. In the absence of further intervening court orders, DOE will revert to its approach prior to the injunction and present monetized benefits where appropriate and permissible under law.

‡ Costs include incremental equipment costs as well as installation costs.

DOE's analysis of the national impacts of the proposed standards is described in sections IV.H, IV.K, and IV.L of this document.

D. Conclusion

DOE has tentatively concluded that, based on clear and convincing evidence as presented in the following sections, the proposed standards are technologically feasible and economically justified, and would result in the significant additional conservation of energy. Specifically, with regards to technological feasibility, CWH equipment achieving these standard levels are already commercially available for all equipment classes covered by this proposal. As for economic justification, DOE's analysis shows that the benefits of the proposed standard exceed, to a great extent, the burdens of the proposed standards. Using a 7-percent discount rate for consumer benefits and costs and NO_X and SO_2 reduction benefits, and a 3-percent discount rate case for GHG social costs, the estimated cost of the proposed standards for CWH equipment is $59.2 million per year in increased equipment costs, while the estimated annual benefits are $109.6 million in reduced equipment operating costs, $112.8 million in GHG reductions, $104.6 million in reduced NO_X emissions, and −$0.30 million in (increased) SO_2 emissions. The net benefit amounts to $267.4 million per year.

As previously mentioned, the proposed standards would result in estimated national energy savings of 0.70 quad, the equivalent of the electricity use of 7.0 million homes in one year. In determining whether energy savings are significant, DOE considers the specific circumstances surrounding a given rulemaking.[12] In making this determination, DOE looks at, among other things, the FFC effects of the proposed standards. These effects include the energy consumed in electricity production (depending on load shape), in distribution and transmission, and in extracting, processing, and transporting primary fuels (*i.e.,* coal, natural gas, petroleum fuels), and thus present a more complete picture of the impacts of energy conservation standards, including greenhouse gas emissions. Accordingly, taking into account the significance of cumulative FFC national energy savings, the cumulative FFC emissions

[12] Procedures, Interpretations, and Policies for Consideration in New or Revised Energy Conservation Standards and Test Procedures for Consumer Products and Commercial/Industrial Equipment, 86 FR 70892, 70901 (Dec. 13, 2021).

reductions, and the need to confront the global climate crisis, among other factors, DOE has initially determined the energy savings for the TSL proposed in this rulemaking are ''significant'' within the meaning of EPCA. Finally, DOE notes that a more detailed discussion of the basis for these tentative conclusions is contained in the remainder of this document and the accompanying TSD. Based on available facts, data, and DOE's own analyses, DOE has preliminarily determined that it is highly probable an amended standard would result in a significant additional amount of energy savings, and is technologically feasible and economically justified.

DOE also considered more-stringent energy efficiency levels as potential standards, and is still considering them in this rulemaking. However, DOE has tentatively concluded that the potential burdens of the more-stringent energy efficiency levels would outweigh the projected benefits.

Based on consideration of the public comments DOE receives in response to this document and related information collected and analyzed during the course of this rulemaking effort, DOE may adopt energy efficiency levels presented in this document that are either higher or lower than the proposed standards, or some combination of level(s) that incorporate the proposed standards in part.

II. Introduction

The following section briefly discusses the statutory authority underlying this NOPR, as well as some of the historical background relevant to the establishment of the amended standards for CWH equipment.

A. Authority

EPCA authorizes DOE to regulate the energy efficiency of a number of consumer products and industrial equipment. Title III, Part C of EPCA, added by Public Law 95–619, Title IV, section 441(a) (42 U.S.C. 6311–6317, as codified), established the Energy Conservation Program for Certain Industrial Equipment, which sets forth a variety of provisions designed to improve energy efficiency. This equipment includes the classes of CWH equipment that are the subject of this NOPR. (42 U.S.C. 6311(1)(K)) EPCA prescribed energy conservation standards for CWH equipment. (42 U.S.C. 6313(a)(5)) Additionally, DOE must consider amending the energy efficiency standards for certain types of commercial and industrial equipment, including CWH equipment, whenever ASHRAE amends the standard levels or design requirements prescribed in ASHRAE/IES Standard 90.1, and at a minimum, every 6 years. (42 U.S.C. 6313(a)(6)(A)–(C))

The energy conservation program for covered products under EPCA consists essentially of four parts: (1) Testing, (2) labeling, (3) the establishment of Federal energy conservation standards, and (4) certification and enforcement procedures. Relevant provisions of EPCA specifically include definitions (42 U.S.C. 6311), energy conservation standards (42 U.S.C. 6313), test procedures (42 U.S.C. 6314), labeling provisions (42 U.S.C. 6315), and the authority to require information and reports from manufacturers (42 U.S.C. 6316).

Federal energy conservation requirements for covered equipment established under EPCA generally supersede State laws and regulations concerning energy conservation testing, labeling, and standards. (42 U.S.C. 6316(a) and (b); 42 U.S.C. 6297) DOE may, however, grant waivers of Federal preemption for particular State laws or regulations, in accordance with the procedures and other provisions set forth under EPCA. (*See* 42 U.S.C. 6316(b)(2)(D))

Subject to certain criteria and conditions, DOE is required to develop test procedures to measure the energy efficiency, energy use, or estimated annual operating cost of covered equipment. (42 U.S.C. 6314) Manufacturers of covered equipment must use the Federal test procedures as the basis for (1) certifying to DOE that their equipment complies with the applicable energy conservation standards adopted pursuant to EPCA (42 U.S.C. 6316(b); 42 U.S.C. 6296), and (2) making representations about the efficiency of that equipment (42 U.S.C. 6314(d)). Similarly, DOE uses these test procedures to determine whether the equipment complies with relevant standards promulgated under EPCA. The DOE test procedures for CWH equipment appear at part 431, subpart G.

ASHRAE Standard 90.1 sets industry energy efficiency levels for small, large, and very large commercial package air-conditioning and heating equipment, packaged terminal air conditioners, packaged terminal heat pumps, warm air furnaces, packaged boilers, storage water heaters, instantaneous water heaters, and unfired hot water storage tanks (collectively ''ASHRAE equipment''). For each type of listed equipment, EPCA directs that if ASHRAE amends Standard 90.1, DOE must adopt amended standards at the new ASHRAE efficiency level, unless DOE determines, supported by clear and convincing evidence,[13] that adoption of a more stringent level would produce significant additional conservation of energy and would be technologically feasible and economically justified. (42 U.S.C. 6313(a)(6)(A)(ii) (The threshold for ''clear and convincing'' evidence is discussed in more detail in section III.H.) Under EPCA, DOE must also review energy efficiency standards for CWH equipment every 6 years and either: (1) Issue a notice of determination that the standards do not need to be amended as adoption of a more stringent level is not supported by clear and convincing evidence; or (2) issue a notice of proposed rulemaking including new proposed standards based on certain criteria and procedures in subparagraph (B) of 42 U.S.C. 6313(a)(6). (42 U.S.C. 6313(a)(6)(C))

In deciding whether a more-stringent standard is economically justified, under either the provisions of 42 U.S.C. 6313(a)(6)(A) or 42 U.S.C. 6313(a)(6)(C), DOE must determine whether the benefits of the standard exceed its burdens. DOE must make this determination after receiving comments on the proposed standard, and by considering, to the maximum extent practicable, the following seven factors:

(1) The economic impact of the standard on manufacturers and consumers of products subject to the standard;

(2) The savings in operating costs throughout the estimated average life of the covered products in the type (or class) compared to any increase in the price, initial charges, or maintenance expenses for the covered equipment that are likely to result from the standard;

(3) The total projected amount of energy savings likely to result directly from the standard;

(4) Any lessening of the utility or the performance of the covered product likely to result from the standard;

(5) The impact of any lessening of competition, as determined in writing by the Attorney General, that is likely to result from the standard;

(6) The need for national energy conservation; and

(7) Other factors the Secretary of Energy considers relevant.

[13] The clear and convincing threshold is a heightened standard, and would only be met where the Secretary has an abiding conviction, based on available facts, data, and DOE's own analyses, that it is highly probable an amended standard would result in a significant additional amount of energy savings, and is technologically feasible and economically justified. *American Public Gas Association* v. *U.S. Dep't of Energy,* No. 20–1068, 2022 WL 151923, at *4 (D.C. Cir. January 18, 2022) (citing *Colorado* v. *New Mexico,* 467 U.S. 310, 316, 104 S.Ct. 2433, 81 L.Ed.2d 247 (1984)).

(42 U.S.C. 6313(a)(6)(B)(ii)(I)–(VII))

Further, EPCA establishes a rebuttable presumption that an energy conservation standard is economically justified if the Secretary finds that the additional cost to the consumer of purchasing a product that complies with the standard will be less than three times the value of the energy (and, as applicable, water) savings during the first year that the consumer will receive as a result of the standard, as calculated under the applicable test procedure. (42 U.S.C. 6295(o)(2)(B)(iii)) However, while this rebuttable presumption analysis applies to most commercial and industrial equipment (42 U.S.C. 6316(a)), it is not a required analysis for ASHRAE equipment (42 U.S.C. 6316(b)(1)). Nonetheless, DOE included the analysis of rebuttable presumption in its economic analysis and presents the results in section V.B.1.c of this document.

EPCA also contains what is known as an ''anti-backsliding'' provision, which prevents the Secretary from prescribing any amended standard that either increases the maximum allowable energy use or decreases the minimum required energy efficiency of a covered product. (42 U.S.C. 6313(a)(6)(B)(iii)(I)) Also, the Secretary may not prescribe an amended or new standard if interested persons have established by a preponderance of the evidence that the standard is likely to result in the unavailability in the United States in any covered product type (or class) of performance characteristics (including reliability), features, sizes, capacities, and volumes that are substantially the same as those generally available in the United States. (42 U.S.C. 6313(a)(6)(B)(iii)(II)(aa))

B. Background and Rulemaking History

As previously noted, EPCA established initial Federal energy conservation standards for CWH equipment that generally corresponded to the levels in ASHRAE Standard 90.1–1989. On October 29, 1999, ASHRAE released Standard 90.1–1999, which included new efficiency levels for numerous categories of CWH equipment. DOE evaluated these new standards and subsequently amended energy conservation standards for CWH equipment in a final rule published in the **Federal Register** on January 12, 2001. 66 FR 3336 (''January 2001 final rule''). DOE adopted the levels in ASHRAE Standard 90.1–1999 for all classes of CWH equipment, except for electric storage water heaters. For electric storage water heaters, the standard in ASHRAE Standard 90.1–1999 was less stringent than the standard prescribed in EPCA and, consequently, would have increased energy consumption.

Under those circumstances, DOE could not adopt the new efficiency level for electric storage water heaters in ASHRAE Standard 90.1–1999. 66 FR 3336, 3350. In the January 2001 final rule, DOE also adopted the efficiency levels contained in the Addendum to ASHRAE Standard 90.1–1989 for hot water supply boilers, which were identical to the efficiency levels for instantaneous water heaters. 66 FR 3336, 3356.

On October 21, 2004, DOE published a direct final rule in the **Federal Register** (''October 2004 direct final rule'') that recodified the existing energy conservation standards, so that they are located contiguous with the test procedures that were promulgated in the same notice. 69 FR 61974. The October 2004 final rule also updated definitions for CWH equipment at 10 CFR 431.102.

The American Energy Manufacturing Technical Corrections Act (''AEMTCA''), Public Law 112–210 (Dec. 18, 2012), amended EPCA to require that DOE publish a final rule establishing a uniform efficiency descriptor and accompanying test methods for covered consumer water heaters and some CWH equipment. (42 U.S.C. 6295(e)(5)(B)) EPCA further required that the final rule must replace the energy factor (for consumer water heaters) and thermal efficiency and standby loss (for some commercial water heaters) metrics with a uniform efficiency descriptor. (42 U.S.C. 6295(e)(5)(C)) Pursuant to 42 U.S.C. 6295(e), on July 11, 2014, DOE published a final rule for test procedures for residential and certain commercial water heaters (''July 2014 final rule'') that, among other things, established UEF, a revised version of the current residential energy factor metric, as the uniform efficiency descriptor required by AEMTCA. 79 FR 40542, 40578. In addition, the July 2014 final rule defined the term ''residential-duty commercial water heater,'' an equipment category that is subject to the new UEF metric and the corresponding UEF test procedures. 79 FR 40542, 40586–40588 (July 11, 2014). Conversely, CWH equipment that does not meet the definition of a residential-duty commercial water heater is not subject to the UEF metric or corresponding UEF test procedures. *Id.* Further details on the UEF metric and residential-duty commercial water heaters are discussed in section III.A of this document.

In a NOPR published on April 14, 2015 (''April 2015 NOPR''), DOE proposed, among other things, conversion factors from thermal efficiency and standby loss to UEF for residential-duty commercial water heaters. 80 FR 20116, 20143. Subsequently, in a final rule published on December 29, 2016 (the ''December 2016 conversion factor final rule''), DOE specified standards for residential-duty commercial water heaters in terms of UEF. However, while the metric was changed from thermal efficiency and/or standby loss, the stringency was not changed. 81 FR 96204, 96239 (Dec. 29, 2016).

In ASHRAE Standard 90.1–2013, ASHRAE increased the thermal efficiency level for commercial oil-fired storage water heaters, thereby triggering DOE's statutory obligation to promulgate an amended uniform national standard at those levels, unless DOE were to determine that there is clear and convincing evidence supporting the adoption of more-stringent energy conservation standards than the ASHRAE levels.[14] In a final rule published on July 17, 2015 (''July 2015 ASHRAE equipment final rule''), among other things, DOE adopted the standard for commercial oil-fired storage water heaters at the level set forth in ASHRAE Standard 90.1–2013, which increased the standard from 78 to 80 percent thermal efficiency with compliance required starting on October 9, 2015. 80 FR 42614 (July 17, 2015). Since that time ASHRAE has issued 2 updated versions of Standard 90.1, 90.1–2016 and 90.1–2019. However, DOE was not triggered to review amended standards for commercial water heaters by any updates in ASHRAE Standard 90.1–2016 or ASHRAE Standard 90.1–2019. Overall, DOE has not been triggered to review the standards for the equipment subject to this rulemaking based on an update

[14] ASHRAE Standard 90.1–2013 also appeared to change the standby loss levels for four equipment classes (gas-fired storage water heaters, oil-fired storage water heaters, gas-fired instantaneous water heaters, and oil-fired instantaneous water heaters) to efficiency levels that surpassed the Federal energy conservation standard levels. However, upon reviewing the changes DOE concluded that all changes to standby loss levels for these equipment classes were editorial errors because they were identical to SI (International System of Units; metric system) formulas rather than I–P (Inch-Pound; English system) formulas. As a result, DOE did not conduct an analysis of the potential energy savings from amended standby loss standards for this equipment in response to the ASHRAE updates. DOE did not receive any comments on this issue. 80 FR 1171, 1185 (January 8, 2015). The standby loss levels for these equipment classes were reverted to the previous levels in ASHRAE Standard 90.1–2016 and have not been updated since then.

to the efficiency levels in ASHRAE Standard 90.1 since the 1999 edition because ASHRAE has not updated the efficiency levels for such equipment since 1999. The current standards for all CWH equipment classes are set forth in DOE's regulations at 10 CFR 431.110, except for electric instantaneous water heaters that are not residential-duty, which are included in EPCA (the history of the standards for electric instantaneous water heaters is discussed in section III.B.4 of this document). (42 U.S.C. 6313(a)(5)(D)–(E)) Table II.1 shows the current standards for all CWH equipment classes, except residential-duty commercial water heaters, which are shown in Table II.2 of this document.

TABLE II.1—CURRENT FEDERAL ENERGY CONSERVATION STANDARDS FOR CWH EQUIPMENT EXCEPT FOR RESIDENTIAL-DUTY COMMERCIAL WATER HEATERS

Product	Size	Energy conservation standards *	
		Minimum thermal efficiency (equipment manufactured on and after October 9, 2015) ** *** (%)	Maximum standby loss (equipment manufactured on and after October 29, 2003) ** †
Electric storage water heaters	All	N/A	$0.30 + 27/V_m$ (%/h).
Gas-fired storage water heaters	≤155,000 Btu/h	80	$Q/800 + 110(V_r)^{1/2}$ (Btu/h).
	>155,000 Btu/h	80	$Q/800 + 110(V_r)^{1/2}$ (Btu/h).
Oil-fired storage water heaters	≤155,000 Btu/h	*** 80	$Q/800 + 110(V_r)^{1/2}$ (Btu/h).
	>155,000 Btu/h	*** 80	$Q/800 + 110(V_r)^{1/2}$ (Btu/h).
Electric instantaneous water heaters ‡	<10 gal	80	N/A.
	≥10 gal	77	$2.30 + 67/V_m$ (%/h).
Gas-fired instantaneous water heaters and hot water supply boilers	<10 gal	80	N/A.
	≥10 gal	80	$Q/800 + 110(V_r)^{1/2}$ (Btu/h).
Oil-fired instantaneous water heater and hot water supply boilers	<10 gal	80	N/A.
	≥10 gal	78	$Q/800 + 110(V_r)^{1/2}$ (Btu/h).
		Minimum thermal insulation	
Unfired hot water storage tank	All	R–12.5	

* V_m is the measured storage volume, and V_r is the rated volume, both in gallons. Q is the nameplate input rate in Btu/h.

** For hot water supply boilers with a capacity of less than 10 gallons: (1) The standards are mandatory for products manufactured on and after October 21, 2005 and (2) products manufactured prior to that date, and on or after October 23, 2003, must meet either the standards listed in this table or the applicable standards in subpart E of this part for a ''commercial packaged boiler.''

*** For oil-fired storage water heaters: (1) The standards are mandatory for equipment manufactured on and after October 9, 2015 and (2) equipment manufactured prior to that date must meet a minimum thermal efficiency level of 78 percent.

† Water heaters and hot water supply boilers having more than 140 gallons of storage capacity need not meet the standby loss requirement if: (1) The tank surface area is thermally insulated to R–12.5 or more, (2) a standing pilot light is not used, and (3) for gas or oil-fired storage water heaters, they have a fire damper or fan-assisted combustion.

‡ Energy conservation standards for electric instantaneous water heaters are included in EPCA. (42 U.S.C. 6313(a)(5)(D)–(E)) The compliance date for these energy conservation standards is January 1, 1994. In this NOPR, DOE proposes to codify these standards for electric instantaneous water heaters in its regulations at 10 CFR 431.110. Further discussion of standards for electric instantaneous water heaters is included in section III.B.4 of this NOPR.

TABLE II.2—CURRENT ENERGY CONSERVATION STANDARDS FOR RESIDENTIAL-DUTY COMMERCIAL WATER HEATERS

Equipment	Specification *	Draw pattern **	Uniform energy factor	Compliance date
Gas-fired Storage	>75 kBtu/h and ≤105 kBtu/h and ≤120 gal	Very Small	$0.2674 - (0.0009 \times V_r)$	December 29, 2016.
		Low	$0.5362 - (0.0012 \times V_r)$.	
		Medium	$0.6002 - (0.0011 \times V_r)$.	
		High	$0.6597 - (0.0009 \times V_r)$.	
Oil-fired storage	>105 kBtu/h and ≤140 kBtu/h and ≤120 gal	Very Small	$0.2932 - (0.0015 \times V_r)$.	
		Low	$0.5596 - (0.0018 \times V_r)$.	
		Medium	$0.6194 - (0.0016 \times V_r)$.	
		High	$0.6740 - (0.0013 \times V_r)$.	
Electric instantaneous	>12 kW and ≤58.6 kW and ≤ 2 gal	Very Small	0.80.	
		Low	0.80.	
		Medium	0.80.	
		High	0.80.	

* Additionally, to be classified as a residential-duty water heater, a commercial water heater must meet the following conditions: (1) If requiring electricity, use single-phase external power supply; and (2) the water heater must not be designed to heat water at temperatures greater than 180 °F.

** Draw pattern is a classification of hot water use of a consumer water heater or residential-duty commercial water heater, based upon the first-hour rating. The draw pattern is determined using the *Uniform Test Method for Measuring the Energy Consumption of Water Heaters* in appendix E to subpart B of 10 CFR part 430.

On October 21, 2014, DOE published a request for information (''RFI'') as an initial step for reviewing the energy conservation standards for CWH equipment. 79 FR 62899 (''October 2014 RFI''). The October 2014 RFI solicited information from the public to help DOE determine whether more-stringent energy conservation standards for CWH equipment would result in a significant amount of additional energy savings, and whether those standards would be technologically feasible and economically justified. 79 FR 62899, 62899–62900. DOE received a number of comments from interested parties in response to the October 2014 RFI.

On May 31, 2016, DOE published a NOPR and notice of public meeting in the **Federal Register** (''May 2016 CWH ECS NOPR'') that addressed all of the comments received in response to the RFI and proposed amended energy conservation standards for CWH equipment. 81 FR 34440. The May 2016 CWH ECS NOPR and the technical support document (''TSD'') for that NOPR are available at *www.regulations.gov/docket?D=EERE-2014-BT-STD-0042*.

On June 6, 2016, DOE held a public meeting at which it presented and discussed the analyses conducted as part of this rulemaking (*e.g.,* engineering analysis, LCC, PBP, and MIA). In the public meeting, DOE presented the results of the analysis and requested comments from stakeholders on various issues related to the rulemaking in response to the May 2016 CWH ECS NOPR.

DOE received a number of comments from interested parties in response to the May 2016 CWH ECS NOPR. Table II.3 identifies these commenters. Although DOE withdrew the May 2016 CWH ECS NOPR (as discussed in the following paragraphs), DOE considered comments received in response to that document to the extent relevant to the preparation of this NOPR.

TABLE II.3—INTERESTED PARTIES PROVIDING WRITTEN AND ORAL COMMENTS ON THE MAY 2016 CWH ECS NOPR

Name	Abbreviation	Commenter type *
Appliance Standards Awareness Project, Alliance to Save Energy, Northeast Energy Efficiency Partnership, American Council for an Energy-Efficient Economy, EarthJustice.	Joint Advocates	EA
Northwest Energy Efficiency Alliance	NEEA	EA
Air-Conditioning, Heating and Refrigeration Institute	AHRI	TA
The U.S. Chamber of Commerce, the American Chemistry Council, the American Coke and Coal Chemicals Institute, the American Forest & Paper Association, the American Fuel & Petrochemical Manufacturers, the American Petroleum Institute, the Brick Industry Association, the Council of Industrial Boiler Owners, the National Association of Manufacturers, the National Mining Association, the National Oilseed Processors Association, and the Portland Cement Association.	The Associations	TA
Industrial Energy Consumers of America	IECA	TA
American Gas Association and American Public Gas Association	AGA and APGA	UA
Edison Electric Institute	EEI	UA
National Propane Gas Association	NPGA	IR
National Rural Electric Cooperative Association, American Public Power Association, Edison Electric Institute.	Joint Utilities	IR
Plumbing-Heating-Cooling Contractors National Association	PHCC	IR
A.O. Smith Corporation	A.O. Smith	M
Bock Water Heaters, Inc	Bock	M
Bradford White Corporation	Bradford White	M
HTP, Inc	HTP	M
Raypak, Inc	Raypak	M
Rheem Corporation	Rheem	M
California Energy Commission	CEC	OS
Environmental Defense Fund, Institute for Policy Integrity at New York University School of Law, Natural Resources Defense Council, and Union of Concerned Scientists.	Joint Organizations	OS
Pacific Gas and Electric Company, Southern California Gas Company, San Diego Gas and Electric, and Southern California Edison.	CA IOUs	U
Spire Inc	Spire	U
Anonymous	Anonymous	I
Johnnie Temples	Johnnie Temples	I
PVI Industries, Inc	PVI	M
NegaWatt Consulting	NegaWatt	OS
Bradley Corporation	Bradley	M

* TA: trade association, EA: efficiency/environmental advocate, IR: industry representative, M: manufacturer, OS: other stakeholder, U: utility or utilities filing jointly, UA: utility association, and I: individual.

A parenthetical reference at the end of a comment quotation or paraphrase provides the location of the item in the public record.[15]

[15] The parenthetical reference provides a reference for information located in the docket. (Docket No. EERE–2014–BT–STD–0042, which is maintained at *www.regulations.gov/#!docketDetail;D=EERE-2014-BT-STD-0042*). The references are arranged as follows: (commenter name, comment docket ID number, page of that document).

On December 23, 2016, DOE published a notice of data availability (''NODA'') for energy conservation standards for CWH equipment (''December 2016 CWH ECS NODA''). 81 FR 94234. The December 2016 CWH ECS NODA presented the thermal efficiency and standby loss levels analyzed in the May 2016 CWH ECS NOPR for residential-duty gas-fired storage water heaters in terms of UEF, using the updated conversion factors for gas-fired and oil-fired storage water heaters adopted in the December 2016 conversion factor final rule (81 FR 94234, 94237).

On January 15, 2021, in response to a petition for rulemaking submitted by the American Public Gas Association, Spire, Inc., the Natural Gas Supply Association, the American Gas Association, and the National Propane Gas Association (83 FR 54883; Nov. 1, 2018) DOE published a final interpretive

rule (''the January 2021 final interpretive rule'') determining that, in the context of residential furnaces, commercial water heaters, and similarly-situated products/equipment, use of non-condensing technology (and associated venting) constitute a performance-related ''feature'' under EPCA that cannot be eliminated through adoption of an energy conservation standard. 86 FR 4776. Correspondingly, DOE withdrew the May 2016 CWH ECS NOPR. 86 FR 3873 (Jan. 15, 2021).

However, DOE has subsequently published a final interpretive rule that returns to the previous and long-standing interpretation (in effect prior to the January 15, 2021 final interpretive rule), under which the technology used to supply heated air or hot water is not a performance-related ''feature'' that provides a distinct consumer utility under EPCA. 86 FR 73947 (Dec. 29, 2021).

In conducting the analysis for this NOPR, DOE evaluates condensing technologies and associated venting systems (*i.e.,* trial standard levels (''TSLs'') 2, 3, and 4) in its analysis of potential energy conservation standards. Any adverse impacts on utility and availability of non-condensing technology options are considered in DOE's analyses of these TSLs.

As illustrated by the preceding discussion, the rulemaking for CWH equipment has been subject to multiple rounds of public comment, including public meetings, and extensive records have been developed in the relevant dockets. (See Docket Number EERE–2014–BT–STD–0042, respectively). Consequently, the information obtained through those earlier rounds of public comment, information exchange, and data gathering have been considered in this rulemaking and DOE is building upon the existing record through further analysis and further notice and comment.

C. Deviation From Appendix A

On January 11, 2022, DOE published a test procedure NOPR for consumer water heaters and residential-duty commercial water heaters. 87 FR 1554. In accordance with section 3(a) of 10 CFR part 430, subpart C, appendix A (''appendix A''), DOE notes that it is deviating from the provision in appendix A specifying that test procedures be finalized at least 180 days before new or amended standards are proposed for the same equipment. 10 CFR part 430, subpart C, appendix A, section 8(d)(2). DOE is opting to deviate from this step because the proposed test procedure amendments for residential-duty commercial water heaters are not expected to impact the current efficiency ratings. Further, the test procedure final rule for consumer water heaters and residential-duty commercial water heaters is expected to publish before a final rule in this proposed rulemaking. If DOE determines that the test procedure amendments for residential-duty commercial water heaters do in fact impact the efficiency ratings, DOE will review the implications of those changes before finalizing amended standards for residential-duty commercial water heaters.

Issue 1: DOE requests comment on its assumption that the proposed test procedure amendments for residential-duty commercial water heaters are not expected to impact the efficiency ratings.

III. General Discussion

DOE developed this proposed rule after considering comments, data, and information from interested parties that represent a variety of interests. This proposed rule addresses issues raised by commenters to the extent relevant to the preparation of this NOPR.

A. Test Procedures

DOE's current test procedures for CWH equipment are specified at 10 CFR 431.106 and provide mandatory methods for determining the thermal efficiency, standby loss, and UEF, as applicable, of CWH equipment.

As noted previously, on October 21, 2004, DOE published the October 2004 direct final rule, which adopted amended test procedures for CWH equipment. 69 FR 61974. These test procedure amendments incorporated by reference certain sections of ANSI Z21.10.3–1998, ''Gas Water Heaters, Volume III, Storage Water Heaters with Input Ratings above 75,000 Btu per Hour, Circulating and Instantaneous.'' *Id.* at 69 FR 61983. On May 16, 2012, DOE published a final rule for certain commercial heating, air-conditioning, and water heating equipment in the **Federal Register** that, among other things, updated the test procedures for certain CWH equipment by incorporating by reference ANSI Z21.10.3–2011. 77 FR 28928. These updates did not materially alter DOE's test procedure for CWH equipment.

On May 9, 2016, DOE published a NOPR that proposed to amend the test procedures for certain CWH equipment (''May 2016 CWH TP NOPR''). 81 FR 28588. In the May 2016 CWH TP NOPR, DOE proposed several changes, including (1) updating references of industry test standards to incorporate by reference the most recent versions of the industry standards; (2) updating the requirements for ambient conditions, measurement locations, and measurement intervals for the thermal efficiency and standby loss test procedures; (3) amending the test procedure set-up requirements for storage water heaters, storage-type instantaneous water heaters, instantaneous water heaters, and hot water supply boilers; (4) developing a test method for determining the standby loss of unfired hot water storage tanks; (5) updating provisions for setting the tank thermostat for storage and storage-type instantaneous water heaters prior to the thermal efficiency and standby loss tests; (6) clarifying the thermal efficiency and standby loss test procedures with regard to stored energy loss and manipulation of settings during efficiency testing; (7) defining ''storage-type instantaneous water heater'' and modifying several definitions for certain consumer water heaters and CWH equipment included at 10 CFR 430.2 and 10 CFR 431.102, respectively; (8) updating DOE's procedures for determining storage volume and standby loss of instantaneous water heaters and hot water supply boilers (other than storage-type instantaneous water heaters); (9) developing a new test procedure for commercial heat pump water heaters and incorporating by reference certain sections, figures, and tables from ASHRAE 118.1–2012; (10) establishing a procedure for determining the fuel input rate of gas-fired and oil-fired CWH equipment and clarifying DOE's certification and enforcement regulations regarding fuel input rate; and (11) establishing default values for certain testing parameters for oil-fired CWH equipment.

On November 10, 2016, DOE published a final rule amending the test procedures for certain CWH equipment (''November 2016 CWH TP final rule''). 81 FR 79261. In the November 2016 CWH TP final rule, DOE generally adopted the proposals set forth in the May 2016 CWH TP NOPR, except that it did not adopt the following proposals: (1) Ambient humidity requirements, (2) tightened ambient room temperature allowable range (75 °F ± 5 °F), and (3) requirements that the certified fuel input rate be equal to the mean of the measured values of fuel input rate in a sample. In that final rule, DOE also amended its regulations for gas supply and outlet pressure of gas-fired CWH equipment, modified the definition for ''storage-type instantaneous water heater,'' and updated the requirements for establishing steady-state operation. DOE received many industry comments

in response to DOE's proposed standby loss test procedure for unfired hot water storage tanks, and in the November 2016 CWH TP final rule, DOE stated that it was still considering these comments and would address the comments and its proposed test procedure for unfired hot water storage tanks in a separate rulemaking notice. 81 FR 79261, 79277 (Nov. 10, 2016).

In addition, as discussed in section II.B, AEMTCA amended EPCA to require that DOE publish a final rule establishing a uniform efficiency descriptor and accompanying test methods for covered consumer water heaters and certain CWH equipment. (42 U.S.C. 6295(e)(5)(B)) The AEMTCA amendments required DOE, in the final rule, to replace the current energy factor (for consumer water heaters) and thermal efficiency and standby loss (for commercial water heaters) metrics with a uniform efficiency descriptor. (42 U.S.C. 6295(e)(5)(C)) However, under the AEMTCA amendments, DOE may provide an exclusion from the uniform efficiency descriptor for specific categories of covered water heaters that do not have residential uses, that can be clearly described, and that are effectively rated using the current thermal efficiency and standby loss descriptors. (42 U.S.C. 6295(e)(5)(F))

The AEMTCA amendments to EPCA further require that, along with developing a uniform descriptor, DOE develop a mathematical conversion factor to translate the results based upon use of the efficiency metric under the test procedure in effect on December 18, 2012, to the new energy descriptor. (42 U.S.C. 6295(e)(5)(E)(i)) In addition, pursuant to 42 U.S.C. 6295(e)(5)(E)(ii) and (iii), the conversion factor must not affect the minimum efficiency requirements for covered water heaters, including residential-duty commercial water heaters. Furthermore, such conversions must not lead to a change in measured energy efficiency for covered residential and residential-duty commercial water heaters manufactured and tested prior to the final rule establishing the uniform efficiency descriptor. *Id.*

In the July 2014 test procedure final rule, DOE, among other things, established the UEF metric, a revised version of the current residential energy factor metric, as the uniform efficiency descriptor required by AEMTCA. 79 FR 40542, 40578–40579 (July 11, 2014).

The uniform efficiency descriptor established in the July 2014 final rule applies to all commercial water heaters that meet the definition of ''residential-duty commercial water heater.'' This term was initially defined in the July 2014 final rule, and later revised in the November 2016 CWH TP final rule. 81 FR 79261, 79288–79289 (Nov. 10, 2016). Residential-duty commercial water heater is defined in 10 CFR 431.102 as any gas-fired storage, oil-fired storage, or electric instantaneous commercial water heater that meets the following conditions:

(1) For models requiring electricity, uses single-phase external power supply;

(2) Is not designed to provide outlet hot water at temperatures greater than 180 °F; and

(3) Does not meet any of the criteria shown in Table III.1, which reflects the table in 10 CFR 431.102.

TABLE III.1—RATED INPUT AND STORAGE VOLUME RANGES FOR NON-RESIDENTIAL-DUTY COMMERCIAL WATER HEATERS

Water heater type	Indicator of non-residential application
Gas-fired storage.	Rated input >105 kBtu/h; Rated storage volume >120 gallons.
Oil-fired storage.	Rated input >140 kBtu/h; Rated storage volume >120 gallons.
Electric instantaneous.	Rated input >58.6 kW; Rated storage volume >2 gallons.

CWH equipment not meeting the definition of ''residential-duty commercial water heater'' was deemed to be sufficiently characterized by the current thermal efficiency and standby loss metrics. DOE provided a method for converting existing thermal efficiency and/or standby loss ratings for residential-duty commercial water heaters to UEF in the December 2016 conversion factor final rule. DOE also adopted UEF standard levels for the equipment, and DOE's methodology for translating the standards ensured equivalent stringency between the then-existing standards (in terms of thermal efficiency and standby loss metrics) and the converted standards (in terms of UEF). 81 FR 96204, 96219–96223 (Dec. 29, 2016).

Compliance with the UEF metric has been mandatory since December 29, 2016, and manufacturers have been required to determine UEF based on UEF test data, rather than using equations to convert from thermal efficiency and standby loss, since December 29, 2017. Therefore, in this NOPR, DOE analyzes residential-duty gas-fired storage water heaters in terms of UEF and does not utilize any UEF conversion factors.

B. Scope of Rulemaking

1. Residential-Duty Commercial Water Heaters

As discussed in the July 2014 final rule, DOE regulates residential-duty commercial water heaters as commercial water heaters. 79 FR 40542, 40544 (July 11, 2014) However, as discussed in section III.B.2 of this document, DOE is not considering amended standards for residential-duty oil-fired storage water heaters because DOE has initially found that the market for this equipment has not changed appreciably since standards were last amended. However, the same is not true for residential-duty gas-fired storage water heaters. DOE has tentatively determined that the market for residential-duty gas-fired storage water heaters has appreciably changed since the July 2014 final rule. DOE is considering amended energy conservation standards for residential-duty commercial gas-fired storage water heaters in the current rulemaking, which addresses commercial water heaters generally.

As discussed in sections II.B and III.A of this document, DOE established that residential-duty commercial water heaters are covered by the new UEF metric in the July 2014 final rule. 79 FR 40542, 40586 (July 11, 2014). The analyses of residential-duty equipment for the withdrawn May 2016 CWH ECS NOPR were conducted in terms of the thermal efficiency and standby loss metrics because there were insufficient efficiency data in terms of UEF available when DOE undertook the analyses for the withdrawn May 2016 CWH ECS NOPR. 81 FR 34440, 34453. Those results were subsequently converted to the UEF metric in the December 2016 NODA. 81 FR 94234. However, data in terms of UEF have since become available; therefore, DOE updated the analysis of residential-duty equipment to be in terms of UEF for this NOPR. Details about the UEF levels analyzed in this NOPR are discussed in sections IV.C.4.c and IV.C.6 of this document.

2. Oil-Fired Commercial Water Heating Equipment

ASHRAE Standard 90.1–2013 raised the thermal efficiency level for commercial oil-fired storage water heaters from 78 percent to 80 percent. In the July 2015 ASHRAE equipment final rule, DOE adopted the ASHRAE Standard 90.1 efficiency level of 80 percent having determined that there was insufficient potential for energy savings to justify further increasing the standard. 80 FR 42614 (July 17, 2015). This standard applied to both residential-duty commercial oil storage

water heaters as well as non-residential-duty commercial oil storage water heaters at the time, although equivalent standards in terms of UEF were developed and adopted for residential-duty commercial gas storage water heaters in the December 2016 Conversion Factor Final Rule. 81 FR 96204 (Dec. 29, 2016).

In considering amended efficiency standards for commercial oil-fired storage water heaters (including residential-duty oil-fired storage water heaters) in the withdrawn May 2016 CWH ECS NOPR, DOE initially determined that circumstances did not change appreciably between the publication of the July 2015 ASHRAE equipment final rule and the May 2016 CWH ECS NOPR, and, therefore, DOE did not analyze amended efficiency standards for this equipment in the May 2016 CWH ECS NOPR. 81 FR 34440, 34453. DOE has not received any new or additional information on this issue to suggest that DOE should consider amended standards for commercial oil-fired storage water heaters or residential-duty oil-fired storage water heaters and therefore DOE maintains the approach from the withdrawn May 2016 CWH ECS NOPR.

For this NOPR, DOE considered whether amended standby loss standards for commercial oil-fired water heaters would be warranted. DOE has initially determined that a change in the maximum standby loss level would likely effect less of a change in energy consumption of oil-fired storage water heaters than would a change in the thermal efficiency due to the magnitude of energy consumed in active mode as compared to standby losses. Therefore, DOE has tentatively determined that an amended standby loss standard would likely result in only a negligible amount of additional energy savings. Thus, DOE has not analyzed amended standby loss standards for commercial oil-fired storage water heaters in this rulemaking.

DOE also considered oil-fired instantaneous water heaters and hot water supply boilers and only identified a small number of oil-fired tank-type instantaneous units currently on the market that would meet DOE's definition of oil-fired tank-type instantaneous commercial water heaters. DOE estimates that there are very few annual shipments for this equipment class. Therefore, DOE has initially determined that the energy savings possible from amended standards for such equipment is negligible, and thus, would not impact the results of the analyses conducted for this NOPR. Therefore, DOE did not analyze amended standards for commercial oil-fired instantaneous water heaters and hot water supply boilers for this NOPR.

Based on the discussion in the preceding paragraphs, and because DOE has not received new information to contradict its previous findings, DOE tentatively concludes that the potential energy savings resulting from amended standards for commercial oil-fired water heating equipment would be negligible. Any such energy savings from amended standards for commercial oil-fired water heating equipment would not appreciably change the absolute energy savings estimated for CWH equipment; *i.e.,* would not impact the determination of whether amended energy conservation standards for CWH equipment would result in significant energy savings. Thus, DOE has continued to exclude commercial oil-fired water heating equipment from the analysis conducted for this NOPR.

3. Unfired Hot Water Storage Tanks

Unfired hot water storage tanks are a class of CWH equipment. On August 9, 2019, DOE published an RFI initiating an effort to determine whether to amend the current uniform national standard for unfired hot water storage tanks. 84 FR 39220. Subsequently, on June 10, 2021 DOE published a notice of proposed determination and request for comment proposing not to amend energy conservation standards for unfired hot water storage tanks. 86 FR 30796. Because amended energy conservation standards for unfired hot water storage tanks are being considered as part of that proceeding, they were not considered further for this NOPR.

4. Electric Instantaneous Water Heaters

EPCA prescribes energy conservation standards for several classes of CWH equipment manufactured on or after January 1, 1994. (42 U.S.C. 6313(a)(5)) DOE codified these standards in its regulations for CWH equipment at 10 CFR 431.110. However, when codifying these standards from EPCA, DOE inadvertently omitted the standards put in place by EPCA for electric instantaneous water heaters. Specifically, for instantaneous water heaters with a storage volume of less than 10 gallons, EPCA prescribes a minimum thermal efficiency of 80 percent. For instantaneous water heaters with a storage volume of 10 gallons or more, EPCA prescribes a minimum thermal efficiency of 77 percent and a maximum standby loss, in percent/hour, of 2.30 + (67/measured volume (in gallons)). (42 U.S.C. 6313(a)(5)(D) and (E)) Although DOE's regulations at 10 CFR 431.110 do not currently include energy conservation standards for electric instantaneous water heaters, these standards prescribed in EPCA are applicable. Therefore, in this NOPR, DOE is proposing to codify these standards in its regulations at 10 CFR 431.110.

DOE is also proposing to allow use of a calculation-based method for determining storage volume of electric instantaneous water heaters that is the same as the method for gas-fired and oil-fired instantaneous water heaters and hot water supply boilers found at 10 CFR 429.72(e) (added at 81 FR 79261, 79320 (Nov. 10, 2016)). DOE has initially concluded that the same rationale for including these provisions for gas-fired and oil-fired instantaneous water heaters and hot water supply boilers also applies to electric instantaneous water heaters (*i.e.,* it may be difficult to completely empty the instantaneous water heater in order to obtain a dry weight measurement, which is needed in a weight-based test for an accurate representation of the storage volume). Therefore, DOE is proposing to include electric instantaneous water heaters in these provisions in order to provide manufacturers with flexibility as to how the storage volume is determined.

DOE notes that because electric instantaneous water heaters typically use electric resistance heating elements, which are highly efficient, the thermal efficiency of these units already approaches 100 percent. DOE has also tentatively determined that there are no options for substantially increasing the rated thermal efficiency of this equipment, and the impact of setting thermal efficiency energy conservation standards for these products would be negligible. Similarly, the stored water volume is typically low, resulting in limited potential for reducing standby losses for most electric instantaneous water heaters. As a result, amending the standards for electric instantaneous water heaters established in EPCA would result in minimal energy savings. Even if DOE were to account for the energy savings potential of amended standards for electric instantaneous water heaters, the contribution of any potential energy savings from amended standards for these units would be negligible and not appreciably impact the energy savings analysis for CWH equipment. Therefore, DOE did not analyze amended energy conservation standards for electric instantaneous water heaters.

5. Commercial Heat Pump Water Heaters

In the withdrawn May 2016 CWH ECS NOPR, DOE did not consider energy conservation standards for commercial heat pump water heaters because DOE's proposed test procedure for commercial heat pump water heaters was not finalized, and there were insufficient data with the proposed test procedure for units currently on the market. DOE expressed its intent to consider energy conservation standards for commercial heat pump water heaters in a future rulemaking. 81 FR 34440, 34454–34455 (May 31, 2016). Further, DOE noted that all commercial heat pump water heaters it had identified on the market were ''add-on'' heat pumps designed to be paired with a storage tank in the field, and DOE had not identified any commercial water heater models that integrate a storage tank and heat pump. DOE did not consider commercial integrated heat pump water heaters as a design option for electric storage water heaters because DOE did not identify any such units on the market. 81 FR 34440, 34454 and 34469.

In the November 2016 CWH TP final rule, DOE adopted a test procedure for commercial heat pump water heaters. 81 FR 79261, 79301–79304. However, DOE has initially concluded that there are still limited data using this test procedure for units currently on the market due to limited units on the market. Since the November 2016 CWH TP DOE is aware of only one commercial integrated heat pump water heater model currently on the market. Therefore, DOE did not consider energy conservation standards for commercial heat pump water heaters in this NOPR. As stated in the withdrawn May 2016 CWH ECS NOPR, DOE plans to analyze standards for commercial heat pump water heaters in a future rulemaking, at which time DOE will consider the appropriate equipment class structure for commercial electric water heaters, including commercial heat pump water heaters. Section IV.A.2.f of this NOPR includes discussion of DOE's consideration of grid-enabled water heaters.

6. Electric Storage Water Heaters

In this rulemaking, DOE is not analyzing thermal efficiency standards for electric storage water heaters. Electric storage water heaters are not currently subject to a thermal efficiency standard under 10 CFR 431.110. Electric storage water heaters typically use electric resistance heating elements, which are highly efficient. The thermal efficiency of these units already approaches 100 percent. DOE did not consider commercial integrated heat pump water heaters as the maximum technologically feasible (''max-tech'') for electric storage water heaters at this time. DOE found only one such model on the market, at a single storage volume and heating capacity. Given the wide range of capacities and stored water volumes in products currently on the market, which are required to meet hot water loads in commercial buildings, it is unclear based on this single model whether heat pump water heater technology would be suitable to meet the range of load demands on the market.

Issue 2: DOE requests comment and information on whether integrated heat pump water heaters are capable of meeting the same hot water loads as commercial electric storage water heaters that use electric resistance elements.

Although DOE did not consider an integrated heat pump water heater as a design option for electric storage water heaters, DOE proposed amended standby loss standards for electric storage water heaters in the withdrawn May 2016 CWH ECS NOPR based on increased insulation thickness. 81 FR 34440, 34443 (May 31, 2016). In response to the withdrawn May 2016 CWH ECS NOPR, DOE received several comments opposing the proposed amended standby loss standard for electric storage water heaters. Summaries of these comments and DOE's responses are included in section IV.C.4.b of this NOPR. After consideration of industry comments and closer examination of the market, DOE recognizes that the only technology option that DOE analyzed in the engineering analysis as providing standby loss reduction for electric storage water heaters (*i.e.,* increasing tank foam insulation thickness to 3 inches) is already currently included in some models rated at or near the current standby loss standard. Consequently, DOE did not analyze any technology options for reducing standby loss below (*i.e.,* more stringent than) the current standard, and therefore, this NOPR does not propose to amend the standby loss standard for electric storage water heaters. Section IV.C.4.b of this NOPR includes further discussion of standby loss levels for electric storage water heaters and DOE's decision not to amend standby loss standards for electric storage water heaters.

7. Instantaneous Water Heaters and Hot Water Supply Boilers

Other than storage-type instantaneous water heaters, DOE did not include instantaneous water heaters and hot water supply boilers in its analysis of potential amended standby loss standards.[16] Instantaneous water heaters and hot water supply boilers (other than storage-type instantaneous water heaters) with greater than 10 gallons of water stored have a standby loss requirement under 10 CFR 431.110. However, DOE did not analyze more stringent standby loss standards for these units because it has initially determined that such amended standards would result in minimal energy savings. DOE identified only 81 out of 468 models on the market of instantaneous water heaters or hot water supply boilers with greater than or equal to 10 gallons of water stored (other than storage-type instantaneous water heaters), and 32 of the identified models have less than 15 gallons of water stored. Even if DOE were to account for the energy savings potential of amended standby loss standards for instantaneous water heaters and hot water supply boilers (other than storage-type instantaneous water heaters) with greater than 10 gallons of water stored CWH equipment, the contribution of any potential energy savings from amended standards for these units would be negligible and not appreciably impact the energy savings analysis for CWH equipment.

DOE has initially determined that instantaneous water heaters (other than storage-type instantaneous water heaters) and hot water supply boilers with less than 10 gallons of water stored would not have significantly different costs and benefits as compared to instantaneous water heaters (other than storage-type instantaneous water heaters) and hot water supply boilers with greater than or equal to 10 gallons of water stored. Therefore, DOE analyzed both equipment classes of instantaneous water heaters and hot water supply boilers (less than 10 gallons and greater than or equal to 10 gallons stored volume) together for thermal efficiency standard levels in this NOPR.

DOE also initially determined that establishing standby loss standards for instantaneous water heaters and hot water supply boilers with less than or equal to 10 gallons water stored would result in minimal energy savings. Even if DOE were to account for the energy savings potential of amended standby loss standards for instantaneous water

[16] DOE adopted a definition for ''storage-type instantaneous water heater'' in the November 2016 CWH TP final rule. 81 FR 79261, 79289–79290 (Nov. 10, 2016). Storage-type instantaneous water heaters are discussed in section IV.A.2.b of this NOPR.

heaters and hot waters supply boilers with less than or equal to 10 gallons of water stored, the contribution any potential energy savings from amended standards for these units would be negligible and not appreciably impact the energy savings analysis for CWH equipment. For instantaneous water heaters and hot water supply boilers (other than storage-type instantaneous water heaters), DOE has not found and did not receive any information or data suggesting that DOE should analyze amended standby loss standards or separately analyze amended thermal efficiency standards for each stored volume range (less than 10 gallons, and greater than or equal to 10 gallons stored volume).

C. Technological Feasibility

1. General

In each energy conservation standards rulemaking, DOE conducts a screening analysis based on information gathered on all current technology options and prototype designs that could improve the efficiency of the products or equipment that is the subject of the rulemaking. As the first step in such an analysis, DOE develops a list of technology options for consideration in consultation with manufacturers, design engineers, and other interested parties. DOE then determines which of these means for improving efficiency are technologically feasible. DOE considers technologies incorporated in commercially-available equipment or in working prototypes to be technologically feasible.

After DOE has determined that particular technology options are technologically feasible, it further evaluates each technology option in light of the following additional screening criteria: (1) Practicability to manufacture, install, and service; (2) adverse impacts on product utility or availability; and (3) adverse impacts on health or safety. *See generally* 10 CFR 431.4; 10 CFR part 430, subpart C, appendix A, sections 6(c)(3)(ii)–(v) and 7(b)(2)–(5). Additionally, it is DOE's policy not to include in its analyses any proprietary technology that is a unique pathway to achieving a certain efficiency level. Section IV.B of this document discusses the results of the screening analysis for CWH equipment, particularly the designs DOE considered, those it screened out, and those that are the basis for the standard levels considered in this proposed rulemaking. For further details on the screening analysis for this proposed rulemaking, see chapter 4 of the NOPR TSD.

2. Maximum Technologically Feasible Levels

When DOE proposes to adopt an amended standard for a type or class of covered equipment, it determines the maximum improvement in energy efficiency or maximum reduction in energy use that is technologically feasible for such equipment. Accordingly, in the engineering analysis, DOE determined the max-tech improvements in energy efficiency for CWH equipment, using the design parameters for the most efficient products available on the market. The max-tech levels that DOE determined for this proposed rulemaking are described in section IV.C.4 of this NOPR and chapter 5 of the NOPR TSD.

D. Energy Savings

1. Determination of Savings

For each TSL, DOE projected energy savings from the application of the TSL to CWH equipment purchased in the 30-year period that begins in the first full year of compliance with potential standards (2026–2055 for gas-fired CWH equipment).[17] The savings are measured over the entire lifetime of CWH equipment purchased in the previous 30-year period. DOE quantified the energy savings attributable to each TSL as the difference in energy consumption between each standards case and the no-new-standards case. The no-new-standards case represents a projection of energy consumption that reflects how the market for a product would likely evolve in the absence of amended energy conservation standards.

DOE used its national impacts analysis (''NIA'') spreadsheet model to estimate national energy savings (''NES'') from potential amended standards for CWH equipment. The NIA spreadsheet model (described in section IV.H of this document) calculates energy savings in terms of site energy, which is the energy directly consumed by equipment at the locations where they are used. For electricity, DOE reports NES in terms of primary energy savings, which is the savings in the energy that is used to generate and transmit the site electricity. For natural gas, the primary energy savings are considered to be equal to the site energy savings because they are supplied to the user without transformation from another form of energy.

DOE also calculates NES in terms of full-fuel cycle (''FFC'') energy savings. The FFC metric includes the energy consumed in extracting, processing, and transporting primary fuels (*e.g.,* coal, natural gas, petroleum fuels), and thus presents a more complete picture of the impacts of energy conservation standards.[18] DOE's approach is based on the calculation of an FFC multiplier for each of the energy types used by covered equipment.[19] For more information on FFC energy savings, see section IV.H.3 of this document.

2. Significance of Savings

To adopt any new or amended standards for covered equipment, DOE must determine that such action would result in significant energy savings. (See 42 U.S.C. 6313(a)(6)(C)(i); 42 U.S.C. 6313(a)(6)(A)(ii)(II)) [20]

The significance of energy savings offered by a new or amended energy conservation standard cannot be determined without knowledge of the specific circumstances surrounding a given rulemaking.[21] For example, the United States has now rejoined the Paris Agreement and will exert leadership in confronting the climate crisis.[22] Additionally, some covered products and equipment have most of their energy consumption occur during periods of peak energy demand. The impacts of these products on the energy infrastructure can be more pronounced than products with relatively constant demand. In evaluating the significance of energy savings, DOE considers differences in primary energy and FFC effects for different covered products and equipment when determining whether energy savings are significant.

[17] DOE also presents a sensitivity analysis that considers impacts for equipment shipped in a 9-year period.

[18] The FFC metric is discussed in DOE's statement of policy and notice of policy amendment. 76 FR 51282 (Aug. 18, 2011), as amended at 77 FR 49701 (Aug. 17, 2012).

[19] Natural gas and electricity were the energy types analyzed in the FFC calculations.

[20] In setting a more stringent standard for ASHRAE equipment, DOE must have ''clear and convincing evidence'' that doing so ''would result in significant additional conservation of energy'' in addition to being technologically feasible and economically justified. 42 U.S.C. 6313(a)(6)(A)(ii)(II). This language indicates that Congress had intended for DOE to ensure that, in addition to the savings from the ASHRAE standards, DOE's standards would yield additional energy savings that are significant. In DOE's view, this statutory provision shares the requirement with the statutory provision applicable to covered products and non-ASHRAE equipment that ''significant conservation of energy'' must be present (42 U.S.C. 6295(o)(3)(B))—and supported with ''clear and convincing evidence''—to permit DOE to set a more stringent requirement than ASHRAE.

[21] The numeric threshold for determining the significance of energy savings established in a final rule published on February 14, 2020 (85 FR 8626, 8670), was subsequently eliminated in a final rule published on December 13, 2021 (86 FR 70755).

[22] See Executive Order 14008, 86 FR 7619 (Feb. 1, 2021) (''Tackling the Climate Crisis at Home and Abroad'').

Primary energy and FFC effects include the energy consumed in electricity production (depending on load shape), in distribution and transmission, and in extracting, processing, and transporting primary fuels (*i.e.,* coal, natural gas, petroleum fuels), and thus present a more complete picture of the impacts of energy conservation standards.

Accordingly, DOE evaluates the significance of energy savings on a case-by-case basis, taking into account the significance of cumulative FFC national energy savings, the cumulative FFC emissions reductions, and the need to confront the global climate crisis, among other factors. As stated, the proposed standards would result in estimated national energy savings of 0.70 quad, the equivalent of the electricity use of 7.0 million homes in one year. DOE has initially determined, based on the methodology described in section IV.E and the analytical results presented in section V.B.3.a, that there is clear and convincing evidence that the energy savings for the TSL proposed in this rulemaking are ''significant'' within the meaning of 42 U.S.C. 6313(a)(6)(A)(ii)(II).

E. Economic Justification

1. Specific Criteria

EPCA provides seven factors to be evaluated in determining whether a potential energy conservation standard for CWH equipment is economically justified. (42 U.S.C. 6313(a)(6)(B)(ii)(I)–(VII) and (C)(i)) The following sections discuss how DOE has addressed each of those seven factors in this rulemaking.

a. Economic Impact on Manufacturers and Commercial Consumers

EPCA requires DOE to consider the economic impact of a standard on manufacturers and the commercial consumers of the products subject to the standard. (42 U.S.C. 6313(a)(6)(B)(I) and (C)(i)) In determining the impacts of a potential amended standard on manufacturers, DOE typically conducts an MIA. For the MIA, DOE first uses an annual cash-flow approach to determine the quantitative impacts. This step incorporates both a short-term impact assessment (based on the cost and capital requirements during the period between when a regulation is issued and when entities must comply with the regulation) and a long-term impact assessment (over a 30-year period).[23] The industry-wide impacts analyzed include: (1) INPV, which values the industry on the basis of expected future cash flows; (2) cash flows by year; (3) changes in revenue and income; and (4) other measures of impact, as appropriate. Second, DOE analyzes and reports the impacts on different types of manufacturers (manufacturer subgroups), including impacts on small manufacturers. Third, DOE considers the impact of standards on domestic manufacturer employment and manufacturing capacity, as well as the potential for new and amended standards to result in plant closures and loss of capital investment. Finally, DOE takes into account cumulative impacts of various DOE regulations and other regulatory requirements on manufacturers.

For individual commercial consumers, measures of economic impact include the changes in LCC and PBP associated with new or amended standards. These measures are discussed further in the following section. For commercial consumers in the aggregate, DOE also calculates the national net present value of the economic impacts applicable to a particular rulemaking. DOE also evaluates the LCC impacts of potential standards on identifiable subgroups of commercial consumers that may be affected disproportionately by a national standard.

b. Savings in Operating Costs Compared to Increase in Price (Life-Cycle Costs)

EPCA requires DOE to consider the savings in operating costs throughout the estimated average life of CWH equipment compared to any increase in the price of the equipment that is likely to result from the standard. (42 U.S.C. 6313(a)(6)(B)(ii)(II); 42 U.S.C. 6313(a)(6)(C)(i)) DOE conducts this comparison in its LCC and PBP analysis.

The LCC is the sum of the purchase price of a piece of equipment (including installation cost and sales tax) and the operating expense (including energy, maintenance, and repair expenditures) discounted over the lifetime of the equipment. To account for uncertainty and variability in specific inputs, such as equipment lifetime and discount rate, DOE uses distributions of values, with probabilities attached to each value. For its analysis, DOE assumes that commercial consumers will purchase the covered equipment in the first full year of compliance with amended standards.

The PBP is the estimated amount of time (in years) it takes consumers to recover the increased purchase cost (including installation) of a more-efficient equipment through lower operating costs. DOE calculates the PBP by dividing the change in purchase cost due to a more-stringent standard by the change in annual operating cost for the year that standards are assumed to take effect.

The LCC savings are calculated relative to a no-new-standards case that reflects projected market trends in the absence of amended standards. DOE identifies the percentage of commercial consumers estimated to receive LCC savings or experience an LCC increase, in addition to the average LCC savings associated with a particular standard level. DOE's LCC analysis is discussed in further detail in section IV.F of this NOPR.

c. Energy Savings

Although significant conservation of energy is a separate statutory requirement for adopting an energy conservation standard, EPCA requires DOE, in determining the economic justification of a standard, to consider the total projected energy savings that are expected to result directly from the standard. (42 U.S.C. 6313(a)(6)(B)(ii)(III)) As discussed in section IV.H of this NOPR and chapter 10 of the NOPR TSD, DOE uses the NIA spreadsheet to project NES.

d. Lessening of Utility or Performance of Products

In establishing classes of equipment, and in evaluating design options and the impact of potential standard levels, DOE must consider any lessening of the utility or performance of the considered equipment likely to result from the standard. (42 U.S.C. 6313(a)(6)(B)(ii)(IV)) Based on data available to DOE, the standards proposed in this document would not reduce the utility or performance of the products under consideration in this rulemaking. As discussed in section IV.A.2.c, DOE considered whether different venting technologies should be considered a necessary feature.

Although the standards proposed in this NOPR would, if adopted, effectively eliminate non-condensing technology (and associated venting), DOE has recently published a final interpretive rule that returns to the previous and long-standing interpretation (in effect prior to the January 15, 2021 final interpretive rule), under which the technology used to supply heated air or hot water is not a performance-related ''feature'' that provides a distinct utility under EPCA. 86 FR 73947 (Dec. 29, 2021). Therefore, for the purpose of the analysis conducted for this rulemaking DOE is not precluded from setting

[23] DOE also presents a sensitivity analysis that considers impacts for equipment shipped in a 9-year period, which is a proxy for the timeline in EPCA for the review of certain energy conservation standards and potential revision of and compliance with such revised standards.

energy conservation standards that preclude non-condensing technology and did not analyze separate equipment classes for non-condensing and condensing CWH equipment in this NOPR.

e. Impact of Any Lessening of Competition

EPCA directs DOE to consider the impact of any lessening of competition, as determined in writing by the Attorney General, that is likely to result from a proposed standard. (*See* 42 U.S.C. 6313(a)(6)(B)(ii)(V)) DOE will transmit a copy of this proposed rule to the Attorney General with a request that the DOJ provide its determination on this issue. DOE will publish and respond to the Attorney General's determination in the final rule. DOE invites comment from the public regarding the competitive impacts that are likely to result from this proposed rule. In addition, stakeholders may also provide comments separately to DOJ regarding these potential impacts. See the **ADDRESSES** section for information to send comments to DOJ.

f. Need for National Energy Conservation

DOE also considers the need for national energy conservation in determining whether a new or amended standard is economically justified. (42 U.S.C. 6313(a)(6)(B)(ii)(VI)) The energy savings from the proposed standards are likely to provide improvements to the security and reliability of the Nation's energy system. DOE conducts a utility impact analysis to estimate how standards may affect the Nation's needed power generation capacity, as discussed in section IV.M of this document.

DOE maintains that environmental and public health benefits associated with the more efficient use of energy are important to take into account when considering the need for national energy conservation. The proposed standards are likely to result in environmental benefits in the form of reduced emissions of air pollutants and GHGs associated with energy production and use. As part of the analysis of the need for national energy and water conservation, DOE conducts an emissions analysis to estimate how potential standards may affect these emissions, as discussed in section IV.K of this document; the estimated emissions impacts are reported in section V.B.6 of this document.[24] DOE also estimates the economic value of emissions reductions resulting from the considered TSLs, as discussed in section IV.L of this document. DOE emphasizes that the SC–GHG analysis presented in this NOPR and TSD was performed in support of the cost-benefit analyses required by Executive Order 12866, and is provided to inform the public of the impacts of emissions reductions resulting from this proposed rule. The SC–GHG estimates were not factored into DOE's EPCA analysis of the need for national energy and water conservation.

g. Other Factors

EPCA allows the Secretary of Energy, in determining whether a standard is economically justified, to consider any other factors that the Secretary deems to be relevant. (42 U.S.C. 6313(a)(6)(B)(ii)(VII) and (C)(i)) DOE did not consider other factors for this document.

2. Rebuttable Presumption

EPCA creates a rebuttable presumption that an energy conservation standard is economically justified if the additional cost to the consumer of a product that meets the standard is less than three times the value of the first year's energy savings resulting from the standard, as calculated under the applicable DOE test procedure. DOE's LCC and PBP analyses generate values used to calculate the effects that potential amended energy conservation standards would have on the PBP for commercial consumers. These analyses include, but are not limited to, the 3-year PBP contemplated under the rebuttable-presumption test.

In addition, DOE routinely conducts an economic analysis that considers the full range of impacts to commercial consumers, manufacturers, the Nation, and the environment, as required under 42 U.S.C. 6313(a)(6)(B)(ii) and 42 U.S.C. 6313(a)(6)(C)(i). The results of this analysis serve as the basis for DOE's evaluation of the economic justification for a potential standard level (thereby supporting or rebutting the results of any preliminary determination of economic justification). The rebuttable presumption payback calculation is discussed in section V.B.1.c of this document.

F. Revisions to Notes in Regulatory Text

In the withdrawn May 2016 CWH ECS NOPR, DOE proposed to modify the three notes to the table of energy conservation standards in 10 CFR 431.110. 81 FR 34440, 34458 (May 31, 2016). First, DOE proposed to modify the note to the table of energy conservation standards denoted by subscript ''a'' to maintain consistency with DOE's procedure and enforcement provisions for determining fuel input rate of gas-fired and oil-fired CWH equipment that were proposed in the May 2016 CWH TP NOPR (81 FR 28588, 28622 (May 9, 2016)). Among these changes, DOE proposed that the fuel input rate certified to DOE, which must be equal to the mean of the measured values of fuel input rate in a sample, be used to determine equipment classes and calculate the standby loss standard. Therefore, in the withdrawn May 2016 CWH ECS NOPR, DOE proposed to replace the term ''nameplate input rate'' with the term ''fuel input rate.'' 81 FR 34440, 34458 (May 31, 2016).

DOE also proposed to remove the note to the table of energy conservation standards denoted by subscript ''b.'' This note clarifies the compliance date for energy conservation standards for hot water supply boilers with capacity less than 10 gallons. Specifically, the note says that the standards in the table are mandatory for such equipment beginning on October 21, 2005, but that between October 23, 2003 and October 21, 2005 manufacturers may either comply with the standards listed in the table for hot water supply boilers with less than 10 gallons of storage or with the standards in subpart E of 10 CFR part 431 for a ''commercial packaged boiler.'' DOE determined that this note is no longer needed because the specific compliance dates for hot water supply boilers with less than 10 gallons of storage is well in the past, with all such equipment being required to meet the standards in the table in 10 CFR 431.110 since October 21, 2005. *Id.*

DOE also proposed to modify the note to the table of energy conservation standards denoted by subscript ''c,'' which establishes design requirements for water heaters and hot water supply boilers having more than 140 gallons of storage capacity that do not meet the standby loss standard. DOE proposed to replace the phrase ''fire damper'' with the phrase ''flue damper,'' because ''flue damper'' was more consistent with commonly used terminology and likely the intended meaning, and that ''fire

[24] As discussed in section IV.L of this document, for the purpose of complying with the requirements of Executive Order 12866, DOE also estimates the economic value of emissions reductions resulting from the considered TSLs. DOE calculates this estimate using a measure of the social cost (''SC'') of each pollutant (*e.g.,* SC–CO_2). Although this estimate is calculated for the purpose of complying with Executive Order 12866, the Seventh Circuit Court of Appeals confirmed in 2016 that DOE's consideration of the social cost of carbon in energy conservation standards rulemakings is permissible under EPCA. *Zero Zone* v. *Dept of Energy,* 832 F.3d 654, 678 (7th Cir. 2016).

damper'' was a typographical error.[25] The intent of this design requirement was to require that any water heaters or hot water supply boilers greater than 140 gallons that do not meet the standby loss standard must have some device that physically restricts heat loss through the flue, either a flue damper or blower that sits atop the flue. *Id.*

In response to the withdrawn May 2016 CWH ECS NOPR, A.O. Smith and Rheem opposed DOE's proposal to replace the term ''nameplate input rate'' with ''fuel input rate.'' A.O. Smith argued that because input rate is one of the characteristics that define a product's DOE classification, a fixed number such as the nameplate rated input is necessary. A.O. Smith stated that manufacturers are required by safety standards to display the rated input on product labels and operating instructions. A.O. Smith also argued that the only role for rated input during efficiency testing is to ensure the unit is firing on rate, and that rated input has no effect on measurement of energy efficiency. A.O. Smith added that replacing the term with ''fuel input rate'' does not help consumers but will add regulatory burden to manufacturers. Rheem disagreed with the method for determining ''fuel input rate'' proposed in the May 2016 CWH TP NOPR and believes that the term ''nameplate input rate'' is clear and consistent for all water heaters and is should remain in subscript ''a.'' Rheem stated that it would only support a change to the term ''fuel input rate'' if the method of determining fuel input rate remains unchanged from how it is currently performed in industry. (A.O. Smith, No. 39 at pp. 6–7; Rheem, No. 43 at p. 8)

In the November 2016 CWH TP final rule, DOE did not adopt its proposed certification provisions for fuel input rate. DOE stated that the safety certification process during the design and development of CWH equipment is sufficient for determining the rated input for CWH equipment. Additionally, DOE adopted the term ''rated input'' to mean the maximum rate at which CWH equipment is rated to use energy as specified on the nameplate and adopted the term ''fuel input rate'' to mean the rate at which any particular unit of CWH equipment consumes energy during testing. 81 FR 79261, 79304–79306 (Nov. 10, 2016). To maintain consistency with the November 2016 CWH TP final rule, DOE is no longer proposing to adopt its proposal in the May 2016 CWH ECS NOPR to replace the term ''nameplate input rate'' with the term ''fuel input rate.'' Instead, DOE is proposing to replace the term ''nameplate input rate'' with the term ''rated input.'' DOE notes that this change simply ensures consistency in nomenclature throughout DOE's regulations for CWH equipment. Similar to the term ''nameplate input rate,'' the term ''rated input'' also refers to the input rate specified on the nameplate of CWH equipment. Additionally, in this NOPR, DOE continues to propose the other revisions initially proposed in the May 2016 CWH ECS NOPR to subscript ''b'' and ''c'' of 10 CFR 431.110 for the reasons previously stated.

Issue 3: DOE requests comment on its proposed revisions to notes to the table of energy conservation standards in 10 CFR 431.110.

G. Certification, Compliance, and Enforcement Issues

In the withdrawn May 2016 CWH ECS NOPR, DOE proposed to add requirements to its certification, compliance, and enforcement regulations at 10 CFR 429.44 that the rated value of storage volume must equal the mean of the measured storage volume of the units in the sample. 81 FR 34440, 34458 (May 31, 2016). DOE notes that there are currently no requirements from the Department limiting the amount of difference that is allowable between the tested (*i.e.,* measured) storage volume and the ''rated'' storage volume that is specified by the manufacturer for CWH equipment other than residential-duty commercial water heaters. In the July 2014 test procedure final rule, DOE established a requirement for consumer water heaters and residential-duty commercial water heaters that requires the rated volume to be equal to the mean of the measured volumes in a sample. 79 FR 40542, 40565 (July 11, 2014).

From examination of reported measured storage volume data in the AHRI Directory, DOE observed that many units are rated at storage volumes above the measured storage volume. DOE's maximum standby loss equations for gas-fired and oil-fired CWH equipment are based on the rated storage volume, and the maximum standby loss standard increases as rated storage volume increases. Consequently, DOE proposed to require that the rated storage volume must be equal to the mean of the values measured using DOE's test procedure. In addition, DOE proposed to specify that for DOE-initiated testing, the mean of the measured storage volumes must be within 5 percent of the rated volume in order to use the rated storage volume in calculation of maximum standby loss. If the mean of the measured storage volume is more than 5 percent different than the rated storage volume, then DOE proposed to use the mean of the measured values in calculation of maximum standby loss. DOE notes that similar changes were made to DOE's certification, compliance, and enforcement regulations for residential and residential-duty water heaters in the July 2014 final rule. 79 FR 40542, 40565 (July 11, 2014). In the May 2016 CWH ECS NOPR, DOE requested comment on its proposed changes to the certification, compliance, and enforcement regulations requiring the rated volume to be equal to the mean of the measured volumes in a sample.

AHRI, Bock, A.O. Smith, and Bradford White opposed DOE's proposed changes to 10 CFR 429.44(b)(1)(ii)(C), which would make the rated volume equal to the mean of measured storage volumes within the sample. (AHRI, No. 40 at p. 37; Bock, No. 33 at p. 3; A.O. Smith, No. 39 at p. 7; Bradford White, No. 42 at p. 3) AHRI, Bock, A.O. Smith, Bradford White, and Rheem stated that the relationship of measured volume and rated volume is already addressed by the applicable water heater safety standards. (AHRI, No. 40 at p. 37; Bock, No. 33 at p. 3; A.O. Smith, No. 39 at p. 7; Bradford White, No. 42 at p. 3; Rheem, No. 43 at p. 9) Bock stated that safety certification with ANSI Z21.10.3–2015 requires that rated storage volume be within ±5 percent of the measured volume. Therefore, Bock argued that DOE should use rated volume for the calculation of maximum standby loss, and the certifying agency, ANSI, should resolve any discrepancy beyond a threshold of 5 percent between rated and measured volume with the manufacturer. (Bock, No. 33 at p. 3)

AHRI, Rheem, Bradford White, and A.O. Smith commented that DOE's proposed changes regarding certification of rated volume are unnecessary. (AHRI, No. 40 at p. 37; Rheem, No. 43 at p. 9; Bradford White, No. 42 at p. 3; A.O. Smith, No. 39 at p. 7) AHRI commented that there is no evidence that the current practice of determining rated volume has caused any problems in the field or in the compliance of CWH equipment with the existing energy conservation standards. (AHRI, No. 40 at p. 37) AHRI and Rheem suggested that it is also

[25] In the January 2001 final rule, DOE used the terminology ''flue damper'' in the footnote to the standards table. 66 FR 3356. The October 2004 final rule, which recodified the existing standards to be contiguous with newly adopted test procedures, changed the footnote terminology to ''fire damper'' without providing rationale. 69 FR 61985. Further, ASHRAE Standard 90.1 has consistently used the term ''flue damper'' to describe the requirements. Therefore, DOE concluded the change in the October 2004 final rule was likely inadvertent.

outside of DOE's authority to redefine how rated volume is determined because it is not an energy conservation metric. (AHRI, No. 40 at p. 37; Rheem, No. 43 at p. 10) AHRI stated that it filed a petition with DOE which was published in the **Federal Register** on November 7, 2014 (79 FR 66338) in response to a similar provision included in the July 2014 final rule for consumer water heaters and residential-duty commercial water heaters. Specifically, AHRI's petition sought the repeal of provisions that required the rated volume to be equal to the mean of the measured volumes in a sample for consumer water heaters and residential-duty commercial water heaters. AHRI stated in the petition that these amendments in effect increase the stringency of the applicable minimum standards for residential water heaters, are unnecessary to develop a uniform energy descriptor, do not coincide with industry practice, and would impose significant burden on manufacturers in terms of additional testing and rewriting of market literature. (AHRI, No. 40 at p. 37) Rheem added that to define rated storage volume in the manner proposed in the May 2016 CWH ECS NOPR provides no measurable benefits nor addresses any known complaints, and it only would serve to infringe on industry standards and customary practice in the marketplace (*i.e.,* requiring rated volume to be equal to the mean of measured volumes, rather than allowing a 5-percent tolerance when determining rated volume as included in ANSI Z21.10.3–2015). (Rheem, No. 43 at p. 10)

AHRI argued that according to 42 U.S.C. 6314(a)(4)(A), DOE is required to adopt ''generally accepted industry test procedures'' unless that procedure either does not adequately measure energy or is unduly burdensome. AHRI stated that establishing certification and enforcement regulations for the rated volume of storage water heaters is contrary to the policy established by Office of Management and Budget (''OMB'') Circular No. A–119 and Executive Order 13563, in that DOE has provided no evidence or compelling arguments that voluntary consensus standards requirements for rated volume have failed to serve the agency's needs. (AHRI, No. 40 at p. 38)

Rheem stated that while rated storage volume is used as a variable in the standby loss equations for gas-fired and oil-fired CWH equipment, thermal efficiency is the desired energy efficiency value for these classes of CWH equipment in the industry and marketplace. Rheem commented that thermal efficiency is not dependent on storage volume. Conversely, Rheem stated that standby loss is the desired energy efficiency metric for electric storage water heaters, but the current maximum standby loss equation uses measured storage volume and not rated storage volume. Therefore, Rheem argued that rated storage volume is not a critical input to determining the desired energy efficiency values by commercial consumers of CWH equipment. (Rheem, No. 43 at p. 10)

After considering the comments, DOE is not proposing to change the requirements regarding certification of storage volume in this NOPR.

Additionally, in the withdrawn May 2016 CWH ECS NOPR DOE proposed changes to the equations for maximum standby losses that would be consistent with the proposed changes to DOE's certification, compliance, and enforcement regulations. DOE received several comments on these proposals. (A.O. Smith, No. 39 at p. 7; Bradford White, No. 42 at pp. 3–4; AHRI, Public Meeting Transcript, No. 20 at p. 14; Rheem, No. 43 at pp. 10–11) However, because DOE is no longer proposing changes to the storage volume determination of CWH equipment in this NOPR, DOE is also no longer proposing to change the equations to calculate maximum standby losses.

DOE is not proposing to establish equipment-specific certification requirements for electric instantaneous water heaters in this NOPR. DOE may propose to establish certification requirements for electric instantaneous water heaters in future rulemakings.

H. General Comments

As discussed in section II.A of this NOPR, pursuant to EPCA, DOE must determine, supported by clear and convincing evidence, that amended standards for CWH equipment would result in significant additional conservation of energy and be technologically feasible and economically justified. (42 U.S.C. 6313(a)(6)(A)(ii)(II); 42 U.S.C. 6313(a)(6)(C)(i)) The statutory criteria require more than just a consideration of a standard level that provides the maximum improvement in energy savings for CWH equipment. In making the determination of economic justification of an amended standard, DOE must determine whether the benefits of the proposed standard exceed the burdens of the proposed standard by considering, to the maximum extent practicable, the seven criteria described in EPCA (*see* 42 U.S.C. 6313(a)(6)(B)(ii)(I)–(VII)). A discussion of DOE's consideration of the statutory factors is contained in section V of this NOPR.

The clear and convincing threshold is a heightened standard, and would only be met where the Secretary has an abiding conviction, based on available facts, data, and DOE's own analyses, that it is highly probable an amended standard would result in a significant additional amount of energy savings, and is technologically feasible and economically justified. *See American Public Gas Association* v. *U.S. Dep't of Energy,* No. 20–1068, 2022 WL 151923, at *4 (D.C. Cir. January 18, 2022) (citing *Colorado* v. *New Mexico,* 467 U.S. 310, 316, 104 S.Ct. 2433, 81 L.Ed.2d 247 (1984)).

In response to the withdrawn May 2016 CWH ECS NOPR, DOE received comments and information regarding the assumptions that it used for inputs in the rulemaking analyses. DOE considered these comments in appropriate analyses conducted in this NOPR and modified its assumptions and inputs as necessary to account for the information or feedback provided by industry representatives. For example, DOE received comments from stakeholders about the achievable standby loss levels of gas-fired and electric storage water heaters. DOE used the suggestions provided in these comments and updated its analyzed standby loss levels to better reflect models currently on the market and the technology options that are used to reduce standby loss. Based on comments from stakeholders regarding the standby loss of electric storage water heaters, DOE concluded that the only technology option analyzed in the withdrawn NOPR would not reduce standby loss for all models on the market across the range of storage volumes. Therefore, DOE did not analyze amended energy conservation standards for electric storage water heaters for this NOPR.

Several stakeholders commented that DOE's analysis incorrectly estimates the energy use of CWH equipment (AHRI, No. 40 at p. 1; A.O. Smith, No. 39 at p. 3; IECA, No. 24 at p. 1; Spire, No. 45 at pp. 12–13) and costs to commercial consumers (AHRI, No. 40 at p. 1; A.O. Smith, No. 39 at p. 3; IECA, No. 24 at p. 1; Bock, No. 33 at p. 2), and underestimates the market share of higher-efficiency (*i.e.,* condensing) gas-fired CWH equipment currently on the market (AHRI, No. 40 at p. 1; Bock, No. 33 at p. 2). AHRI further argued that DOE's analysis overestimates the future shipments of CWH equipment. (AHRI, No. 40 at p. 1) IECA argued that DOE substantially overstated the potential benefits of the proposed standards and

understated the negative impact on U.S. manufacturing jobs. (IECA, No. 24 at p. 1)

In response, DOE notes that for this NOPR, it refined the total shipment estimates and no-new-standards-case efficiency distributions in its analyses by integrating additional shipment data provided by AHRI in response to the withdrawn NOPR. DOE also updated its energy use analysis by incorporating data from CBECS 2012, as suggested by stakeholders.[26] After thoroughly considering the stakeholder's comments regarding installation costs of condensing gas-fired CWH equipment, DOE re-evaluated its installation costs to align more closely with field applications. Furthermore, DOE reiterates that it conducts a rigorous analysis on impacts of amended standards on manufacturers, including impact on direct employment. Section IV of this NOPR provides details on DOE's updates to its various analyses.

Spire argued that significant energy savings cannot be based on the claim that the aggregate additional energy savings for all proposed standards are significant. Spire asserted that DOE's obligation is to consider each standard individually on the basis of clear and convincing evidence. Spire further argued that DOE failed to consider how fuel switching would affect the energy savings and emissions reductions estimated in the withdrawn NOPR. (Spire, No. 45 at p. 5) AGA and APGA recommended that DOE disaggregate the analyses of each equipment class and treat each of its economic justification criteria separately. AGA and APGA further argued that DOE's consideration of each TSL by comparing the commercial consumer LCC results against monetized emission reductions is entirely subjective and leads to uncertainty as to what DOE considers to constitute ''economic justification.'' (AGA and APGA, No. 35 at p. 4)

In response to the comments from Spire and AGA and APGA, as described in section V.A of this NOPR, DOE groups various efficiency levels for each equipment class into TSLs in order to examine the combined impact that amended standards for all analyzed equipment classes would have on an industry. This approach also allows DOE to capture the effects on manufacturers of amended standards for all classes, better reflecting the burdens for manufacturers that produce equipment across several equipment classes. As discussed in section IV.H.2 of this NOPR, DOE also considered the effects of fuel switching by comparing total installed costs and operating costs of competing CWH equipment types. From this analysis, DOE has tentatively concluded that this NOPR will not incentivize fuel switching in the CWH market.

DOE disputes the notion that its consideration of TSLs is subjective. Rather, through a detailed and thorough analysis, DOE considered the benefits and burdens of amended standards for CWH equipment to commercial consumers, the Nation, and manufacturers, in accordance with the criteria described in EPCA (*see* 42 U.S.C. 6313(a)(6)(B)(ii)(I)–(VII)). Contrary to the assertion of AGA and APGA, DOE's economic justification is not based on comparing the commercial consumer LCC results against monetized emissions reductions. In fact, DOE considers a variety of economic factors, including commercial consumer LCC results, NPV of commercial consumer benefits, and manufacturer INPV. DOE presents monetized benefits in accordance with the applicable Executive Orders and DOE would reach the same tentative conclusions presented in this NOPR in the absence of the social cost of greenhouse gases, including the Interim Estimates presented by the Interagency Working Group.

IV. Methodology and Discussion of Related Comments

This section addresses the analyses DOE has performed for this proposed rulemaking with regard to CWH equipment. Separate subsections address each component of DOE's analyses.

In overview, DOE used several analytical tools to estimate the impact of the standards considered in this document. The first tool is a spreadsheet that calculates the LCC and PBP of potential amended or new energy conservation standards. The NIA uses a second spreadsheet set that provides shipments forecasts and calculates NES and NPV resulting from potential new or amended energy conservation standards.[27] These spreadsheet tools are available on the DOE website for this proposed rulemaking: *www1.eere.energy.gov/buildings/appliance_standards/standards.aspx?productid=36.*

Additionally, DOE estimated the impacts on electricity demand and air emissions from utilities due to the amended energy conservation standards for CWH equipment. DOE used a version of the U.S. Energy Information Administration's (''EIA's'') National Energy Modeling System (''NEMS'') for the electricity and air emissions analyses. The NEMS model simulates the energy sector of the U.S. economy. EIA uses NEMS[28] to prepare its *Annual Energy Outlook* (''*AEO*''), a widely known baseline energy forecast for the United States. The version of NEMS used for appliance standards analysis, which makes minor modifications to the *AEO* version, is called NEMS–BT.[29] NEMS–BT accounts for the interactions among the various energy supply and demand sectors and the economy as a whole.

A. Market and Technology Assessment

For the market and technology assessment for CWH equipment, DOE gathered information that provides an overall picture of the market for the equipment concerned, including the purpose of the equipment, the industry structure, manufacturers, market characteristics, and technologies used in the equipment. This activity included both quantitative and qualitative assessments based primarily on publicly-available information. The subjects addressed in the market and technology assessment for this rulemaking include the following: (1) A determination of equipment classes, (2) manufacturers and industry structure, (3) types and quantities of CWH equipment sold, (4) existing efficiency programs, and (5) technologies that could improve the energy efficiency of CWH equipment. The key findings of DOE's market assessment are summarized below. Chapter 3 of the NOPR TSD provides further discussion of the market and technology assessment.

1. Definitions

EPCA includes the following categories of CWH equipment as

[26] DOE is aware that a new version of CBECS (CBECS 2018) will likely be available for the next rulemaking phase, and DOE will evaluate its applicability for the commercial water heater energy analysis in that phase.

[27] DOE routinely uses a third spreadsheet tool, the Government Regulatory Impact Model (''GRIM''), to assess manufacturer impacts of potential new or amended standards as part of the MIA. However, as discussed in section III.E.1.a of this document, the MIA was not updated for the SNOPR.

[28] For more information on NEMS, refer to EIA. *The National Energy Modeling System: An Overview.* 2018. EIA: Washington, DC. DOE/EIA–0581(2018). Available at *www.eia.gov/outlooks/aeo/.*

[29] EIA approves the use of the name ''NEMS'' to describe only an *AEO* version of the model without any modification to code or data. Because the present analysis entails some minor code modifications and runs the model under various policy scenarios that deviate from *AEO* assumptions, the name ''NEMS–BT'' refers to the model as used here. (BT stands for DOE's Building Technologies Office.)

covered industrial equipment: Storage water heaters, instantaneous water heaters, and unfired hot water storage tanks. EPCA defines a ''storage water heater'' as a water heater that heats and stores water internally at a thermostatically-controlled temperature for use on demand. This term does not include units that heat with an input rating of 4,000 Btu per hour or more per gallon of stored water. EPCA defines an ''instantaneous water heater'' as a water heater that heats with an input rating of at least 4,000 Btu per hour per gallon of stored water. Lastly, EPCA defines an ''unfired hot water storage tank'' as a tank that is used to store water that is heated external to the tank. (42 U.S.C. 6311(12)(A)–(C))

DOE first codified the following more specific definitions for CWH equipment at 10 CFR 431.102 in the October 2004 direct final rule. 69 FR 61974, 61983. Several of these definitions were subsequently amended in the November 2016 CWH TP final rule. 81 FR 79261, 79287–79288 (Nov. 10, 2016).

Specifically, DOE now defines ''hot water supply boiler'' in 10 CFR 431.102 as a packaged boiler that is industrial equipment and that (1) has an input rating from 300,000 Btu/h to 12,500,000 Btu/h and of at least 4,000 Btu/h per gallon of stored water; (2) is suitable for heating potable water; and (3) meets either or both of the following conditions: (i) It has the temperature and pressure controls necessary for heating potable water for purposes other than space heating; or (ii) the manufacturer's product literature, product markings, product marketing, or product installation and operation instructions indicate that the boiler's intended uses include heating potable water for purposes other than space heating.

DOE also defines an ''instantaneous water heater'' in 10 CFR 431.102 as a water heater that uses gas, oil, or electricity, including: (1) Gas-fired instantaneous water heaters with a rated input both greater than 200,000 Btu/h and not less than 4,000 Btu/h per gallon of stored water; (2) oil-fired instantaneous water heaters with a rated input both greater than 210,000 Btu/h and not less than 4,000 Btu/h per gallon of stored water; and (3) electric instantaneous water heaters with a rated input both greater than 12 kW and not less than 4,000 Btu/h per gallon of stored water.

DOE defines a ''storage water heater'' in 10 CFR 431.102 as a water heater that uses gas, oil, or electricity to heat and store water within the appliance at a thermostatically-controlled temperature for delivery on demand including: (1) Gas-fired storage water heaters with a rated input both greater than 75,000 Btu/h and less than 4,000 Btu/h per gallon of stored water; (2) oil-fired storage water heaters with a rated input both greater than 105,000 Btu/h and less than 4,000 Btu/h per gallon of stored water; and (3) electric storage water heaters with a rated input both greater than 12 kW and less than 4,000 Btu/h per gallon of stored water.

Lastly, DOE defines an ''unfired hot water storage tank'' in 10 CFR 431.102 as a tank used to store water that is heated externally, and that is industrial equipment.

2. Equipment Classes

When evaluating and establishing energy conservation standards, DOE generally divides covered equipment into equipment classes by the type of energy used or by capacity or other performance-related features that justify a different standard. In determining whether a performance-related feature justifies a different standard, DOE considers such factors as the utility to the commercial consumers of the feature and other factors DOE determines are appropriate.

CWH equipment classes are divided based on the energy source, equipment category (*i.e.,* storage vs. instantaneous and hot water supply boilers), and size (*i.e.,* input capacity and rated storage volume). Unfired hot water storage tanks are also included as a separate equipment class, but as discussed in section III.B.3 of this proposed rulemaking are being considered as part of a separate proceeding and therefore were not analyzed for this NOPR. Table IV.1 shows the current equipment classes and energy conservation standards for CWH equipment other than residential-duty commercial water heaters, and Table IV.2 shows DOE's current equipment classes and energy conservation standards for residential-duty commercial water heaters.

TABLE IV.1—CURRENT EQUIPMENT CLASSES AND ENERGY CONSERVATION STANDARDS FOR CWH EQUIPMENT EXCEPT FOR RESIDENTIAL-DUTY COMMERCIAL WATER HEATERS

Equipment class	Size	Energy conservation standards *	
		Minimum thermal efficiency (equipment manufactured on and after Oct. 9, 2015) ** *** (%)	Maximum standby loss (equipment manufactured on and after Oct. 29, 2003) ** †
Electric storage water heaters	All	N/A	0.30 + 27/V_m (%/h).
Gas-fired storage water heaters	≤155,000 Btu/h	80	Q/800 + 110(V_r)½ (Btu/h).
	>155,000 Btu/h	80	Q/800 + 110(V_r)½ (Btu/h).
Oil-fired storage water heaters	≤155,000 Btu/h	*** 80	Q/800 + 110(V_r)½ (Btu/h).
	>155,000 Btu/h	*** 80	Q/800 + 110(V_r)½ (Btu/h).
Electric instantaneous water heaters ‡	<10 gal	80	N/A.
	≥10 gal	77	2.30 + 67/V_m (%/h).
Gas-fired instantaneous water heaters and hot water supply boilers	<10 gal	80	N/A.
	≥10 gal	80	Q/800 + 110(V_r)½ (Btu/h).
Oil-fired instantaneous water heater and hot water supply boilers	<10 gal	80	N/A
	≥10 gal	78	Q/800 + 110(V_r)½ (Btu/h).
		Minimum thermal insulation	
Unfired hot water storage tank	All	R–12.5	

* V_m is the measured storage volume, and V_r is the rated volume, both in gallons. Q is the nameplate input rate in Btu/h.

** For hot water supply boilers with a capacity of less than 10 gallons: (1) The standards are mandatory for products manufactured on and after October 21, 2005 and (2) products manufactured prior to that date, and on or after October 23, 2003, must meet either the standards listed in this table or the applicable standards in subpart E of part 431 for a ''commercial packaged boiler.''

*** For oil-fired storage water heaters: (1) The standards are mandatory for equipment manufactured on and after October 9, 2015 and (2) equipment manufactured prior to that date must meet a minimum thermal efficiency level of 78 percent.

† Water heaters and hot water supply boilers having more than 140 gallons of storage capacity need not meet the standby loss requirement if: (1) The tank surface area is thermally insulated to R–12.5 or more, (2) a standing pilot light is not used, and (3) for gas or oil-fired storage water heaters, they have a fire damper or fan-assisted combustion.

‡ Energy conservation standards for electric instantaneous water heaters are included in EPCA. In this NOPR, DOE codifies these standards for electric instantaneous water heaters in its regulations at 10 CFR 431.110. Further discussion of standards for electric instantaneous water heaters is included in section III.B.4 of this document.

TABLE IV.2—CURRENT EQUIPMENT CLASSES AND ENERGY CONSERVATION STANDARDS FOR RESIDENTIAL-DUTY COMMERCIAL WATER HEATERS

Equipment	Specification *	Draw pattern **	Uniform energy factor
Gas-fired Storage	>75 kBtu/h and	Very Small	$0.2674 - (0.0009 \times V_r)$.
	≤105 kBtu/h and	Low	$0.5362 - (0.0012 \times V_r)$.
	≤120 gal and	Medium	$0.6002 - (0.0011 \times V_r)$.
	≤180 °F	High	$0.6597 - (0.0009 \times V_r)$.
Oil-fired storage	>105 kBtu/h and	Very Small	$0.2932 - (0.0015 \times V_r)$.
	≤140 kBtu/h and	Low	$0.5596 - (0.0018 \times V_r)$.
	≤120 gal and	Medium	$0.6194 - (0.0016 \times V_r)$.
	≤180 °F	High	$0.6740 - (0.0013 \times V_r)$.
Electric instantaneous	>12 kW and	Very Small	0.80.
	≤58.6 kW and	Low	0.80.
	≤2 gal and	Medium	0.80.
	≤180 °F	High	0.80.

* To be classified as a residential-duty water heater, a commercial water heater must, if requiring electricity, use single-phase external power supply, and not be designed to heat water at temperatures greater than 180 °F.

** Draw pattern is a classification of hot water use of a consumer water heater or residential-duty commercial water heater, based upon the first-hour rating. The draw pattern is determined using the *Uniform Test Method for Measuring the Energy Consumption of Water Heaters* in appendix E to subpart B of 10 CFR part 430.

As discussed in section IV.A.2.e, DOE proposed in the May 2016 CWH ECS NOPR to consolidate commercial gas-fired and oil-fired storage water heater equipment classes that are currently divided by input rates of 155,000 Btu/h. 81 FR 34440, 34462 In the May 2016 CWH ECS NOPR, DOE sought comment on the overall proposed equipment class structure for CWH equipment. 81 FR 34440, 34460 (May 31, 2016). The following subsections include clarifications in response to the various comments received.

a. Residential-Duty Electric Instantaneous Water Heaters

Residential-duty electric instantaneous water heaters are a separate equipment class within DOE's regulations for CWH equipment. In the December 2016 conversion factor final rule, DOE established equipment classes and energy conservation standards for residential-duty commercial water heaters, including residential-duty electric instantaneous water heaters. 81 FR 96204, 96239 (Dec. 29, 2016). However, DOE notes that it did not analyze amended energy conservation standards for this equipment class in this NOPR, as further discussed in section III.B.4 of this NOPR.

b. Storage-Type Instantaneous Water Heaters

Based on a review of equipment on the market, DOE has found that gas-fired storage-type instantaneous water heaters are very similar to gas-fired storage water heaters, but with a higher ratio of input rating to tank volume. This higher input-volume ratio is achieved with a relatively larger heat exchanger paired with a relatively smaller tank. Increasing either the input capacity or storage volume increases the hot water delivery capacity of the water heater. However, through a review of product literature, DOE did not identify any significant design differences that would warrant different energy conservation standard levels (for either thermal efficiency or standby loss) between models in these two equipment classes. Therefore, DOE grouped the two equipment classes together in the May 2016 CWH ECS NOPR analyses and proposed the same standard levels for each equipment class.

In the withdrawn May 2016 CWH TP NOPR, DOE noted that the ''gas-fired instantaneous water heaters and hot water supply boilers with a storage volume greater than or equal to 10 gallons'' equipment class encompasses both instantaneous water heaters and hot water supply boilers with large volume heat exchangers, as well as instantaneous water heaters with storage tanks (but with at least 4,000 Btu/h of input per gallon of water stored). 81 FR 28588, 28607 (May 9, 2016). Therefore, in the May 2016 CWH TP NOPR, DOE proposed to define ''storage-type instantaneous water heater'' as an instantaneous water heater that includes a storage tank with a submerged heat exchanger(s) or heating element(s). *Id.* at 81 FR 28637. However, based on industry feedback, in the November 2016 CWH TP final rule, DOE decided not to include the criterion regarding submerged heat exchanger(s) or heating element(s) in the definition. Instead, DOE defined ''storage-type instantaneous water heater'' as an instantaneous water heater that includes a storage tank with a storage volume greater than or equal to 10 gallons. 81 FR 79261, 79289–79290 (Nov. 10, 2016).

In response to the May 2016 CWH ECS NOPR, DOE received various comments regarding the difference (or lack of difference) between storage-type instantaneous water heaters and storage water heaters and questioning whether storage-type instantaneous equipment should be considered in DOE's analysis. (Rheem, No. 43 at p. 11; Bock, No. 33 at p. 3; A.O. Smith, No. 39 at p. 7; Bradford White, No. 42 at p. 4) As stated, the definition for storage-type instantaneous water heaters was finalized in the November 2016 CWH TP final rule. 81 FR 79261, 79289–

79290 (Nov. 10, 2016). For this NOPR DOE has continued to analyze amended energy conservation standards for storage-type instantaneous water heaters in a manner consistent with storage water heaters, as was done in the withdrawn May 2016 CWH ECS NOPR. The potential standard levels considered in this document reflect the similarity of these types of equipment, with the same standard levels considered for both storage water heaters and storage-type instantaneous water heaters.

c. Condensing Gas-Fired Water Heating Equipment

DOE has recently considered whether non-condensing technology (and associated venting) constitutes a performance-related ''feature'' that provides a distinct consumer utility under EPCA which may not be eliminated by an energy conservation standard. On January 15, 2021, in response to a petition for rulemaking submitted by the American Public Gas Association, Spire, Inc., the Natural Gas Supply Association, the American Gas Association, and the National Propane Gas Association (83 FR 54883; Nov. 1, 2018), DOE published the January 2021 final interpretive rule determining that, in the context of residential furnaces, commercial water heaters, and similarly-situated products/equipment, use of non-condensing technology (and associated venting) constitute a performance-related ''feature'' under EPCA that cannot be eliminated through adoption of an energy conservation standard. 86 FR 4776. Correspondingly, DOE withdrew the May 2016 CWH ECS NOPR. 86 FR 3873 (Jan. 15, 2021).

However, DOE has subsequently published a final interpretive rule that returns to the previous and long-standing interpretation (in effect prior to the January 15, 2021 final interpretive rule), under which the technology used to supply heated air or hot water is not a performance-related ''feature'' that provides a distinct consumer utility under EPCA. 86 FR 73947 (Dec. 29, 2021). For the purpose of the analysis conducted for this rulemaking DOE did not analyze separate equipment classes for non-condensing and condensing CWH equipment in this NOPR.

d. Tankless Water Heaters and Hot Water Supply Boilers

In the withdrawn May 2016 CWH ECS NOPR, DOE discussed the differences in design and application between equipment within the ''gas-fired instantaneous water heaters and hot water supply boilers'' equipment class with storage volume less than 10 gallons. 81 FR 34440, 34461–34462 (May 31, 2016). Specifically, DOE identified gas-fired instantaneous water heaters and hot water supply boilers that are ''tankless water heaters'' and those that are ''hot water supply boilers.'' *Id.* From examination of equipment literature and discussion with manufacturers, DOE stated that tankless water heaters are typically used without a storage tank, flow-activated, wall-mounted, and capable of higher temperature rises. Hot water supply boilers, conversely, are typically used with a storage tank and recirculation loop, thermostatically-activated, and not wall-mounted. However, despite these differences, tankless water heaters and hot water supply boilers share basic similarities: Both kinds of equipment supply hot water in commercial applications with at least 4,000 Btu/h per gallon of stored water, and both include heat exchangers through which incoming water flows and is heated by combustion flue gases that flow around the heat exchanger tubes. DOE analyzed tankless water heaters and hot water supply boilers as two separate kinds of representative equipment for the instantaneous water heaters and hot water supply boilers equipment class for the May 2016 CWH ECS NOPR. *Id.*

In response to the May 2016 CWH ECS NOPR, DOE received several comments related to whether tankless water heaters and hot water supply boilers should be treated as separate equipment classes in DOE's energy conservation standards for CWH equipment and whether proposing the same standards incentivizes any switching in shipments from one equipment class to the other. In addition, responses to the withdrawn May 2016 NOPR indicated that some stakeholders were confused by the terminology used in that NOPR and the types of equipment that were considered as representative of this class. (AHRI, No. 40 at pp. 6–8 and Raypak, No. 41 at pp. 6–7; Rheem, No. 43 at p. 12; Bradford White, No. 42 at p. 4)

In the withdrawn May 2016 CWH ECS NOPR analysis, DOE used the term ''hot water supply boiler'' to generally refer not only to hot water supply boilers, but also to instantaneous water heaters that have similar designs and applications as hot waters supply boilers (*i.e.,* instantaneous water heaters other than tankless water heaters and storage-type instantaneous water heaters). DOE recognizes that this terminology may have led to confusion for some stakeholders. Therefore, in this NOPR, DOE refers to this representative equipment within the equipment class of ''gas-fired instantaneous water heaters and hot water supply boilers'' as ''gas-fired circulating water heaters and hot water supply boilers.'' The term ''circulating water heater'' is a commonly used term in industry, and its use is intended to resolve confusion for stakeholders regarding the equipment included in DOE's analyses. DOE is not proposing to define the term ''circulating water heater'' in DOE's regulations, but rather uses the term within this rulemaking notice and the NOPR TSD to clarify the name of representative equipment for the analysis of gas-fired instantaneous water heaters in response to the comments received on the May 2016 CWH ECS NOPR. DOE reiterates that within this NOPR, the term ''circulating water heaters and hot water supply boilers'' refers to both instantaneous water heaters (other than tankless water heaters and storage-type instantaneous water heaters) and hot water supply boilers.

With respect to the issue of whether separate equipment classes are necessary, DOE acknowledges that there are certain design differences between tankless water heaters and circulating water heaters and hot water supply boilers. For this NOPR, DOE maintained its approach of analyzing ''tankless water heaters'' and ''circulating water heaters and hot water supply boilers'' as two separate kinds of representative equipment in the gas-fired instantaneous water heaters equipment class, and presents analytical results separately for the two types of representative equipment in section V of this NOPR, although DOE is not proposing to restructure the equipment classes.

e. Gas-Fired and Oil-Fired Storage Water Heaters

In the withdrawn May 2016 CWH ECS NOPR, DOE proposed to consolidate commercial gas-fired and oil-fired storage water heater equipment classes that are currently divided by input rates of 155,000 Btu/h. DOE proposed the following two equipment classes without an input rate distinction: (1) Gas-fired storage water heaters and (2) oil-fired storage water heaters. 81 FR 34440, 34462 (May 31, 2016). The input rate of 155,000 Btu/h was first used as a dividing criterion for storage water heaters in the Energy Policy Act of 1992 (''EPAct 1992'') amendments to EPCA, which mirrored the standard levels and equipment classes in ASHRAE Standard 90.1–1989. (42 U.S.C. 6313(a)(5)(B)–(C)) ASHRAE has since updated its efficiency levels for oil-fired and gas-fired storage water heaters in ASHRAE

Standard 90.1–1999 by consolidating equipment classes that were previously divided by an input rate of 155,000 Btu/h. Pursuant to requirements in EPCA, DOE adopted the increased standards in ASHRAE Standard 90.1–1999, but did not correspondingly consolidate the equipment classes above and below 155,000 Btu/h. As a result, DOE's current standards are identical for the equipment classes that are divided by input rate of 155,000 Btu/h.

For this NOPR, DOE is maintaining its proposal to realign the equipment class structure to eliminate the input rate division at 155,000 Btu/h for commercial gas-fired storage water heaters and oil-fired storage water heaters, consistent with the equipment class structure in the latest version of ASHRAE Standard 90.1.

f. Grid-Enabled Water Heaters

DOE currently only prescribes a standby loss standard for commercial electric storage water heaters, and in this NOPR DOE is not proposing to amend the standby loss level for electric storage water heaters. In the withdrawn May 2016 CWH ECS NOPR DOE had proposed an amended standby loss standard for electric storage water heaters, which DOE determined would be most commonly met by increasing insulation thickness, and which would not differentially affect grid-enabled technology. Therefore, in the May 2016 CWH ECS NOPR, DOE tentatively concluded that a separate equipment class for grid-enabled commercial electric storage water heaters was not warranted. 81 FR 34440 (May 31, 2016). DOE did not receive comments regarding its tentative conclusion in the May 2016 CWH ECS NOPR. Because DOE is not proposing to amend the standard for commercial electric storage water heaters, and because DOE maintains that a grid-enabled water heater would not be differentially impacted by a standby loss standard, DOE is not proposing to establish a separate equipment class for grid-enabled electric storage water heaters in this NOPR.

g. Input Capacity for Instantaneous Water Heaters and Hot Water Supply Boilers

In response to the May 2016 CWH ECS NOPR, DOE received comments suggesting that DOE should split up the equipment class for gas-fired instantaneous water heaters and hot water supply boilers by input capacity, similar to DOE's current energy conservation standards for commercial packaged boilers. (Raypak, No. 41 at p. 7) However, DOE notes that it adopted the current equipment class structure for commercial packaged boilers, including the division by input capacity, from ASHRAE 90.1. As discussed in section IV.A.2.c of this document, EPCA established a specific and separate statutory scheme for establishing and amending energy conservation standards applicable to ASHRAE equipment, including CWH equipment. (*See* 42 U.S.C. 6313(a)(6)) DOE must adopt the level set forth in ASHRAE Standard 90.1 unless the Department has clear and convincing evidence to adopt a more-stringent standard. (*See* 42 U.S.C. 6313(a)(6)). ASHRAE 90.1 does not divide the equipment classes for commercial gas-fired instantaneous water heaters and hot water supply boilers by input capacity. Therefore, DOE has not analyzed separate classes for gas-fired instantaneous water heaters and hot water supply boilers equipment class by input capacity.

3. Review of the Current Market for CWH Equipment

In order to gather information needed for the market assessment for CWH equipment, DOE consulted a variety of sources, including manufacturer literature, manufacturer websites, the AHRI Directory of Certified Product Performance,[30] the CEC Appliance Efficiency Database,[31] and DOE's Compliance Certification Database.[32] DOE used these sources to compile a database of CWH equipment that served as resource material throughout the analyses conducted for this rulemaking. This database contained the following counts of unique models: 768 commercial gas-fired storage water heaters, 94 residential-duty commercial gas-fired storage water heaters, 167 commercial gas-fired storage-type instantaneous water heaters (tank-type water heaters with greater than 4,000 Btu/h per gallon of stored water), 19 gas-fired tankless water heaters, 449 gas-fired circulating water heaters and hot water supply boilers, 115 commercial oil-fired storage water heaters, 2 residential-duty commercial oil-fired storage water heaters, and 36 commercial oil-fired storage-type instantaneous water heaters. No oil-fired tankless water heaters or hot water supply boilers were found on the market. Chapter 3 of the NOPR TSD provides more information on the CWH equipment currently available on the market, including a full breakdown of these units into their equipment classes and graphs showing performance data.

4. Technology Options

As part of the market and technology assessment, DOE uses information about commercially-available technology options and prototype designs to help identify technologies that manufacturers could use to improve energy efficiency for CWH equipment. This effort produces an initial list of all the technologies that are technologically feasible. This assessment provides the technical background and structure on which DOE bases its screening and engineering analyses. Chapter 3 of the NOPR TSD includes descriptions of all technology options identified for this equipment.

Because thermal efficiency, standby loss, and UEF are the relevant performance metrics in this rulemaking, DOE did not consider technologies that have no significant effect on these metrics. However, DOE does not discourage manufacturers from using these other technologies because they might reduce annual energy consumption in the field. The following list includes the technologies that DOE did not consider because they would not significantly affect efficiency as measured by the DOE test procedure. Chapter 3 of the NOPR TSD provides details and reasoning for the exclusion from further consideration of each technology option, as listed here:

- Plastic tank.
- Direct vent.
- Timer controls.
- Intelligent and wireless controls.
- Modulating combustion.
- Self-cleaning.

DOE also did not consider technologies as options for increasing efficiency if they are included in baseline equipment, as determined from an assessment of units on the market. DOE's research suggests that electromechanical flue dampers and electronic ignition are technologies included in baseline equipment for commercial gas-fired storage water heaters; therefore, they were not included as technology options for that equipment class. However, electromechanical flue dampers and electronic ignition were not identified on baseline units for residential-duty gas-fired storage water heaters, and these options were, therefore, considered for increasing efficiency of residential-duty gas-fired storage water heaters. DOE also considered insulation of fittings around pipes and ports in the

[30] Last accessed on March 4, 2021 and available at *www.ahridirectory.org.*

[31] Last accessed on March 4, 2021 and available at *cacertappliances.energy.ca.gov/Pages/ApplianceSearch.aspx.*

[32] Last accessed on February 26, 2021 and available at *www.regulations.doe.gov/certification-data/.*

tank to be included in baseline equipment; therefore, such insulation was not considered as a technology option for the analysis.

The technology options that were considered for improving the energy efficiency of CWH equipment for this NOPR are as follows:

- Improved insulation (including increasing jacket insulation, insulating tank bottom, advanced insulation types, and foam insulation).
- Mechanical draft (including induced draft (also known as power vent) and forced draft).
- Condensing heat exchanger (for all gas-fired equipment classes and including optimized flue geometry).
- Condensing pulse combustion.
- Improved heat exchanger design (including increased surface area and increased baffling).
- Sidearm heating and two-phase thermosiphon technology.
- Electronic ignition systems.
- Improved heat pump water heaters (including gas absorption heat pump water heaters).
- Premix burner (including submerged combustion chamber for gas-fired storage water heaters and storage-type instantaneous water heaters).
- Electromechanical flue damper.
- Modulating combustion.

B. Screening Analysis

DOE uses the following screening criteria to determine which technology options are suitable for further consideration in an energy conservation standards rulemaking:

- *Technological feasibility.* DOE will consider technologies incorporated in commercial products or in working prototypes to be technologically feasible. Technologies that are not incorporated in commercial equipment or in working prototypes are not considered in this NOPR.
- *Practicability to manufacture, install, and service.* If mass production and reliable installation and servicing of a technology in commercial products could be achieved on the scale necessary to serve the relevant market at the time of the compliance date of the standard, then DOE will consider that technology practicable to manufacture, install, and service.
- *Adverse impacts on product utility or product availability.* If DOE determines a technology would have a significant adverse impact on the utility of the product to significant subgroups of commercial consumers, or would result in the unavailability of any covered product type with performance characteristics (including reliability), features, sizes, capacities, and volumes that are substantially the same as products generally available in the United States at the time, it will not consider this technology further.
- *Adverse impacts on health or safety.* If DOE determines that a technology will have significant adverse impacts on health or safety, it will not consider this technology further.
- *Unique-pathway proprietary technologies.* If a design option utilizes proprietary technology that represents a unique pathway to achieving a given efficiency level, that technology will not be considered further.

10 CFR 431.4; 10 CFR part 430, subpart C, appendix A, sections 6(c)(3) and 7(b).

1. Screened-Out Technologies

Technologies that pass through the screening analysis are subsequently examined in the engineering analysis for consideration in DOE's downstream cost-benefit analysis. Based upon a review under the above factors, DOE screened out the design options listed in Table IV.3 for the reasons provided. Chapter 4 of the NOPR TSD contains additional details on the screening analysis, including a discussion of why each technology option was screened out.

TABLE IV.3—SUMMARY OF SCREENED-OUT TECHNOLOGY OPTIONS

Excluded technology option	Applicable equipment classes *	Reasons for exclusion				
		Technological feasibility	Practicability to manufacture, install, and service	Adverse impacts on product utility	Adverse impacts on health or safety	Unique-pathway proprietary technology
Advanced insulation types	All storage water heaters	X	X			
Condensing pulse combustion.	All gas-fired equipment classes.		X			
Sidearm heating	All gas-fired storage		X			
Two-phase thermosiphon technology.	All gas-fired storage		X			
Gas absorption heat pump water heaters.	Gas-fired instantaneous water heaters.		X			

* All mentions of storage water heaters in this column refer to both storage water heaters and storage-type instantaneous water heaters.

In this NOPR, DOE has tentatively concluded that none of the identified technology options are proprietary. However, in the engineering analysis, DOE included the manufacturer production costs associated with multiple designs of condensing heat exchangers used by a range of manufacturers and these represent the vast majority of the condensing gas-fired storage water heater market to account for intellectual property rights surrounding specific designs of condensing heat exchangers.

2. Remaining Technologies

After screening out or otherwise removing from consideration certain technologies, the remaining technologies are passed through for consideration in the engineering analysis. Table IV.4 presents identified technologies for consideration in the engineering analysis. Chapter 3 of the NOPR TSD contains additional details on the technology assessment and the technologies analyzed.

TABLE IV.4—TECHNOLOGY OPTIONS CONSIDERED FOR ENGINEERING ANALYSIS

Equipment	Mechanical draft	Condensing heat exchanger	Increased heat exchanger area, baffling	Electronic ignition	Premix burner	Electro-mechanical flue damper
Commercial gas-fired storage water heaters and storage-type instantaneous water heaters	X	X	X		X	
Residential-duty gas-fired storage water heaters	X	X	X	X	X	X
Gas-fired instantaneous water heaters and hot water supply boilers	X	X	X		X	

C. Engineering Analysis

The purpose of the engineering analysis is to establish the relationship between the efficiency and cost of CWH equipment. There are two elements to consider in the engineering analysis: The selection of efficiency levels to analyze (*i.e.,* the ''efficiency analysis'') and the determination of product cost at each efficiency level (*i.e.,* the ''cost analysis''). In determining the performance of higher-efficiency equipment, DOE considers technologies and design option combinations not eliminated by the screening analysis. For each equipment category, DOE estimates the baseline cost, as well as the incremental cost for the equipment at efficiency levels above the baseline. The output of the engineering analysis is a set of cost-efficiency ''curves'' that are used in downstream analyses (*i.e.,* the LCC and PBP analyses and the NIA).

1. Efficiency Analysis

DOE typically uses one of two approaches to develop energy efficiency levels for the engineering analysis: (1) Relying on observed efficiency levels in the market (*i.e.,* the efficiency-level approach), or (2) determining the incremental efficiency improvements associated with incorporating specific design options to a baseline model (*i.e.,* the design-option approach). Using the efficiency-level approach, the efficiency levels established for the analysis are determined based on the market distribution of existing products (in other words, based on the range of efficiencies and efficiency level ''clusters'' that already exist on the market). Using the design option approach, the efficiency levels established for the analysis are determined through detailed engineering calculations and/or computer simulations of the efficiency improvements from implementing specific design options that have been identified in the technology assessment. DOE may also rely on a combination of these two approaches. For example, the efficiency-level approach (based on actual products on the market) may be extended using the design option approach to ''gap fill'' levels (to bridge large gaps between other identified efficiency levels) and/or to extrapolate to the max-tech level (particularly in cases where the max-tech level exceeds the maximum efficiency level currently available on the market).

For the analysis of thermal efficiency and UEF levels, DOE identified the efficiency levels for the analysis based on market data (*i.e.,* the efficiency level approach). For the analysis of standby loss levels, DOE identified efficiency levels for analysis based on market data, commonly used technology options (*e.g.,* electronic ignition), and testing data (*i.e.,* a combination of the efficiency level approach and the design option approach). DOE's selection of efficiency levels for this NOPR is discussed in additional detail in section IV.C.4 of this document.

2. Cost Analysis

The cost analysis portion of the engineering analysis is conducted using one or a combination of cost approaches. The selection of cost approach depends on a suite of factors, including the availability and reliability of public information, characteristics of the regulated product, the availability and timeliness of purchasing the product/equipment on the market. The cost approaches are summarized as follows:

- *Physical teardowns:* Under this approach, DOE physically dismantles a commercially-available product, component-by-component, to develop a detailed bill of materials (''BOM'') for the product.
- *Catalog teardowns:* In lieu of physically deconstructing a product, DOE identifies each component using parts diagrams (available from manufacturer websites or appliance repair websites, for example) to develop the bill of materials for the product.
- *Price surveys:* If neither a physical nor catalog teardown is feasible (for example, for tightly integrated products such as fluorescent lamps, which are infeasible to disassemble and for which parts diagrams are unavailable) or cost-prohibitive and otherwise impractical (*e.g.,* large commercial boilers), DOE conducts price surveys using publicly-available pricing data published on major online retailer websites and/or by soliciting prices from distributors and other commercial channels.

For this NOPR, DOE conducted the cost analysis using a combination of physical teardowns and catalog teardowns. The resulting BOMs from physical and catalog teardowns provide the basis for the manufacturer production cost (''MPC'') estimates.

To account for manufacturers' non-production costs and profit margin, DOE applies a non-production cost multiplier (the manufacturer markup) to the MPC. The resulting manufacturer selling price (''MSP'') is the price at which the manufacturer distributes a unit into commerce. DOE developed an average manufacturer markup by examining the annual Securities and Exchange Commission (SEC) 10–K reports filed by companies that manufacturer CWH equipment. During manufacturer interviews conducted ahead of the May 2016 CWH ECS NOPR, DOE discussed the manufacturer markup and used the industry feedback to modify the manufacturer markup estimate. DOE considers the manufacturer markup published in the May 2016 CWH ECS NOPR to be the best publicly available information.

The approach for this NOPR was similar to that used for the withdrawn May 2016 CWH ECS NOPR, except that the analysis for residential-duty commercial storage water heaters is now done in terms of UEF instead of thermal efficiency and standby loss (which for the May 2016 CWH ECS NOPR were then converted to UEF). Chapter 5 of the NOPR TSD includes further detail on the engineering analysis.

In choosing the physical and catalog teardown approach over the price survey approach, DOE considered

several factors. DOE notes that the sales prices of CWH equipment currently seen in the marketplace, which include both an MPC and various markups applied through the distribution chain, are not necessarily indicative of what the sales prices of those models of CWH equipment would be following the implementation of a more-stringent energy conservation standard. At a given efficiency level, the MPC of CWH equipment depends in part on the production volume. At any given efficiency level above the current baseline, the industry-aggregated MPC for CWH equipment at that level may be high relative to what it would be under a more-stringent standard, due to the increase in production volume (and thus, improved economies of scale and purchasing power for CWH equipment components), which would occur at that level if a Federal standard made it the new baseline efficiency level.

Furthermore, under a more-stringent standard, the markups incorporated into the sales price may change relative to current markups. Therefore, basing the engineering analysis on prices of CWH equipment as currently seen in the marketplace would be a less accurate method of estimating future CWH equipment prices following an amended standard. It is for these reasons that DOE contractors conduct interviews with manufacturers under non-disclosure agreements (''NDAs'') to determine if the MPCs developed by the analysis reflect the industry average cost rather than rely on current sales prices whenever feasible (although as noted above in some cases this approach is not feasible). Because the cost estimation methodology uses data supplied by manufacturers under the NDAs (such as raw material and purchased part prices), the resulting individual model cost estimates themselves cannot be published.

Additionally, while manufacturers of CWH equipment offer both non-condensing and condensing models, condensing equipment is often marketed as a premium product and, therefore, often includes features and capabilities that are not efficiency-related. While such features (*e.g.,* powered anode rods, more sophisticated building management system integration) may be included in condensing equipment currently on the market, these features are not necessary in order to achieve a higher efficiency level, and, therefore, DOE does not believe that the costs for these features should be included in the costs of condensing equipment in the engineering analysis.

The Department must balance transparency and access to information alongside protection of intellectual property and proprietary data. DOE understands that manufacturers would object to having any sensitive information related to the design of their products being released into the public domain. Additionally, DOE notes that all manufacturers that participated in manufacturer interviews conducted in advance of the withdrawn May 2016 CWH ECS NOPR had access to DOE's MPC estimates for models they manufacture that were torn down, as well as the raw material and purchased part price data underlying the MPC estimates for those models. These discussions were covered by NDAs to allow manufacturers to submit confidential data and to comment freely on the inputs into the DOE analysis as well as the results. The MPCs presented in this NOPR take into account the feedback received from manufacturers, which DOE has found to be a valuable tool for ensuring the accuracy of its cost estimates. Without adequate safeguards, manufacturers would likely be unwilling to share information relevant to the rulemaking, which would have correspondingly negative impacts on the rulemaking process.

In the present case, as is generally the case in appliance standards rulemakings, manufacturer and equipment specific data are presented in aggregate. Additionally, prices for raw materials and purchased parts have been updated to the most recent market estimates, in 2020$, to create the current MPCs. Given the potential for competitive harm, data are not released outside the aggregated form (neither publicly, nor to DOE). The BOMs used to estimate the industry-aggregate MPCs are developed by a DOE contractor and are not provided to DOE; DOE only receives the industry-aggregate MPCs from its contractor for use in its analyses. Such aggregated data are used to help populate the analytical spreadsheets for the rulemaking that are publicly available. (DOE notes that it does not typically receive any separate report regarding the aggregated data; therefore, there is no such report available for entry in the rulemaking docket.) This approach allows manufacturers to provide feedback under NDA, improving the quality of the analysis.

3. Representative Equipment for Analysis

For the engineering analysis, DOE reviewed all CWH equipment categories analyzed in this rulemaking (see section III.B for discussion of rulemaking scope) and examined each one separately. Within each equipment category, DOE analyzed the distributions of input rating and storage volume of models available on the market and held discussions with manufacturers to determine appropriate representative equipment. DOE notes that representative equipment was selected which reflects the most common capacity and/or storage volume for a given equipment category. While a single representative equipment capacity can never perfectly represent a wide range of input capacities or storage volumes, DOE reasons that analyzing a representative capacity and storage volume that was selected using manufacturer feedback is sufficiently representative of the equipment category while also allowing for a feasible analysis.

For storage water heaters, the volume of the tank is a significant factor for costs and efficiency. Water heaters with larger volumes have higher materials, labor, and shipping costs. A larger tank volume is likely to lead to a larger tank surface area, thereby increasing the standby loss of the tank (assuming other factors are held constant, *e.g.,* same insulation thickness and materials). The current standby loss standards for storage water heaters are, in part, a function of volume to account for this variation with tank size. The incremental cost of increasing insulation thickness varies as the tank volume increases, and there may be additional installation concerns for increasing the insulation thickness on larger tanks. Installation concerns are discussed in more detail in section IV.F.2.b of this NOPR. DOE examined specific storage volumes for storage water heaters and storage-type instantaneous water heaters (referred to as representative storage volumes). Because DOE lacked specific information on shipments, DOE used its CWH equipment database (discussed in section IV.A.3 of this NOPR) to examine the number of models at each rated storage volume to determine the representative storage volume, and also solicited feedback from manufacturers during manufacturer interviews as to which storage volumes corresponded to the most shipments. Table IV.5 shows the representative storage volumes that DOE determined best characterize each equipment category.

As discussed in sections III.B.6 and IV.C.4.b of this NOPR, DOE did not analyze amended energy conservation standards for electric storage water heaters in this NOPR because manufacturer feedback and DOE's research of equipment on the market

indicated that the only technology option analyzed in the withdrawn May 2016 CWH ECS NOPR for decreasing standby loss is already used in some models at the baseline. Consequently, no representative volume was analyzed for electric storage water heaters in this NOPR.

For all CWH equipment categories, the input capacity is also a significant factor for cost and efficiency. Water heaters with higher input capacities typically have higher materials costs and may also have higher labor and shipping costs. Gas-fired storage water heaters with higher input capacities may have additional heat exchanger length to transfer more heat. This leads to higher material costs and may require the tank to expand to compensate for the displaced volume. Gas-fired tankless water heaters, circulating water heaters, and hot water supply boilers require larger heat exchangers to transfer more heat with a higher input capacity. DOE examined input capacities for models in all gas-fired CWH equipment categories to determine representative input capacities. Because the gas-fired instantaneous water heaters and hot water supply boilers equipment class includes several types of equipment that is technologically disparate, DOE selected representative input capacities that would represent both tankless water heaters and circulating water heaters and hot water supply boilers within this broader equipment class. DOE did not receive any shipments data for specific input capacities, and, therefore, DOE considered the number of models at each input capacity in the database of models it compiled (based on DOE's Compliance Certification Database, the AHRI Directory, the CEC Appliance Database, and manufacturer literature), as well as feedback from manufacturer interviews in determining the appropriate representative input capacities for this NOPR. The representative input capacities used in the analyses for this NOPR are shown in Table IV.5.

TABLE IV.5—REPRESENTATIVE STORAGE VOLUMES AND INPUT CAPACITIES

Equipment	Specifications	Representative rated storage volume (gal)	Representative input capacity (kBtu/h)
Commercial gas-fired storage water heaters and gas-fired storage-type instantaneous water heaters*.	>105 kBtu/h or >120 gal	100	199
Residential-duty gas-fired storage water heaters**	≤105 kBtu/h and ≤120 gal	75	76
Gas-fired instantaneous water heaters and hot water supply boilers:			
Tankless water heaters	<10 gal		250
Circulating water heaters and hot water supply boilers	All***		399

* Any commercial gas storage water heater that does not meet the definition of a residential-duty storage water heater is a commercial gas-fired storage water heater regardless of whether it meets the specifications listed.

** To be classified as a residential-duty water heater, a commercial water heater must, if requiring electricity, use single-phase external power supply, and not be designed to heat water at temperatures greater than 180 °F. 79 FR 40542, 40586 (July 11, 2014).

*** For the engineering analysis, circulating water heaters and hot water supply boilers with storage volume <10 gallons and ≥10 gallons were analyzed in the same equipment class. Amended standby loss standards for circulating water heaters and hot water supply boilers with storage volume ≥10 gallons were not analyzed in this NOPR, as discussed in section III.B.7 of this NOPR. Therefore, no representative storage volume was chosen for the instantaneous water heaters and hot water supply boilers equipment class.

The representative volume and input capacities shown in Table IV.5 are the same as those used for the withdrawn May 2016 CWH ECS NOPR. DOE sought comment on the representative CWH equipment used in the engineering analysis in the May 2016 CWH ECS NOPR (81 FR 34440, 34467 (May 31, 2016)), and is including the clarifications in the following subsections in response to the various comments received.

Some commenters expressed concerns regarding the representative input capacity for instantaneous water heaters and hot water supply boilers. (Raypak, No. 41 at p. 7; Spire, No. 45 at pp. 24–25) In response, DOE notes that the representative input capacity is meant to describe the most typical model sold of circulating water heaters and hot water supply boilers. From DOE's market assessment and feedback from manufacturer interviews, DOE has determined that the most frequently sold input capacity of circulating water heaters and hot water supply boilers is 399,000 Btu/h. Additionally, DOE has tentatively determined that a representative capacity of 250,000 Btu/h is appropriate for tankless water heaters. No stakeholders have suggested an alternative input capacity that would be more appropriate for use as the representative input capacity for gas-fired tankless water heaters.

DOE also examined the parts catalogs of circulating water heaters and hot water supply boilers from various manufacturers. From this examination, DOE determined that the same or similar materials, as well as purchased parts, are typically utilized in the manufacture of both representative and larger-capacity circulating water heaters and hot water supply boilers. For example, DOE's market assessment and feedback from manufacturer interviews indicate that the majority of condensing circulating water heaters and hot water supply boilers on the market use purchased condensing heat exchangers. These purchased condensing heat exchangers are typically designed to be modular, so that a larger-capacity unit may include either a larger, similar heat exchanger or multiple similar heat exchangers. Although the amount of material used increases as capacity increases, DOE has not found any evidence that the unit cost of the material would increase due to a lack of economy of scale.

DOE research suggests that within a set input capacity range, circulating water heaters and hot water supply boilers feature many of the same components. For example, a larger-capacity condensing circulating water heater or hot water supply boiler may feature one or more heat exchangers, each of which features a separate premix burner, gas valve, and blower system. Thus, within a given range of input capacities, the MPC of the combustion and heat exchange system will not change materially until an input/efficiency limit is reached; at that point, manufacturers typically add another parallel combustion path to the system (requiring a burner, heat exchanger, blower, and associated controls) or turn to a wholly new combustion system. Hence, the MPC related to the combustion and heat exchange subsystems for condensing circulating water heaters and hot water

supply boilers typically follows a step-like pattern as input capacities increase.

DOE research suggests that condensing circulating water heaters and hot water supply boilers with input capacity less than 1 million Btu/h typically do not require more than one premix burner tube or one blower, and that circulating water heaters and hot water supply boilers with input capacity up to 1.7 million Btu/h only require two premix burner tubes and two blowers. Therefore, a condensing circulating water heater or hot water supply boiler with an input capacity of 800,000 Btu/h, twice the representative input capacity, would still include only one premix burner tube and one blower, and a condensing circulating water heater or hot water supply boiler with an input capacity four times the representative input capacity would include only two premix burner tubes and two blowers. While the cost of premix burner tubes does increase with increasing input capacity, feedback from manufacturer interviews indicates that the cost would increase less than linearly with the input capacity. Additionally, within an input range in which circulating water heaters and hot water supply boilers use the same number of premix burner tubes, a larger-capacity unit would utilize the same or similar controls and wiring harness as a smaller input-capacity unit, the cost of which would likely remain fixed regardless of the input capacity. There may be examples of components of certain larger capacity circulating water heaters and hot water supply boilers that may be purchased at a higher cost due to a lack of economy of scale. However, the potential increase in price of any such purchased part would be offset by the many instances in which the production costs remain fixed regardless of input capacity.

For gas-fired storage water heaters and tankless water heaters, DOE expects that the fraction of costs that remain fixed regardless of input capacity would be even higher than for circulating water heaters and hot water supply boilers. Given the smaller input capacity ranges, DOE is not aware of any larger-capacity condensing models in these classes that require more blowers or premix burners than are required in models at the representative capacity. Similar to circulating water heaters and hot water supply boilers, larger-capacity models in these classes would utilize the same controls and wiring harness as smaller-capacity models; thus, the controls and wiring harness costs would remain fixed regardless of the input capacity. Therefore, the representative capacities and corresponding manufacturer production costs used in this analysis appropriately estimate the costs for larger-capacity CWH equipment.

4. Efficiency Levels for Analysis

For each equipment category, DOE analyzed multiple efficiency levels and estimated manufacturer production costs at each efficiency level. The following subsections provide a description of the full efficiency level range that DOE analyzed from the baseline efficiency level to the max-tech efficiency level for each equipment category.

Baseline equipment is used as a reference point for each equipment category in the engineering analysis and the LCC and PBP analyses, which provides a starting point for analyzing potential technologies that provide energy efficiency improvements. Generally, DOE considers ''baseline'' equipment to refer to a model or models having features and technologies that just meet, but do not exceed, the Federal energy conservation standard and provide basic consumer utility.

DOE conducted a survey of its CWH equipment database and manufacturers' websites to determine the highest thermal efficiency levels on the market for each equipment category. DOE identified the most stringent standby loss level for each class by consideration of rated standby loss values of models currently on the market as well as technology options that are feasible but may not currently be included in models on the market in each equipment category.

As discussed in section III.B.1, DOE conducted the analysis for residential-duty gas-fired storage commercial water heaters using UEF rating data, whereas the analysis in the withdrawn May 2016 CWH ECS NOPR analysis was conducted in terms of thermal efficiency and standby loss levels because sufficient data were not available when the rulemaking analysis was initially conducted to conduct the analysis in terms of UEF.

a. Thermal Efficiency Levels

In establishing the baseline thermal efficiency levels for this analysis, DOE used the current energy conservation standards for CWH equipment to identify baseline units. The baseline thermal efficiency levels used for the analysis in this NOPR are presented in Table IV.6.

TABLE IV.6—BASELINE THERMAL EFFICIENCY LEVELS FOR CWH EQUIPMENT

Equipment	Thermal efficiency (%)
Commercial gas-fired storage water heaters and storage-type instantaneous water heaters	80
Gas-fired instantaneous water heaters and hot water supply boilers	80

For both the commercial gas-fired storage water heaters and gas-fired instantaneous water heaters and hot water supply boilers equipment categories, DOE analyzed several thermal efficiency levels and determined the manufacturing cost at each of these levels. For this NOPR, DOE developed thermal efficiency levels based on a review of equipment currently available on the market. As noted previously, DOE compiled a database of CWH equipment to determine what types of equipment are currently available to commercial consumers. For each equipment class, DOE surveyed various manufacturers' equipment offerings to identify the commonly available thermal efficiency levels. By identifying the most prevalent thermal efficiency levels in the range of available equipment and examining models at these levels, DOE established a technology path that manufacturers typically use to increase the thermal efficiency of CWH equipment.

DOE established intermediate thermal efficiency levels for each gas-fired equipment category (aside from residential-duty gas-fired storage water heaters, which as noted previously were analyzed using UEF). The intermediate thermal efficiency levels are representative of the most common efficiency levels and those that represent significant technological changes in the design of CWH equipment. For commercial gas-fired storage water heaters and for commercial gas-fired instantaneous water heaters and hot water supply boilers, DOE chose four thermal

efficiency levels between the baseline and max-tech levels for analysis. DOE selected the highest thermal efficiency level identified on the market (99 percent) as the ''max-tech'' level for commercial gas-fired storage water heaters and storage-type instantaneous water heaters. For gas-fired instantaneous water heaters and hot water supply boilers, DOE identified hot water supply boilers with thermal efficiency levels of up to 99 percent and tankless instantaneous water heaters with thermal efficiency levels of up to 97 percent available on the market. However, the tankless water heaters with thermal efficiencies of 97 percent were all at a single input capacity and it is unclear whether this thermal efficiency is achievable at other input capacities. As discussed in section IV.A.2.d of this document, DOE analyzed tankless water heaters and circulating water heaters and hot water supply boilers as two separate kinds of representative equipment for this rulemaking analysis, but they are part of the same equipment class (gas-fired instantaneous water heaters and hot water supply boilers). Therefore, because DOE did not find evidence that 97 percent would be an appropriate max-tech level for tankless instantaneous water heaters that is achievable across the range of product inputs currently available, DOE analyzed 96 percent thermal efficiency as the max-tech level for the gas-fired instantaneous water heaters and hot water supply boilers equipment class. The selected thermal efficiency levels used in the current NOPR analysis are shown in Table IV.7.

TABLE IV.7—BASELINE, INTERMEDIATE, AND MAX-TECH THERMAL EFFICIENCY LEVELS FOR REPRESENTATIVE CWH EQUIPMENT

Equipment	Thermal efficiency levels					
	Baseline—E_t EL0 (%)	E_t EL1 (%)	E_t EL2 (%)	E_t EL3 (%)	E_t EL4 (%)	E_t EL5 * (%)
Commercial gas-fired storage water heaters and storage-type instantaneous water heaters	80	82	90	92	95	99
Gas-fired instantaneous water heaters and hot water supply boilers	80	82	84	92	94	96

* E_t EL5 is the max-tech efficiency level for commercial gas-fired storage water heaters and storage-type instantaneous water heaters, as well as for gas-fired instantaneous water heaters and hot water supply boilers.

b. Standby Loss Levels

DOE used the current energy conservation standards for standby loss to set the baseline standby loss levels. Table IV.8 shows these baseline standby loss levels for representative commercial gas-fired storage water heaters and storage-type instantaneous water heaters. In the withdrawn May 2016 CWH ECS NOPR, DOE also identified baseline standby loss levels for electric storage water heaters. 81 FR 34440, 34443 (May 31, 2016). However, as discussed in this section and section III.B.6 of this NOPR, DOE did not further analyze amended standards for electric storage water heaters in this NOPR because of manufacturer feedback and DOE research of equipment on the market indicating that the only analyzed technology option for decreasing standby loss is already used in some units at the baseline.

TABLE IV.8—BASELINE STANDBY LOSS LEVELS FOR REPRESENTATIVE CWH EQUIPMENT

Equipment	Representative rated storage volume (gal)	Representative input capacity (kBtu/h)	Baseline standby loss level (Btu/h)
Commercial gas-fired storage water heaters and storage-type instantaneous water heaters	100	199	1,349

Standby loss is a function of storage volume and input capacity for gas-fired and oil-fired storage water heaters, and is affected by many aspects of the design of a water heater. Additionally, standby loss is not widely reported in manufacturer literature so DOE relied on current and past data obtained from DOE's Compliance Certification Database and the AHRI Directory. There is significant variation in reported standby loss values in these databases (*e.g.,* standby loss values for commercial gas storage water heaters range from 33 percent to 100 percent of the maximum allowable standby loss standard for those units). However, most manufacturers do not disclose the presence of technology options that affect standby loss, including insulation thickness and type, and baffle design, in their publicly-available literature. Because most manufacturers do not disclose the presence of such options, DOE was unable to determine the standby loss reduction from standby-loss-reducing technology options using market-rated standby loss data.

Therefore, DOE analyzed technology options commonly used on the market to help guide its selection of standby loss levels. To inform the selection of standby loss levels for the withdrawn May 2016 CWH ECS NOPR, DOE performed heat loss calculations for representative equipment to estimate how more-stringent standby loss levels correspond to the identified technology options. Chapter 5 of the May 2016 CWH ECS NOPR TSD provides details on these heat loss calculations. Because DOE used heat loss calculations corresponding to commonly used technology options to inform the selection of standby loss levels for the May 2016 CWH ECS NOPR in addition to rated standby loss market data, the most stringent standby loss levels analyzed did not necessarily reflect the current market max-tech level for each equipment category. However, as described later in this section, DOE did not analyze improved tank insulation as a technology option for reducing standby loss in this NOPR because such insulation improvements would not be a viable standby loss reducing option for

all models on the market. Therefore, DOE did not use tank heat loss calculations to determine standby loss levels in this NOPR. The technology options analyzed and selection of max-tech levels are discussed in the following sections for each equipment category.

In addition to the potential to reduce standby losses using technology options, for commercial and residential-duty gas-fired storage water heaters, standby loss is also reduced by increasing thermal efficiency. Standby loss is measured in the test procedure predominantly as a function of the fuel used to heat the stored water during the standby loss test, with a small contribution of electric power consumption (if the unit requires a power supply). Because standby loss is calculated using the fuel consumed during the test to maintain the water temperature, the standby loss is dependent on the thermal efficiency of the water heater. DOE used data from independent testing of CWH equipment at a third-party laboratory to estimate the fraction of standby loss that can be attributed to fuel consumption or electric power consumption. DOE then scaled down (*i.e.,* made more stringent) the portion of the standby loss attributable to fuel consumption as thermal efficiency increased to estimate the inherent improvement in standby loss associated with increasing thermal efficiency. Chapter 5 of the NOPR TSD explains these calculations, and the interdependence of thermal efficiency (''E_t'') and standby loss (''SL'') are explained in more detail. However, for condensing thermal efficiency levels for residential-duty gas-fired storage water heaters, DOE did not include dependence on thermal efficiency in its standby loss levels, as discussed further later in this section.

Standby loss levels for each equipment category are shown in the following sections in terms of Btu/h for the representative equipment. However, to analyze potential amendments to the current Federal standard, factors (''standby loss reduction factors'') were developed to multiply by the current maximum standby loss equation for each equipment class, based on the ratio of standby loss at each efficiency level to the current standby loss standard. The translation from standby loss values to maximum standby loss equations is described in further detail in section IV.C.5 of this NOPR.

1. Heat Loss Calculations in the May 2016 CWH ECS NOPR

For the withdrawn May 2016 CWH ECS NOPR, DOE used heat loss calculations to determine the standby loss reduction from technology options used on the market because other options (including those suggested by manufacturers in response to the NOPR and discussed as follows) were not feasible. As previously discussed, manufacturers typically do not disclose the presence of standby loss reducing technology options in public literature. Additionally, the testing and/or tearing down of units currently on the market would only help inform the determination of standby loss reduction of technology options if DOE could isolate the effect of each individual technology option. However, DOE is unaware of any manufacturer that offers commercial or residential-duty storage water heater models that are completely identical except for one specific standby-loss-reducing technology option. Therefore, DOE would not reliably be able to determine to what extent (if at all) design difference(s) between two different storage water heaters contribute to the difference in standby loss. For example, two storage water heaters on the market at the same representative capacity might differ in any or all of the following respects that could affect the standby loss: Tank dimensions, numbers and/or sizes of fittings and connections, heat exchanger surface area, insulation type and thickness, and coverage of the tank (including tank walls, top, and bottom) with foam insulation. Therefore, DOE initially concluded in the May 2016 CWH ECS NOPR that neither testing nor tearing down of storage water heaters on the market would allow DOE to reliably select standby loss levels or determine the technological pathway and manufacturing costs for manufacturers to achieve those levels, and instead performed heat loss calculations to estimate the standby loss reductions. The heat loss calculations are described in detail in the May 2016 NOPR TSD.

In response to the May 2016 CWH ECS NOPR, DOE received comments from several stakeholders expressing concerns about DOE's heat loss calculations. For example, Rheem argued that DOE's calculation methodologies are incorrect because the proposed standby loss levels in the NOPR are not achieved by models currently on the market that use the analyzed standby-loss-reducing technology options. (Rheem, No. 43 at p. 20) Rheem further stated that the maximum standby loss requirements proposed in the May 2016 CWH ECS NOPR cannot be achieved for every tank size of commercial storage water heater with the technology options that DOE analyzed for the representative volume. (Rheem, No. 43 at p. 14)

Bock argued that the proposed standby loss levels are not representative of the capabilities of the analyzed technology options. (Bock, No. 33 at pp. 3–4) A.O. Smith argued that DOE must not establish standby loss standards based on theoretical values that have not been validated. (A.O. Smith, No. 39 at pp. 9–10) AHRI also suggested that DOE is speculating costs of products that either do not exist or are produced by specialty companies, which is a departure from DOE's longstanding practice of not including such products in its analysis. (AHRI, No. 40 at p. 20) Bradford White disagreed with DOE's approach of using theoretical calculations to determine the proposed standby loss levels. (Bradford White, No. 42 at p. 14)

A.O. Smith commented that DOE incorrectly assumed that heat loss has a linear relationship based on the R-value of the insulation multiplied by the thickness of the insulation. Instead, A.O. Smith argued that the relationship between heat loss and insulation thickness is non-linear and that foam insulation reaches a maximum effective thickness before experiencing diminishing returns. A.O. Smith also stated that there are design and engineering limitations as to where insulation can be applied on the water heater. (A.O. Smith, No. 39 at pp. 9–10)

DOE recognizes manufacturers' concerns regarding the use of theoretical calculations to inform the selection of standby loss levels, the feasibility of achieving DOE's proposed standby loss levels with the analyzed technology options, and the lack of models currently on the market that meet DOE's proposed standby loss levels. DOE also recognizes Rheem's concerns regarding the proposed standby loss levels not being achievable for all tank volumes of storage water heaters and storage-type instantaneous water heaters. In large part, DOE's subsequent analysis of models on the market agrees with these comments in that DOE found few models that meet the proposed standby loss levels, and it is not clear that the proposed levels could be met with the analyzed technology options across the range of storage volumes on the market. In light of these comments, DOE has made several changes to its standby loss level analysis for this NOPR. First, DOE adjusted the technology options that correspond to the standby loss baseline (*i.e.,* the technology options that DOE assumes are used to meet the current standby loss standard) based on stakeholder comments. Second, because of the adjustment in technology options

analyzed at the baselines, DOE did not analyze improved tank insulation as a technology option for reducing standby loss. Third, because of comments indicating that there are no technology options that reliably decrease standby loss beyond the baseline for electric storage water heaters, DOE did not analyze amended standby loss standards for electric storage water heaters. All of these changes to the analysis are based on comments received for the May 2016 CWH ECS NOPR and are further discussed later in this section.

For all commercial gas-fired storage water heater levels, the only standby loss reduction analyzed corresponds to the inherent standby loss reduction from increasing thermal efficiency. (DOE notes that for non-condensing residential-duty gas-fired storage water heaters, an electromechanical flue damper and electronic ignition were considered which would improve UEF by reducing standby losses. This is discussed further in section IV.C.4.c. of this document) DOE research regarding rated standby loss values showed that the vast majority of models at a given thermal efficiency level already meet the standby loss level associated with the standby loss reduction factor being applied for that level. In addition, because the vast majority of models on the market that meet each thermal efficiency level being analyzed also meet the corresponding standby loss level, further validating the standby loss levels by testing models on the market or by building water heater prototypes is not necessary and was not done for this NOPR.

2. Reduction in Standby Loss Associated With Increased Thermal Efficiency

In the May 2016 CWH ECS NOPR, DOE stated that, for gas-fired storage water heaters, standby loss is a function of storage volume and input rate and is affected by many aspects of the design of a water heater. Further, because standby loss is calculated using the fuel consumed during the test to maintain the water temperature, the standby loss is dependent on the thermal efficiency of the water heater. DOE also suggested that variation in reported standby loss values may be partially attributed to undisclosed technology options (including insulation type and thickness, and baffle design) and sources of variation in the current standby loss test procedure. 81 FR 34440, 34470.

In response to the May 2016 CWH ECS NOPR, commenters questioned the certainty of the relationship between standby loss and thermal efficiency portrayed in DOE's analysis. (*See* Rheem, No. 43 at p. 16; Bradford White, No. 42 at p. 6) In response, DOE notes that although it is true that actual heat losses are largely dependent on tank insulation, fittings, and flue openings, there is also an important distinction to be made between heat loss from the tank and standby loss measured as a function of fuel flow. Increased thermal efficiency does not necessarily affect heat loss from the tank, but it inherently decreases the amount of fuel consumed to reheat the stored water, and thus decreases measured standby loss. Accounting for this inherent difference does not ignore or understate the impacts of water heater design on standby loss.

DOE also recognizes that heat exchangers in non-condensing and condensing storage water heater have different geometries and surface areas. However, DOE's research suggests that many condensing models currently on the market include 1 inch of foam insulation, similar to many baseline non-condensing commercial gas-fired storage water heaters, indicating that the lower standby loss of the condensing models relative to the non-condensing models likely comes as a result of their higher thermal efficiency and condensing heat exchanger designs.

DOE notes that the fact that the vast majority of models on the market already achieve the standby loss decreases that are inherent to increased thermal efficiency from condensing operation using a wide variety of heat exchanger designs (*e.g.,* multi-pass and helical condensing heat exchangers with either a top-fired, side-fired, or bottom-fired configuration [33]) indicates that there are a variety of design paths available to manufacturers to achieve this standby loss reduction. Therefore, DOE maintained its approach to include a dependence of standby loss levels on thermal efficiency in this NOPR. Chapter 5 of the NOPR TSD includes further detail on the dependence of standby loss on thermal efficiency and on the corresponding analysis of models currently on the market.

3. Commercial Gas-Fired Storage Water Heaters and Gas-Fired Storage-Type Instantaneous Water Heaters Technology Options

For commercial gas-fired storage water heaters, DOE preliminarily determined in the May 2016 CWH ECS NOPR analysis that the current minimum Federal standard can be met with installation of 1 inch of fiberglass insulation around the walls of the tank. In the standby loss analysis, DOE considered baseline non-condensing equipment to include electromechanical flue dampers and all condensing equipment to include mechanical draft systems, both of which act to reduce standby losses out the flue. 81 FR 34440, 34470 (May 31, 2016).

In the May 2016 CWH ECS NOPR analysis, DOE then considered the next incremental standby loss level to correspond to the use of 1 inch of sprayed polyurethane foam insulation instead of fiberglass insulation. From DOE's market assessment and manufacturer interviews, DOE found the highest insulation thickness available for commercial gas-fired water heaters to be 2 inches. Therefore, DOE considered the next incremental standby loss level to correspond to 2 inches of polyurethane foam. While more-stringent standby loss levels than the max-tech standby loss level analyzed in the May 2016 CWH ECS NOPR exist on the market, these more-stringent values are only rated for condensing models with specific heat exchanger designs. To avoid mandating specific heat exchanger designs for achieving condensing thermal efficiency levels, DOE considered the max-tech standby loss level to correspond to 2 inches of foam insulation in the May 2016 CWH ECS NOPR. *Id.*

In response to the May 2016 CWH ECS NOPR, A.O. Smith stated that DOE overestimated the max-tech standby loss levels for gas-fired storage water heaters. (A.O. Smith, No. 39 at p. 9) A.O. Smith and Bradford White disagreed with DOE's assertion that the current standby loss standard can be met with 1 inch of fiberglass insulation and with DOE's consideration of this technology option as the baseline standby loss technology for commercial gas-fired storage water heaters. Rather, A.O. Smith and Bradford White argued that models available on the market typically use a combination of fiberglass and sprayed polyurethane foam. (A.O. Smith, No. 39 at p. 10; Bradford White, No. 42 at p. 5) A.O. Smith further argued that if DOE's proposed max-tech standby loss level

[33] In a multi-pass condensing heat exchanger design, the flue gases are forced through flue tubes that span the length of the tank multiple times. Typically, the flue gases are re-directed back through the tank via return plenums located above and/or below the tank. Top-fired, side-fired, and bottom-fired refer to the configuration of the burner assembly (consisting of a gas valve, blower, and premix burner tube) in a condensing gas-fired storage water heater. In a top-fired configuration, the premix burner assembly is located at the top of the tank and fires down into the heat exchanger. In a side-fired configuration, the burner assembly is located on the side of the tank. In a bottom-fired configuration, the burner assembly is located below the tank and fired up into the heat exchanger.

were adopted, it would result in a significant reduction of models available on the market, which would impact competition and pricing. A.O. Smith asserted that DOE does not appreciate the engineering complexity and costs involved in meeting the proposed standby loss standard. A.O. Smith further stated that minimizing heat loss through a heat exchanger while the water heater is in standby mode has a direct and significant correlation to standby loss, and that the methods of reducing standby loss through the heat exchanger are complicated and require use of mechanical draft and changes in controls or heat exchanger geometry. (A.O. Smith, No. 39 at p. 10) A.O. Smith also argued that the current ENERGY STAR standby loss level (*i.e.,* corresponding to a standby loss reduction factor of 0.84) is representative of max-tech technology. (A.O. Smith, No. 39 at p. 11)

Rheem stated that the standby loss level proposed in the May 2016 CWH ECS NOPR cannot be met using the analyzed technology option of 2-inch foam insulation because there is significant heat loss from uninsulated areas of the tank (*e.g.,* fittings). (Rheem, No. 43 at p. 18) Bradford White stated that it was unable to identify any commercial gas-fired storage water heater models at the representative capacities (*i.e.,* 199,000 Btu/h input capacity and 100 gallons rated volume) currently available on the market that meet the max-tech standby level or even some of the intermediate standby loss levels. Bradford White also commented that while some lower-capacity models may meet these standby loss levels, it would be unfair to include them in the analysis for the representative equipment. Bradford White also asserted that the technology options DOE used to select the standby loss levels in the May 2016 CWH ECS NOPR are already used in equipment currently on the market. (Bradford White, No. 42 at pp. 5–6) Bock stated that none of Bock's condensing gas-fired storage models would meet DOE's proposed standby loss standard, even though these models use the technology options that DOE assumes are sufficient to meet the proposed standard. (Bock, No. 33 at p. 1)

In light of comments received regarding the technology options used for baseline models and subsequent DOE research of equipment on the market, DOE agrees that many commercial gas-fired storage water heaters rated at or near the current standby loss standard use a combination of fiberglass and polyurethane foam insulation. Specifically, many models have fiberglass insulation near the bottom of the tank and around fittings and connections, and polyurethane foam insulation covering the rest of the tank walls. DOE acknowledges that changing from 1 inch of fiberglass insulation to 1 inch of foam insulation is not a viable standby-loss-reducing technology option for some models on the market rated at or near the current standby loss standard because they already have 1 inch of foam insulation. Additionally, DOE recognizes that there is significant variation in standby loss ratings for models currently on the market—such that an increase from 1 inch to 2 inches of foam insulation does not necessarily allow all models within a model line to achieve the incremental standby levels corresponding to foam insulation analyzed for the May 2016 CWH ECS NOPR. Specifically, not all models within a model line can necessarily meet a given standby loss level (*i.e.,* standby loss reduction factor, see section IV.C.4.c of this NOPR) with the same insulation thickness. Additionally, stakeholder comments and DOE's research suggest that many commercial gas-fired storage water heaters with standby loss values at or near the current standby loss standard already have foam insulation thicknesses greater than 1 inch. Therefore, increasing foam insulation thickness from 1 inch to 2 inches is also not a viable standby-loss-reducing technology option for some models on the market. Consequently, in this NOPR, DOE did not analyze increasing insulation thickness for commercial gas-fired storage water heaters. The only level of standby loss reduction analyzed for commercial gas-fired storage water heaters in this NOPR corresponds to the standby loss reduction inherent to an increase in thermal efficiency (as discussed previously in this section). Because the analyzed standby loss levels only correspond to the standby loss reduction inherent to achieving each thermal efficiency, DOE expects that at the standby loss levels analyzed, heat exchanger modifications would not be required to meet any of the standby loss levels analyzed for this NOPR.

DOE further notes that all commercial gas-fired storage water heaters that DOE identified on the market have either an electromechanical flue damper (non-condensing models) or mechanical draft technology (condensing models). For the May 2016 CWH ECS NOPR, DOE assumed an equivalent standby loss reduction between these two technologies. The baseline standby loss level reflects use of a flue damper (*i.e.,* the baseline standby loss level is based on non-condensing models). When evaluating condensing thermal efficiency levels, DOE assumed the impact to standby loss from the use of a flue damper, which is not used in condensing models, is equal to the impact from use of mechanical draft.

DOE notes that in the analysis for both the May 2016 CWH ECS NOPR and this NOPR, DOE included the increased standby electrical consumption associated with condensing technology in its determination of the fraction of standby loss attributable to fuel consumption. Chapter 5 of the NOPR TSD includes further detail on the consideration of standby losses from electricity consumption.

DOE recognizes that the primary function of a blower is to propel flue gases as part of a mechanical draft system. However, the fact that it is not the primary function of a blower to restrict flue losses does not necessarily mean that a blower does not have the effect of restricting such flue losses. Similar to a flue damper, a blower sits on the top of the heat exchanger and is a barrier to prevent hot air from rising out of the flue(s) during standby mode. Therefore, in its analysis of the dependence of standby loss on thermal efficiency, DOE maintained its assumption that a blower would provide a similar level of flue loss reduction to that of an electromechanical flue damper. Correspondingly, DOE did not assume any change in flue loss reduction when moving from non-condensing to condensing thermal efficiency levels. This assumption is validated by the previously discussed observation that the majority of condensing commercial gas-fired storage water heaters currently on the market already achieve the inherent standby loss reduction associated with the thermal efficiency increases resulting from condensing operation. As discussed in section IV.C.6 of this NOPR and chapter 5 of the NOPR TSD, DOE's teardown analysis and feedback from manufacturer interviews indicate that blowers are required for condensing operation.

In the May 2016 CWH ECS NOPR TSD, in the context of comparing the standby loss reduction from a flue damper for commercial gas-fired storage water heaters and consumer gas-fired storage water heaters, DOE stated that many commercial water heaters have multiple vented flue pipes, meaning that there is significantly more opportunity for standby loss reduction from a flue damper in commercial water heaters than in consumer water heaters. (Docket No. EERE–2014–BT–STD–

0042–0016 at p. 5–15 [34]) To further clarify, this statement was comparing the standby losses of a consumer gas-fired storage water heater to those of a commercial gas-fired storage water heater. DOE noted that the flue losses would comprise a larger share of total standby loss for a commercial gas-fired storage water heater than for a consumer gas-fired storage water heater. One of DOE's justifications for this argument was that many commercial gas-fired storage water heaters have multiple vented flue pipes, while consumer gas-fired storage water heaters typically only have one flue pipe. DOE clarifies that the phrase ''multiple vented flue pipes'' was meant to refer to multiple flue pipes that exhaust flue gases outside of the tank, though all the flue gases may pass through a collector that has a single outlet to the vent system. Additionally, DOE's intended position was that multiple vented flue pipes would have a higher heat exchanger surface area over which heat can be lost from the stored water when in standby mode.

Table IV.9 presents the examined standby loss levels in this NOPR for commercial gas-fired storage water heaters and storage-type instantaneous water heaters (other than residential-duty gas-fired storage water heaters, which are addressed in the next section). As discussed, these levels reflect only the reduction in standby loss that is achieved by increasing thermal efficiency.

TABLE IV.9—STANDBY LOSS LEVELS FOR COMMERCIAL GAS-FIRED STORAGE WATER HEATERS AND STORAGE-TYPE INSTANTANEOUS WATER HEATERS, 100 GALLON RATED STORAGE VOLUME, 199,000 Btu/h INPUT CAPACITY

Thermal efficiency level	Thermal efficiency (%)	Standby loss (Btu/h)
E_t EL0	80	1349
E_t EL1	82	1316
E_t EL2	90	1223
E_t EL3	92	1197
E_t EL4	95	1160
E_t EL5	99	1115

4. Electric Storage Water Heaters Technology Options

In the withdrawn May 2016 CWH ECS NOPR analysis for electric storage water heaters, DOE determined that the current Federal standard can be met through use of 2 inches of polyurethane foam insulation. Therefore, this design was selected to represent the baseline standby loss level. The more-stringent standby loss level that DOE considered, representing the max-tech efficiency level, corresponded to 3 inches of polyurethane foam insulation.

In response to the May 2016 CWH ECS NOPR, AHRI and A.O. Smith stated that no electric storage water heater models on the market at that time met the proposed standby loss standard. (AHRI, No. 40 at p. 16; A.O. Smith, No. 39 at p. 4) AHRI stated that while DOE has put forward possible engineering paths to reach its proposed standby loss levels, there is no direct manufacturing experience to demonstrate either that these levels can be met in practice or that these levels can be met at the costs projected by DOE. (AHRI, No. 40 at p. 17)

Several commenters suggested that DOE's standby loss calculations overestimate the reduction in standby loss for given technology options for electric storage water heaters. (Bock, No. 33 at p. 4; A.O. Smith, No. 39 at p. 9; Bradford White, No. 42 at p. 7; Rheem, No. 43 at p. 17) A.O. Smith and Bradford White stated that DOE's analyzed technology option for reducing standby loss (*i.e.,* using 3 inches of foam insulation) is already utilized in some electric storage water heaters on the market to meet the current standby loss standard. (A.O. Smith, No. 39 at p. 4; Bradford White, No. 42 at p. 7) A.O. Smith and Rheem commented that there are several models on the market with 3 inches of foam insulation, and none of these models meet the proposed standby loss limits. (A.O. Smith, No. 39 at p. 9; Rheem, No. 43 at p. 17)

Rheem argued that consideration of water heater design was absent from DOE's analysis, and that there should have been a comparison with actual models to validate the theoretical calculations. (Rheem, No. 43 at p. 17)

A.O. Smith argued that DOE created a theoretical max-tech level without explaining whether testing, research, and/or other analysis were performed to validate its theoretical standby loss level. A.O. Smith also argued that DOE has the burden to demonstrate that the proposed level can be achieved. (A.O. Smith, No. 39 at p. 9) EEI requested that DOE clarify whether the proposed 16-percent reduction in standby loss for electric storage water heaters is achievable for larger-volume models. EEI added that commercial electric storage water heaters are sized as large as 10,000 gallons and questioned whether DOE's proposed standby loss reduction is possible for these larger water heaters that have more fittings and surface area (EEI, Public Meeting Transcript, No. 20 at pp. 38–40) AHRI suggested that the standby loss reduction analyzed for electric storage water heaters with 119 gallons storage volume might not scale well for models with storage volume less than 50 gallons, and that these lower-volume models might be adversely affected by DOE's proposed standby loss standard. (AHRI, No. 40 at p. 9)

In light of comments received and DOE's market research, DOE recognizes that some electric storage water heater models currently on the market with 3 inches of foam insulation have a rated standby loss at or near the current standard. Because these models already have 3 inches of foam insulation, the standby loss reduction that DOE attributed to using 3 inches of foam insulation in the May 2016 CWH ECS NOPR would not be achievable for these models using DOE's analyzed technology option. Therefore, in this NOPR, DOE analyzed 3 inches of polyurethane foam insulation as the technology option used to achieve the current standby loss standard. However, 3 inches of foam insulation is also the max-tech technology option, and DOE did not consider any additional technology options for the reduction of standby loss for electric storage water heaters. Therefore, in this NOPR, DOE did not further analyze and is not adopting amended standby loss standards for electric storage water heaters.

c. Uniform Energy Efficiency Levels

As discussed in III.B.1 of this NOPR, DOE conducted all analyses of potential amended standards for residential-duty commercial water heaters in this document in terms of UEF to reflect the current test procedure and metric. However, the withdrawn May 2016 CWH ECS NOPR analysis was conducted in terms of the previous thermal efficiency and standby loss metrics because there were insufficient efficiency data in terms of UEF available when DOE undertook the initial analyses for this proposed rulemaking.

In the May 2016 CWH ECS NOPR analysis for residential-duty gas-fired storage water heaters, DOE previously determined that the Federal standards can be met through use of 1 inch of polyurethane foam insulation. From surveying commercially-available equipment, DOE also determined that all baseline residential-duty gas-fired storage water heaters have a standing pilot and do not use flue dampers. Therefore, in addition to considering increased foam insulation thickness, DOE also considered electromechanical

[34] Page 5–15 of the May 2016 CWH ECS NOPR TSD is page 101 of the document PDF file.

flue dampers and electronic ignition as technology options for improving efficiency. Electromechanical flue dampers were only considered as a technology option for non-condensing residential-duty gas-fired storage water heaters, because flue dampers are not used with mechanical draft systems and condensing water heaters use mechanical draft systems. Therefore, for residential-duty gas-fired storage water heaters, DOE considered electromechanical flue dampers to be a technology option to improve efficiency for non-condensing equipment and considered mechanical draft systems to be featured in all condensing equipment. Both of these technologies improve efficiency by reducing standby losses through the flue during periods when the burner is not operating. Additionally, because all condensing residential-duty gas-fired storage water heaters include electronic ignition, DOE only considered electronic ignition as a technology option for non-condensing residential-duty gas-fired storage water heaters.

In response to the May 2016 CWH ECS NOPR, Bradford White commented that for residential-duty gas-fired storage water heaters, in most cases, 2 inches of polyurethane foam insulation are required to meet the current Federal standard, rather than 1 inch as assumed by DOE in the NOPR. (Bradford White, No. 42 at p. 7)

DOE acknowledges Bradford White's comment that some residential-duty gas-fired storage water heaters with rated standby loss values at or near the current standard (now in terms of UEF rather than standby loss) have 2 inches of polyurethane foam insulation. Because these baseline or near-baseline models already have 2 inches of foam insulation, DOE considered 2 inches of polyurethane foam insulation as a baseline technology option for residential-duty gas-fired storage water heaters, and did not consider any efficiency gains associated with increased insulation.

As previously discussed, electromechanical flue dampers and electronic ignition were only considered as a technology option for non-condensing equipment. Technology options that would specifically decrease standby losses were not considered for condensing residential-duty gas-fired storage water heaters (for which the baseline includes 2 inches of foam insulation and electronic ignition and for which electromechanical flue dampers are not an appropriate technology option). (Even though standby losses are no longer measured directly for residential-duty gas-fired storage water heaters, standby losses still contribute to UEF.)

UEF standards are draw pattern-specific (*i.e.,* there are separate standards for very small, low, medium, and high draw patterns) and are expressed by an equation as a function of the stored water volume. DOE analyzed increased standards in terms of increases to the constant term of the UEF equations and did not consider changes to the slopes of the volume-dependent term. Based on a review of the rated UEF and storage volume for products currently on the market, DOE tentatively determined that the existing slopes of the equations are representative of the relationship between UEF and stored volume across the range of efficiency levels, and thus, DOE did not find justification to consider varying the slope. Additionally, because all residential-duty gas-fired storage water heaters on the market are in the high draw pattern, the analysis was done for the high draw pattern and the same step increase are applied to all other draw patterns. For residential-duty gas-fired storage water heaters, DOE chose four UEF levels between the baseline and max-tech levels for analysis.

To determine the max-tech level, DOE analyzed the difference between UEF ratings of residential-duty gas-fired storage water heaters in its database (see section IV.A.3 of this document) and the minimum UEF allowed for each model based on their rated volumes. The maximum step increase (rounded to the nearest hundredth) was 0.35. However, this level was only achieved at a single storage volume and has not been demonstrated as being achievable across a range of storage volumes. As a result, DOE considered the max-tech step increase to be 0.34, a level that has been demonstrated achievable by residential-duty gas-fired storage water heaters at a range of volumes.

The four intermediate UEF levels are representative of common efficiency levels and those that represent significant technological changes in the design of CWH equipment. Table IV.10 shows the examined UEF levels in this NOPR for residential-duty gas-fired storage water heaters in terms of the incremental step increase and the resulting equation for high draw pattern models.

TABLE IV.10—BASELINE, INTERMEDIATE, AND MAX-TECH UEF LEVELS FOR RESIDENTIAL-DUTY GAS-FIRED STORAGE WATER HEATERS

UEF level	Incremental step increase	UEF (high draw pattern) *
EL0—Baseline	0	$0.6597 - (0.0009 \times V_r)$
EL1	0.02	$0.6797 - (0.0009 \times V_r)$
EL2	0.09	$0.7497 - (0.0009 \times V_r)$
EL3	0.18	$0.8397 - (0.0009 \times V_r)$
EL4	0.27	$0.9297 - (0.0009 \times V_r)$
EL5	0.34	$0.9997 - (0.0009 \times V_r)$

* UEF standards vary based on the test procedure draw pattern that is used to determine the UEF rating. For simplicity and because all residential-duty gas-fired storage water heaters on the market are in the high draw pattern, only the high draw pattern efficiency levels are shown.

5. Standby Loss Reduction Factors

As part of the engineering analysis for commercial gas-fired storage water heaters, DOE reviewed the maximum standby loss equations that define the existing Federal energy conservation standards for gas-fired storage water heaters. The equations allow DOE to expand the analysis on the representative rated input capacity and storage volume to the full range of values covered under the existing Federal energy conservation standards.

DOE uses equations to characterize the relationship between rated input capacity, rated storage volume, and standby loss. The equations allow DOE to account for the increases in standby loss as input capacity and tank volume increase. As the tank storage volume increases, the tank surface area increases, resulting in higher jacket losses. As the input capacity increases, the surface area of flue tubes may increase, thereby providing additional

area for standby heat loss through the flue tubes. The current equations show that for gas-fired storage water heaters, the allowable standby loss increases as the rated storage volume and input rating increase. The current form of the standby loss standard (in Btu/h) for commercial gas-fired and oil-fired water heaters is shown in the multivariable equation below, depending upon both rated input (Q, Btu/h) and rated storage volume (V_r, gal).

$$SL = \frac{Q}{800} + 110\sqrt{V_r}$$

Eq. 1

In order to consider amended standby loss standards for commercial gas-fired storage water heaters, DOE needed to revise the current standby loss standard equation to correspond to the decreased standby loss value, in Btu/h, determined for the representative capacity. In the withdrawn May 2016 CWH ECS NOPR, DOE considered revising the standby loss equations for gas-fired and electric storage water heaters. 81 FR 34440, 34476–34477 (May 31, 2016). However, as discussed in sections III.B.6 and IV.C.4.b of this NOPR, DOE is not proposing to amend the standby loss standard for electric storage water heaters.

DOE analyzed more-stringent standby loss standards by multiplying the current maximum standby loss equation by reduction factors. The use of reduction factors maintains the structure of the current maximum standby loss equation and does not change the dependence of maximum standby loss on rated input and rated storage volume, but still allows DOE to consider increased stringency for standby loss standards. The standby loss reduction factor is calculated by dividing each standby loss level (in Btu/h) by the current standby loss standard (in Btu/h) for the representative input capacity and storage volume.

Table IV.11 shows the standby loss reduction factors determined in this NOPR for commercial gas-fired storage water heaters for each thermal efficiency level. As discussed in section IV.C.4.b of this NOPR, the standby loss reductions associated with commercial gas-fired storage water heaters result from increased thermal efficiency. Chapter 5 of the NOPR TSD includes more detail on the calculation of the standby loss reduction factor.

TABLE IV.11—STANDBY LOSS REDUCTION FACTORS FOR COMMERCIAL GAS-FIRED STORAGE WATER HEATERS

Thermal efficiency level	Thermal efficiency (%)	Standby loss reduction factor
E_t EL0	80	1.00
E_t EL1	82	0.98
E_t EL2	90	0.91
E_t EL3	92	0.89
E_t EL4	95	0.86
E_t EL5	99	0.83

6. Teardown Analysis

After selecting a representative input capacity and representative storage volume (for storage water heaters) for each equipment category, DOE selected equipment near both the representative values and the selected efficiency levels for its teardown analysis. DOE gathered information from these teardowns to create detailed BOMs that included all components and processes used to manufacture the equipment. For the analysis of residential-duty gas-fired storage water heaters DOE identified the UEF ratings of previously torn-down models, wherever possible, and used information from those existing teardowns to inform its analyses. To assemble the BOMs and to calculate the MPCs of CWH equipment, DOE disassembled multiple units into their base components and estimated the materials, processes, and labor required for the manufacture of each individual component, a process known as a ''physical teardown.'' Using the data gathered from the physical teardowns, DOE characterized each component according to its weight, dimensions, material, quantity, and the manufacturing processes used to fabricate and assemble it.

DOE also used a supplementary method called a ''catalog teardown,'' which examines published manufacturer catalogs and supplementary component data to allow DOE to estimate the major differences between equipment that was physically disassembled and similar equipment that was not. For catalog teardowns, DOE gathered product data such as dimensions, weight, and design features from publicly-available information (*e.g.,* manufacturer catalogs and manufacturer websites). DOE also obtained information and data not typically found in catalogs, such as fan motor details or assembly details, from physical teardowns of similar equipment or through estimates based on industry knowledge. The teardown analysis performed for the withdrawn May 2016 CWH ECS NOPR used data from 11 physical teardowns and 22 catalog teardowns to inform development of cost estimates for CWH equipment. In the current NOPR analysis, DOE included results from 11 additional physical teardowns of water heaters and hot water supply boilers. These additional physical teardowns replaced several of the virtual and physical teardowns conducted for the NOPR analysis to ensure that the MPC estimates better reflect designs of models on the market by including physical teardowns of models from additional manufacturers at numerous efficiency levels. Chapter 5 of the NOPR TSD provides further detail on the CWH equipment units that were torn down.

The teardown analysis allowed DOE to identify the technologies that manufacturers typically incorporate into their equipment, along with the efficiency levels associated with each technology or combination of technologies. As noted previously, the end result of each teardown is a structured BOM, which DOE developed for each of the physical and catalog teardowns. The BOMs incorporate all materials, components, and fasteners (classified as either raw materials or purchased parts and assemblies) and characterize the materials and components by weight, manufacturing processes used, dimensions, material, and quantity. The BOMs from the teardown analysis were then used to calculate the MPCs for each type of equipment that was torn down. The MPCs resulting from the teardowns were then used to develop an industry

average MPC for each efficiency level and equipment category analyzed. Chapter 5 of the NOPR TSD provides more details on BOMs and how they were used in determining the manufacturing cost estimates.

During the manufacturer interviews, DOE requested feedback on the engineering analysis and the assumptions that DOE used in the May 2016 CWH ECS NOPR. DOE used the information it gathered from those interviews, along with the information obtained through the teardown analysis, to refine the assumptions and data used to develop MPCs. Chapter 5 of the NOPR TSD provides additional details on the teardown process.

During the teardown process, DOE gained insight into the typical technology options manufacturers use to reach specific efficiency levels. DOE also determined the efficiency levels at which manufacturers tend to make major technological design changes. Table IV.12 through Table IV.15 show the major technology options DOE observed and analyzed for each efficiency level and equipment category. DOE notes that in equipment above the baseline, and sometimes even at the baseline efficiency, additional features and functionalities that do not impact efficiency are often used to address non-efficiency-related consumer demands (*e.g.,* related to comfort or noise when operating). DOE did not include the additional costs for options such as advanced building communication and control systems or powered anode rods that are included in many of the high-efficiency models currently on the market, as they do not improve efficiency but do add cost to the model. In other words, DOE assumed the same level of non-efficiency related features and functionality at all efficiency levels. Chapter 5 of the NOPR TSD includes further detail on the exclusion of costs for non-efficiency-related features from DOE's MPC estimates.

TABLE IV.12—TECHNOLOGIES IDENTIFIED AT EACH THERMAL EFFICIENCY LEVEL FOR COMMERCIAL GAS-FIRED STORAGE WATER HEATERS

Thermal efficiency level	Thermal efficiency (%)	Design changes *
E_t EL0	80	
E_t EL1	82	Increased heat exchanger area.
E_t EL2	90	Condensing heat exchanger, forced draft blower, premix burner.
E_t EL3	92	Condensing heat exchanger, forced draft blower, premix burner, increased heat exchanger surface area.
E_t EL4	95	Condensing heat exchanger, forced draft blower, premix burner, increased heat exchanger surface area.
E_t EL5	99	Condensing heat exchanger, forced draft blower, premix burner, increased heat exchanger surface area.

* The condensing heat exchanger surface area incrementally increases at each EL from E_t EL2 to E_t EL5.

TABLE IV.13—TECHNOLOGIES IDENTIFIED AT EACH THERMAL EFFICIENCY LEVEL FOR RESIDENTIAL-DUTY GAS-FIRED STORAGE WATER HEATERS

UEF level	UEF (high draw pattern) *	Design changes **
EL0—Baseline	$0.6597 - (0.0009 \times V_r)$.	
EL1	$0.6797 - (0.0009 \times V_r)$	Increased heat exchanger area.
EL2	$0.7497 - (0.0009 \times V_r)$	Electronic ignition, electromechanical flue damper or power venting; increased heat exchanger area.
EL3	$0.8397 - (0.0009 \times V_r)$	Electronic ignition; condensing heat exchanger; power venting.
EL4	$0.9297 - (0.0009 \times V_r)$	Electronic ignition; condensing heat exchanger; power venting; premix burner; increased heat exchanger area.
EL5	$0.9997 - (0.0009 \times V_r)$	Electronic ignition; condensing heat exchanger; power venting; premix burner; increased heat exchanger area.

* UEF standards vary based on the test procedure draw pattern that is used to determine the UEF rating. For simplicity and because all residential-duty gas-fired storage water heaters on the market are in the high draw pattern, only the high draw pattern efficiency levels are shown.

** The condensing heat exchanger surface area incrementally increases at each EL from EL3 to EL5.

TABLE IV.14—TECHNOLOGIES IDENTIFIED AT EACH THERMAL EFFICIENCY LEVEL FOR GAS-FIRED TANKLESS WATER HEATERS

Thermal efficiency level	Thermal efficiency (%)	Design changes *
E_t EL0	80	
E_t EL1	82	Increased heat exchanger area.
E_t EL2	84	Increased heat exchanger area.
E_t EL3	92	Secondary condensing heat exchanger.
E_t EL4	94	Secondary condensing heat exchanger, increased heat exchanger surface area.
E_t EL5	96	Secondary condensing heat exchanger, increased heat exchanger surface area.

* The heat exchanger surface area incrementally increases at each EL from E_t EL0 to E_t EL2 and from E_t EL3 to E_t EL5.

TABLE IV.15—TECHNOLOGIES IDENTIFIED AT EACH THERMAL EFFICIENCY LEVEL FOR GAS-FIRED CIRCULATING WATER HEATERS AND HOT WATER SUPPLY BOILERS

Thermal efficiency level	Thermal efficiency (%)	Design changes *
E_t EL0	80	
E_t EL1	82	Increased heat exchanger area.
E_t EL2	84	Increased heat exchanger area, induced draft blower.
E_t EL3	92	Condensing heat exchanger, forced draft blower, premix burner.
E_t EL4	94	Condensing heat exchanger, forced draft blower, premix burner, increased heat exchanger surface area.
E_t EL5	96	Condensing heat exchanger, forced draft blower, premix burner, increased heat exchanger surface area.

* The heat exchanger surface area incrementally increases at each EL from E_t EL0 to E_t EL2 and from E_t EL3 to E_t EL5.

From surveying models currently on the market, DOE determined that the only design change for many efficiency levels is an increased heat exchanger surface area. Based upon heat exchanger calculations and feedback from manufacturer interviews, DOE determined a factor by which heat exchangers would need to expand to reach higher thermal efficiency levels. This factor was higher for condensing efficiency levels than for non-condensing efficiency levels. Chapter 5 of the NOPR TSD provides more information on these heat exchanger sizing calculations, as well as on the technology options DOE considered at each efficiency level.

In response to the May 2016 CWH ECS NOPR, DOE received comments from stakeholders questioning the typical design features assumed in DOE's analysis. For example, Bradford White stated that manufacturers must use more anode rods on products with more flues (*i.e.,* higher thermal efficiency) to ensure the product is sufficiently protected against corrosion. (Bradford White, No. 42 at p. 7)

Lochinvar commented that in determining manufacturer production cost, DOE should take into consideration that condensing equipment requires costlier, corrosion-resistant material. In addition, Lochinvar stated that use of such corrosion-resistant material means condensing equipment may not need anode rods. Lochinvar further stated that anode rods are required for condensing equipment that is built from less expensive, corrosive materials. (Lochinvar, Public Meeting Transcript, No. 20 at p. 44)

In the May 2016 CWH ECS NOPR analysis, DOE assumed that the number of anode rods is independent of efficiency and, thus, analyzed the same number of anode rods across all efficiency levels for each storage water heater class. However, DOE recognizes that the welds inside a storage water heater are typically the primary source of concern for corrosion inside a storage water heater. As stated by Bradford White, a condensing gas-fired storage water heater with a multi-pass heat exchanger design [35] will typically have more flue pipes and, therefore, more welds (joining the flue pipe and tank top or bottom) than would a non-condensing gas-fired storage water heater. Therefore, DOE acknowledges that condensing gas-fired storage water heaters may require an additional anode rod to compensate for the additional welds, relative to a non-condensing gas-fired storage water heater. To reflect this possibility, DOE included the costs of an additional anode rod for residential-duty and commercial gas-fired storage water heaters with a multi-pass condensing heat exchanger design. In response to Lochinvar, DOE included the cost of anode rods in its cost estimates for storage water heaters if the tank and heat exchanger are not constructed entirely from corrosion-resistant materials (*e.g.,* stainless steel or cupronickel), but did not include the cost of anode rods for designs where the tank and heat exchanger are constructed of corrosion-resistant alloys. Manufacturer literature for storage water heaters constructed with stainless steel tanks and heat exchangers indicate that such models do not require anode rods for corrosion protection. Chapter 5 of the NOPR TSD includes further detail on the number of anode rods DOE analyzed to develop cost estimates for storage water heaters.

In addition, DOE notes that many condensing gas-fired storage water heaters currently on the market are often marketed as premium products and include non-efficiency-related features. Some of these features, such as built-in diagnostics and run history information, may require user interfaces, but a user interface is not necessary for operation of a condensing gas-fired storage water heater. DOE research suggests that condensing appliances may feature as little as a push button and several light-emitting diodes on the control board to communicate the status of the unit, error codes, and so on. Some condensing models on the market also include modulating burners and gas valves, which do require more sophisticated controls. However, modulation is not required to achieve condensing operation for gas-fired storage water heaters and does not affect efficiency as measured by DOE's test procedure, and DOE notes that many condensing gas-fired storage water heaters currently on the market do not include modulating combustion systems or the corresponding more sophisticated controls. While a condensing combustion assembly (comprising a gas valve, blower, and premix burner) may require calibration by the manufacturer (the costs for which DOE accounts in its development of cost estimates), DOE does not believe that a technician would need a user interface included within the water heater to service a gas-fired storage water heater with a non-modulating combustion assembly. In order to accurately assess the costs of adopting a more-stringent standard, DOE only considers costs of components that are necessary for models to achieve each efficiency level as measured by DOE's test procedure. Therefore, DOE does not include the costs of features such as modulation, more sophisticated controls, and powered anode rods. Chapter 5 of the NOPR TSD includes further detail on the exclusion of costs for non-efficiency-related features from DOE's MPC estimates.

In the May 2016 CWH ECS NOPR TSD, in the context of assessing market standby loss data for commercial gas-fired storage water heaters, DOE stated that, relative to non-condensing models, many condensing models tend to have fewer flue pipes that vent because the

[35] In a multi-pass condensing heat exchanger design, the flue gases are forced through flue tubes that span the length of the tank multiple times. Typically, the flue gases are re-directed back through the tank via return plenums located above and below the tank.

flue gas must follow a longer path within the heat exchanger to begin condensation. DOE further stated that because there are fewer pipes that vent outside the water heater in most condensing models than in non-condensing models, less heat is lost out of these pipes in standby mode. DOE also mentioned that standby loss for condensing models would generally be lower than for non-condensing models because standby loss is in large part dependent on thermal efficiency, because standby loss is calculated using fuel flow to the burner during the test period. (Docket No. EERE–2014–BT–STD–0042–0016 at pp. 3–21) [36] This statement appears to have caused confusion among stakeholders as to DOE's assumptions about typical condensing heat exchanger designs.

To clarify, DOE notes that, as stated in chapter 5 of the withdrawn May 2016 CWH ECS NOPR TSD, DOE did not assume that manufacturers will switch from their current condensing heat exchanger designs to a helical condensing heat exchanger design. (Docket No. EERE–2014–BT–STD–0042–0016 at pp. 5–21) [37] In the engineering analysis, DOE assumed that manufacturers would continue making condensing gas-fired storage water heaters with heat exchangers similar in design to those included in their current product offerings. Therefore, DOE modeled both helical and multi-pass condensing heat exchanger designs [38] and calculated a weighted average MPC based on manufacturer market shares. The intent of DOE's aforementioned statements in the May 2016 CWH ECS NOPR TSD was to explain why condensing gas-fired storage water heaters currently on the market typically have lower standby losses than do non-condensing storage water heaters. Rather than assuming that manufacturers would change their designs, DOE was simply interpreting the efficiency distributions of models currently on the market. DOE clarifies that the intended meaning of its statement was that condensing gas-fired storage water heaters (including those with helical and multi-pass condensing heat exchanger designs) typically have less surface area on flue pipes (*i.e.,* fewer pipes or smaller-diameter pipes) that vent vertically outside the top of the water heater and into the vent system than do non-condensing gas-fired storage water heaters, therefore providing less opportunity for standby heat loss. In other words, in non-condensing gas-fired storage water heaters, all flue pipes typically vent outside the water heater; therefore, all flue pipes provide a direct air path for standby flue losses out the top of the water heater. Conversely, condensing heat exchangers often include flue pipes (or a single helical pipe) that do not vent out to the top of the water heater and therefore do not provide a direct air path for flue losses (*e.g.,* in a multi-pass heat exchanger, flue gases in many tubes are re-routed within the heat exchanger rather than vented outside the water heater).

Additionally, DOE notes that it has identified at least one manufacturer who produces commercial gas-fired tankless water heaters that include a secondary, condensing heat exchanger made of an aluminum alloy and are intended for potable water heating applications. Therefore, DOE included the manufacturing costs of this model in its market-share weighted average MPCs for gas-fired tankless water heaters in the analyses for both the May 2016 CWH ECS NOPR and this NOPR. However, DOE did not identify any circulating water heaters or hot water supply boilers on the market that include an aluminum heat exchanger, and, therefore, DOE only included condensing heat exchangers made of stainless steel in its cost estimates for circulating water heaters and hot water supply boilers. Chapter 5 of the NOPR TSD includes further details on the materials and cost estimates for condensing heat exchangers.

In the analysis for the withdrawn May 2016 CWH ECS NOPR, DOE did not include the costs of ASME construction as part of the MPC. Bradford White disagreed with DOE's decision not to include the costs of ASME construction in cost estimates for commercial gas-fired storage water heaters, and argued that DOE should consider these costs in its analysis. Bradford White stated that while ASME construction is not required in most States for storage water heaters at DOE's representative capacity (*i.e.,* 100 gallons, 199,000 Btu/h), ASME construction is required for models with an input capacity exceeding the ASME criteria. According to the commenter, manufacturing costs would be higher for condensing products if ASME construction is required. Bradford White also pointed out that Kansas requires ASME construction for all storage water heaters with a storage volume exceeding 85 gallons. (Bradford White, No. 42 at p. 7)

In response to Bradford White's concerns, DOE adjusted its MPC estimates for commercial gas-fired storage water heaters for this NOPR to account for the costs of ASME construction. Specifically, DOE estimated that 20 percent of commercial gas-fired storage water heater shipments are manufactured with ASME construction, based on feedback from manufacturer interviews. For this share of the market, DOE applied a multiplier of 1.2 to the MPC to account for the various costs associated with ASME construction (*e.g.,* materials, labor, testing). This multiplier is consistent with feedback from manufacturer interviews and with the approach DOE used for estimating the costs of ASME construction for instantaneous water heaters and hot water supply boilers in the May 2016 CWH ECS NOPR engineering analysis. Chapter 5 of the NOPR TSD includes additional details on DOE's analysis of ASME construction for commercial gas-fired storage water heaters.

In the analysis for the withdrawn May 2016 CWH ECS NOPR, DOE estimated the burdened assembly and fabrication labor wages as $24/hour.[39] In response, Bradford White indicated that the average burdened assembly and fabrication labor wages used in DOE's analysis of $24/hour was significantly too low. Bradford White stated that this value is closer to the actual value (but still low) if DOE is only considering wages plus benefits. However, Bradford White argued that DOE should consider fully burdened wages (including wages, benefits, and overhead) in its cost estimates. Bradford White further stated that it provided similar feedback regarding the burdened wage during manufacturer interviews and was disappointed that this feedback was not incorporated in the May 2016 CWH ECS NOPR analysis. (Bradford White, No. 42 at p. 14)

In response, DOE's estimate of $24/hour for burdened assembly and fabrication labor wages is based on feedback from manufacturer interviews across many manufacturing industries. DOE typically uses the same wage estimate for many manufacturing industries because the wages across these industries are competitive (*e.g.,* welders are in demand in many manufacturing industries in addition to the CWH equipment industry). DOE also notes that other than Bradford White, no

[36] Page 3–21 of the May 2016 CWH ECS NOPR TSD is page 56 of the document PDF file.

[37] Page 5–21 of the May 2016 CWH ECS NOPR TSD is page 107 of the document PDF file.

[38] In a multi-pass condensing heat exchanger design, the flue gases are forced through flue tubes that span the length of the tank multiple times. Typically, the flue gases are re-directed back through the tank via return plenums located above and below the tank.

[39] DOE uses the term ''burdened wage'' to refer to the gross wages and benefits paid to a manufacturing employee.

manufacturers of CWH equipment indicated that this labor wage estimate was too low in either public comments or manufacturer interviews. Additionally, DOE does not consider employee overhead costs in its labor wage estimates. While Bradford White's comment does not specify what is meant by ''overhead,'' DOE presumes that the costs to which Bradford White is referring to are those that DOE designates as ''non-production costs,'' such as general corporate costs or, alternatively, a ''shop rate.'' The DOE wage estimate reflects only gross wages and benefits to the employee. Other overhead costs are captured in the manufacturer markup that is applied to the manufacturer production cost to determine the manufacturer selling price. DOE does not believe that these costs would directly scale with increased labor requirements in the same manner as wages and benefits. However, in order to better represent the costs for Bradford White of manufacturing CWH equipment, DOE included a 20 percent higher value for burdened assembly and fabrication labor wages for a portion of the market in the development of MPC estimates in this NOPR.

7. Manufacturing Production Costs

After calculating the cost estimates for all the components in each torn-down unit, DOE totaled the cost of materials, labor, depreciation, and direct overhead used to manufacture each type of equipment in order to calculate the MPC. DOE used the results of the teardowns on a market-share weighted average basis to determine the industry average cost increase to move from one efficiency level to the next. DOE reports the MPCs in aggregated form to maintain confidentiality of sensitive component data. DOE obtained input from manufacturers during the manufacturer interview process on the MPC estimates and assumptions. Chapter 5 of the NOPR TSD contains additional details on how DOE developed the MPCs and related results.

DOE estimated the MPC at each efficiency level considered for representative equipment of each equipment category. DOE also calculated the percentages attributable to each element of total production costs (*i.e.,* materials, labor, depreciation, and overhead). These percentages are used to validate the assumptions by comparing them to manufacturers' actual financial data published in annual reports, along with feedback obtained from manufacturers during interviews.

DOE notes that it developed its MPC estimates based on teardowns of CWH equipment from a variety of manufacturers. DOE conducted several rounds of manufacturer interviews and follow-up interviews with all CWH equipment manufacturers that responded to DOE's requests for interviews. As part of the manufacturer interview process, DOE sought feedback on its MPC estimates, as well as feedback on specific component, material, labor, and assembly costs. DOE's methodology for developing MPC estimates involves estimating the material, labor, depreciation, and overhead costs for every part and assembly within a unit. This level of detail allows DOE to estimate the cost of units that were not physically torn down, or to estimate the costs of making slight design changes such as adding an inch of insulation or increasing heat exchanger size. DOE presented manufacturers with MPC estimates broken down by each assembly (*e.g.,* burner and gas valve, heat exchanger, controls) of the water heater, or even a BOM of a torn-down unit from that manufacturer for specific feedback on the estimated costs for every single part within the torn-down unit. As part of the manufacturer interview process, manufacturers did not provide any specific feedback on components or labor that would call into question the validity of the incremental MPC estimates for moving from non-condensing to condensing technology. The incremental MPC estimate reflects the additional components needed to build a condensing product while subtracting components that are either replaced or obviated. For example, condensing gas-fired storage water heaters require a mechanical draft combustion system, while baseline non-condensing models do not. Conversely, baseline non-condensing commercial water heaters typically include an electromechanical flue damper, while condensing models do not because they have a mechanical-draft combustion system that obviates the need for a flue damper.

Additionally, as discussed in section IV.C.6 of this NOPR, DOE standardized non-efficiency-related features across all efficiency levels. This may cause DOE's incremental MPC estimates to seem lower than that of equipment currently on the market, because in many cases condensing equipment is currently marketed as a premium product and includes features (*e.g.,* advanced controls, powered anode rods, modulating gas valves) that are not necessary for condensing operation and do not affect efficiency as measured by DOE's test procedure. Chapter 5 of the NOPR TSD includes further detail on the exclusion of costs for non-efficiency-related features from DOE's MPC estimates.

The MPC estimates presented in this NOPR and chapter 5 of the NOPR TSD are market-shared weighted average MPCs, which will not necessarily be representative for every design pathway used by every manufacturer (*i.e.,* they reflect the industry average cost). DOE research suggests that the absolute and incremental MPCs between baseline and condensing levels are higher for some manufacturers than others. Therefore, DOE included multiple design pathways that are used by a range of manufacturers and that represent the vast majority of models on the market in the market-share weighted average cost estimates, both in absolute as well as incremental terms.

Regarding MPC estimates for tankless water heaters, DOE notes that a significant difference between the incremental cost for condensing technology for gas-fired storage water heaters and gas-fired tankless water heaters is the cost of a blower. DOE research and manufacturer feedback suggest that commercial gas-fired tankless water heaters typically feature forced-draft combustion systems, necessitating a blower for both condensing as well as non-condensing models. Therefore, while reflected in the incremental MPC difference between non-condensing and condensing gas-fired storage water heaters, the cost of a blower would not be reflected in the incremental MPC difference for moving from non-condensing to condensing technology for gas-fired tankless water heaters.

Regarding the incremental costs between condensing levels, the additional heat exchanger area required in DOE's analysis to increase thermal efficiency between condensing levels is based upon feedback from manufacturer interviews. Multiple condensing units that DOE torn down had a rated thermal efficiency in the middle of the range of condensing thermal efficiency levels (*e.g.,* 95–96 percent). MPC estimates for lower condensing efficiency levels (*i.e.,* 90 and 92 percent) were developed by scaling down the design of more-efficient units by reducing the size of their condensing heat exchangers, while assuming other components generally do not change, as described in detail in chapter 5 of the NOPR TSD.

Finally, DOE notes that its analysis does not consider labor to be a fixed cost and instead determines the labor hours required for production separately

for each efficiency level and each equipment category. Therefore, DOE's analysis takes into account the costs for any additional labor required for producing more efficient equipment.

For the reasons previously mentioned, DOE has tentatively concluded that its methodology for developing MPC estimates initially presented in the May 2016 CWH ECS NOPR is sound and has maintained the same methodology for this NOPR. In addition, as noted previously, this NOPR analysis includes results from 11 additional physical teardowns of water heaters and hot water supply boilers (in addition to the physical teardowns performed for the previous (withdrawn) NOPR analysis of models still available on the market), which replaced several of the virtual teardowns conducted for the previous NOPR analysis. These additional physical teardowns were performed to ensure that the MPC estimates better reflect designs of models on the market by including physical teardowns of models from additional manufacturers at numerous efficiency levels. Additionally, DOE revised inputs to the development of MPC estimates based on updated pricing information (for raw materials and purchased parts). These changes resulted in refined MPCs and production cost percentages. Table IV.16, Table IV.17, and Table IV.18 of this document show the MPC for each combination of thermal efficiency and standby loss levels for each equipment category.

TABLE IV.16—MANUFACTURER PRODUCTION COSTS FOR COMMERCIAL GAS-FIRED STORAGE WATER HEATERS, 100-GALLON RATED STORAGE VOLUME, 199,000 Btu/h INPUT CAPACITY

Thermal efficiency level	Thermal efficiency	MPC (2020$)
E_t EL0	80	$1,180.42
E_t EL1	82	1,200.45
E_t EL2	90	1,306.87
E_t EL3	92	1,317.83
E_t EL4	95	1,338.92
E_t EL5	99	1,377.83

TABLE IV.17—MANUFACTURER PRODUCTION COSTS FOR RESIDENTIAL-DUTY GAS-FIRED STORAGE WATER HEATERS, 75-GALLON RATED STORAGE VOLUME, 76,000 Btu/h INPUT CAPACITY

Efficiency level	UEF (high draw pattern) *	MPC (2020$)
EL0	$0.6597 - (0.0009 \times V_r)$	$318.64
EL1	$0.6797 - (0.0009 \times V_r)$	323.35
EL2	$0.7497 - (0.0009 \times V_r)$	411.16
EL3	$0.8397 - (0.0009 \times V_r)$	474.64
EL4	$0.9297 - (0.0009 \times V_r)$	645.18
EL5	$0.9997 - (0.0009 \times V_r)$	663.47

* UEF standards vary based on the test procedure draw pattern that is used to determine the UEF rating. For simplicity and because all residential-duty gas-fired storage water heaters on the market are in the high draw pattern, only the high draw pattern efficiency levels are shown.

TABLE IV.18—MANUFACTURER PRODUCTION COSTS FOR GAS-FIRED INSTANTANEOUS WATER HEATERS AND HOT WATER SUPPLY BOILERS

Thermal efficiency level	Thermal efficiency (%)	MPC (2020$)	
		Gas-fired tankless water heaters	Gas-fired circulating water heaters and hot water supply boilers
		250,000 Btu/h	399,000 Btu/h
E_t EL0	80	$517.86	$1,006.19
E_t EL1	82	525.79	1,015.39
E_t EL2	84	533.55	1,097.04
E_t EL3	92	608.08	2,655.89
E_t EL4	94	624.08	2,811.34
E_t EL5	96	647.19	2,966.78

8. Manufacturer Markup and Manufacturer Selling Price

To account for manufacturers' non-production costs and profit margin, DOE applies a non-production cost multiplier (the manufacturer markup) to the full MPC. The resulting MSP is the price at which the manufacturer can recover all production and non-production costs and earn a profit. To calculate the manufacturer markups, DOE used data from 10–K reports [40] submitted to the U.S. Securities and Exchange Commission (''SEC'') by the three publicly-owned companies that manufacture CWH equipment. DOE averaged the financial figures spanning the years 2008 to 2013 in order to calculate the initial estimate of markups for CWH equipment for this proposed rulemaking. During interviews conducted ahead of the withdrawn May 2016 CWH ECS NOPR, DOE discussed the manufacturer markup with manufacturers and used the feedback to modify the manufacturer markup calculated through review of SEC 10–K reports. DOE considers the manufacturer markup published in the May 2016 CWH ECS NOPR to be the best publicly available information. In this NOPR, DOE is maintaining the manufacturer markups used previously in the May 2016 CWH ECS NOPR, as DOE has not received any additional information or data to indicate that a change would be warranted.

To calculate the MSP for CWH equipment, DOE multiplied the calculated MPC at each efficiency level by the manufacturer markup. See chapter 12 of the NOPR TSD for more details about the manufacturer markup calculation and the MSP calculations.

9. Shipping Costs

Manufacturers of CWH equipment typically pay for shipping to the first step in the distribution chain. Freight is not a manufacturing cost, but it is a substantial cost incurred by the manufacturer that is passed through to

[40] U.S. Securities and Exchange Commission, Annual 10–K Reports (Various Years) (Available at *sec.gov*).

consumers. Therefore, DOE accounted for shipping costs of CWH equipment separately from other non-production costs.

In the May 2016 CWH ECS NOPR, shipping costs for all classes of CWH equipment were determined based on the area of floor space occupied by the unit. In response, Bradford White stated that while consumer water heaters are mostly shipped in semi-trailers, it is more common for commercial water heaters to be shipped via less than truckload (''LTL''), when either lower quantities are being shipped, potentially in an emergency situation, or when a semi-trailer is not going to the area to which the commercial water heater is being delivered. Bradford White stated that DOE's analysis should be weighted more to LTL shipping, which is based on weight. Per Bradford White, condensing water heaters are heavier than non-condensing models and hence would cost more to ship on an LTL basis. Bradford White also commented that commercial and residential-duty storage water heaters are typically shipped with consumer water heaters for distributors stocking inventory, rather than being segregated. (Bradford White, No. 42 at p. 12) Bradford White also disagreed with DOE's statement in the May 2016 CWH ECS NOPR that an increase of height of storage water heaters would not affect shipping costs because commercial storage water heaters cannot be double-stacked. Bradford White argued that when commercial storage water heaters are shipped via semi-trailers, it is very common for the space above them to be used for smaller products. (Bradford White, No. 42 at pp. 12–13)

DOE research suggests that trailers either cube-out (*i.e.,* run out of floor space or storage volume) or weigh-out (*i.e.,* reach their allowed weight limits). Because storage water heaters are filled with air during shipping and instantaneous water heaters and hot water supply boilers are typically lighter than commercial storage water heaters, DOE research suggests that trailers filled with CWH equipment will typically cube-out before they weigh-out. Additionally, because the space above and around the CWH equipment can be filled with smaller and/or lighter products, DOE understands that trailers are typically filled in a way that maximizes the available storage space. As a result, changes to the cubic volume of the product are just as critical as changes to the footprint in determining the change to the shipping cost as unit size increases. DOE's shipping cost analysis only includes estimates of the shipping costs for CWH equipment, not for other products that may be included in the same truckload, although CWH equipment is likely to be shipped alongside other products, presumably to make efficient use of the space in shipping trailers. DOE notes that this is supported by Bradford White's comment that CWH equipment is often shipped with consumer water heaters.

Therefore, in this proposed rulemaking, shipping costs for all classes of CWH equipment were determined based on the cubic volume occupied by the representative units. DOE first calculated the cost per usable unit volume of a trailer, using the standard dimensions of a volume of a 53-foot trailer and an estimated 5-year average cost per shipping load that approximates the cost of shipping the equipment from the middle of the country to either coast. Based on its experience with other rulemakings, DOE recognizes that trailers are rarely shipped completely full and, in calculating the cost per cubic foot, assumed that shipping loads would be optimized such that on average 80 percent of the volume of a shipping container would be filled with cargo. DOE seeks feedback on its assumption about the typical percent of a shipping trailer volume that is filled. The calculated cost to ship each unit was the ratio of the unit's total volume (including packaging) divided by the volume of the shipping container expected to be filled with cargo and multiplied by the total cost of shipping the trailer. DOE recognizes that its shipping costs do not necessarily reflect how every unit of CWH equipment is shipped, that it is possible that a units are shipped differently, and that the corresponding shipping costs may differ from DOE's estimates based on a variety of factors such as composition of the units in a given shipping load and the actual manufacturing location and shipment destination. However, DOE's analysis is intended to provide an estimate of the shipping cost that is representative of the cost to ship the majority of CWH equipment shipments and cannot feasibly account for the shipping costs of every individual unit shipped. Chapter 5 of the NOPR TSD contains additional details about DOE's shipping cost assumptions and DOE's shipping cost estimates.

D. Markups Analysis

The markups analysis develops appropriate markups in the distribution chain (*e.g.,* retailer markups, distributer markups, contractor markups, and sales taxes) to convert the estimates of manufacturer selling price derived in the engineering analysis to consumer prices, which are then used in the LCC and PBP analysis and in the manufacturer impact analysis. At each step in the distribution channel, companies mark up the price of the product to cover business costs and profit margin.

DOE developed baseline and incremental markups for each actor in the distribution chain. DOE developed supply chain markups in the form of multipliers that represent increases above equipment purchase costs for key market participants, including CWH equipment wholesalers/distributors, retailers, and mechanical contractors and general contractors working on behalf of commercial consumers. Baseline markups are applied to the price of products with baseline efficiency, while incremental markups are applied to the difference in price between baseline and higher-efficiency models (the incremental cost increase). The incremental markup is typically less than the baseline markup and is designed to maintain similar per-unit operating profit before and after amended standards.[41]

1. Distribution Channels

Four different markets exist for CWH equipment: (1) New construction in the residential buildings sector, (2) new construction in the commercial buildings sector, (3) replacements in the residential buildings sector, and (4) replacements in the commercial buildings sector. DOE developed eight distribution channels to address these four markets.

For the residential and commercial buildings sectors, DOE characterizes the replacement distribution channels as follows:

- Manufacturer → Wholesaler → Mechanical Contractor → Consumer
- Manufacturer → Manufacturer Representative → Mechanical Contractor → Consumer
- Manufacturer → Retailer → Mechanical Contractor → Consumer

DOE characterizes the new construction distribution channels for the residential and commercial buildings sectors as follows:

- Manufacturer → Wholesaler → Mechanical Contractor → General Contractor → Consumer

[41] Because the projected price of standards-compliant products is typically higher than the price of baseline products, using the same markup for the incremental cost and the baseline cost would result in higher per-unit operating profit. While such an outcome is possible, DOE maintains that in markets that are reasonably competitive it is unlikely that standards would lead to a sustainable increase in profitability in the long run.

- Manufacturer → Manufacturer Representative → Mechanical Contractor → General Contractor → Consumer
- Manufacturer → Retailer → General Contractor → Consumer

In addition to these distribution channels, there are scenarios in which manufacturers sell CWH equipment directly to a consumer through a national account, or a consumer purchases the equipment directly from a retailer. These scenarios occur in both new construction and replacements markets and in both the residential and commercial sectors. In these instances, installation is typically accomplished by site personnel. These distribution channels are depicted as follows:

- Manufacturer → Consumer
- Manufacturer → Retailer → Consumer

2. Comments on Withdrawn May 2016 CWH ECS NOPR

In response to the withdrawn NOPR, Rheem challenged DOE's use of the 2005 the Air Conditioning Contractors of America (''ACCA'') financial analysis in the development of markups on the basis that it is outdated. (Rheem, No. 43 at p. 21) DOE develops its mechanical contractor markups using the most current data available. For this NOPR, DOE updated from the 2012 Economic Census to use data from the 2017 Economic Census. However, the 2017 Economic Census does not separate the mechanical contractor segment into replacement and new construction markets. To calculate markups for these two markets for the withdrawn NOPR, DOE utilized the 2005 ACCA financial data, which reported gross margin data for the entire mechanical contractor market, as well as for both the replacement and new construction markets. For this NOPR, DOE used more current data from the 2020 ACCA Cool Insights document. Using these data, DOE calculated that the baseline markups for the replacement and new construction markets are 1.7 and 15.5 percent lower, respectively, than for all mechanical contractors serving all markets. The markup deviations were applied to the baseline and incremental markups developed from the 2017 Economic Census data.

In the withdrawn NOPR, DOE sought comments on the percentages of shipments allocated to the distribution channels relevant to each equipment class. 81 FR 34440, 34479 (May 31, 2016). In response, three manufacturers commented that wholesalers and manufacturer's representatives were underrepresented in DOE's channel shares, whereas retailers were overrepresented. (A.O. Smith, No. 39 at pp. 11–12; Bradford White, No. 42 at p. 8; Lochinvar, Public Meeting Transcript, No. 20 at p. 52) In addition, Rheem commented that it was reiterating its response to the October 2014 RFI regarding the percentage of shipments allocated to distribution channels. (Rheem, No. 43 at p. 21) In this response, Rheem stated that the majority of shipments are distributed through the wholesale channel. (Rheem, No. 10, at p. 4)

Based on these comments and DOE's additional research, DOE has decreased the percentage of shipments allocated to retail distribution channels and increased the percentage of shipments allocated to wholesaler and manufacturer's representative channels in the markups analysis. For circulating water heater and hot water supply boiler equipment, the percentage of shipments allocated to retailers was decreased from 5 percent to zero, whereas the allocation to wholesalers was increased from 70 percent to 75 percent. For commercial gas-fired storage water heater equipment, the percentage of shipments allocated to retailers was decreased from 15 percent to 5 percent in the new construction market and from 20 percent to 5 percent in the replacement market, whereas the allocation to wholesalers was increased from 80 percent to 90 percent in the new construction market and from 75 percent to 90 percent in the replacement market. For the residential-duty gas-fired storage water heater equipment class, the percentage of shipments allocated to retailers was decreased from 20 percent to 10 percent in the new construction market, from 25 percent to 15 percent in the replacement market for the commercial sector, and from 30 percent to 15 percent in the replacement market for the residential sector. The percentage of shipments allocated to wholesalers was increased from 75 percent to 85 percent in the new construction market, from 70 percent to 80 percent in the replacement market for the commercial sector, and from 67.5 percent to 80 percent in the replacement market for the residential sector. In addition, the percentage of shipments allocated to national accounts was increased from 2.5 percent to 5 percent. These adjustments address the overall assertion of the commenters and that the resulting channel shares reflect the market distribution, although A.O. Smith called for even greater reductions in shipments allocated to retail distribution channels. Appendix 6A of the NOPR TSD provides detail on the percentage of shipments allocated to each distribution channel by equipment category.

During the public meeting for the withdrawn NOPR, Raypak commented that manufacturer's representatives do not markup equipment in the same way as wholesalers, since manufacturer's representatives make sales based on the expertise they provide to consumers. (Raypak, Public Meeting Transcript, No. 20 at p. 53–56) NEEA stated during the public meeting that the expertise of manufacturer's representatives is utilized more in the replacement market, and in this market, a consumer receives an equipment price quote from a manufacturer's representative and then will shop the equipment price to other competitors in the market, such as wholesalers. This forces manufacturer's representatives to maintain competitive markups with wholesalers. (NEEA, Public Meeting Transcript, No. 20 at p. 55) DOE appreciates Raypak and NEEA's comments on this issue and plans to continue researching manufacturer's representative markups. Neither Raypak nor NEEA provided information or data to update the estimated manufacturer's representative markups. Since DOE does not have enough information at this point to estimate separate markups for manufacturer's representatives, DOE assumes that the manufacturer's representative markup is the same as the wholesaler markup.

3. Markups Used in This NOPR

To develop markups for this NOPR, DOE utilized several sources, including the following: (1) The Heating, Air-Conditioning & Refrigeration Distributors International (''HARDI'') 2013 Profit Report [42] to develop wholesaler markups; (2) the 2020 ACCA Cool Insights document containing financial analysis for the heating, ventilation, air-conditioning, and refrigeration (''HVACR'') contracting industry [43] to develop mechanical contractor markups; (3) the U.S. Census Bureau's 2017 Economic Census data [44] for the commercial and institutional building construction industry to develop mechanical and general contractor markups; and (4) the U.S. Census Bureau's 2017 Annual Retail

[42] Heating Air-conditioning & Refrigeration Distributors International. *Heating, Air-Conditioning & Refrigeration Distributors International 2013 Profit Report.*

[43] Air Conditioning Contractors of America (ACCA). *Cool Insights 2020: ACCA's Contractor Financial & Operating Performance Report (Based on 2018 Operations).* 2020.

[44] U.S. Census Bureau. 2017 Economic Census Data. 2020. Available at *www.census.gov/programs-surveys/economic-census.html.*

Trade Survey [45] data to develop retail markups.

In addition to markups of distribution channel costs, DOE derived State and local taxes from data provided by the Sales Tax Clearinghouse.[46] Because both distribution channel costs and sales tax vary by State, DOE developed its markups to vary by State. Chapter 6 of the NOPR TSD provides additional detail on markups.

E. Energy Use Analysis

The purpose of the energy use analysis is to assess the energy requirements (*i.e.,* annual energy consumption) of CWH equipment described in the engineering analysis for a representative sample of building types that utilize the equipment, and to assess the energy-savings potential of increased equipment efficiencies. DOE uses the annual energy consumption in the LCC and PBP analysis to establish the operating cost savings at various equipment efficiency levels.[47] DOE estimated the annual energy consumption of CWH equipment at specified energy efficiency levels across a range of commercial and multifamily residential buildings in different climate zones, with different building characteristics, and including different water heating applications. The annual energy consumption includes use of natural gas (or liquefied petroleum gas (''LPG'')) as well as use of electricity for auxiliary components.

In the October 2014 RFI, DOE indicated that it would estimate the annual energy consumption of CWH equipment at specified energy efficiency levels across a range of applications, building types, and climate zones. 79 FR 62899, 62906–62907 (Oct. 21, 2014). DOE developed representative hot water volumetric loads and water heating energy usage for the selected representative products for each equipment category and building type combination analyzed. This approach captures the variability in CWH equipment use due to factors such as building activity, schedule, occupancy, tank losses, and distribution system piping losses.

For commercial building types, DOE used the daily load schedules and normalized peaks from the 2013 DOE Commercial Prototype Building Models [48] to develop gallons-per-day hot water loads for the analyzed commercial building types.[49] DOE assigned these hot water loads on a square-foot basis to associated commercial building records in the EIA's 2012 CBECS [50] in accordance with their principal building activity subcategories. For residential building types, DOE used the hot water loads model developed by Lawrence Berkeley National Laboratory (''LBNL'') for the 2010 rulemaking for ''Energy Conservation Standards for Residential Water Heaters, Direct Heating Equipment, and Pool Heaters.'' [51] DOE applied this model to the residential building records in the EIA's 2009 Residential Energy Consumption Survey (''RECS'').[52] [53] For RECS housing records in multi-family buildings, DOE focused only on apartment units that share water heaters with other units in the building. Since the LBNL model was developed to analyze individual apartment hot water loads, DOE had to modify it for the analysis of whole building loads. DOE established statistical average occupancy of RECS apartment unit records when determining the individual apartment unit's load. DOE also developed individual apartment loads as if each were equipped with a storage water heater in accordance with LBNL's methodology. Then, DOE multiplied the apartment unit's load by the number of representative units in the building to determine the building's total hot water load.

DOE converted daily volumetric hot water loads into daily Btu energy loads by using an equation that multiplies a building's gallons-per-day consumption of hot water by the density of water,[54] specific heat of water,[55] and the hot water temperature rise. To calculate temperature rise, DOE developed monthly dry bulb temperature estimates for each U.S. State using typical mean year (''TMY'') temperature data as captured in location files provided for use with the DOE EnergyPlus Energy Simulation Software.[56] Then, these dry bulb temperatures were used to develop inlet water temperatures using an equation and methodology developed by the National Renewable Energy Laboratory (''NREL'').[57] DOE took the difference between the building's water heater set point temperature and inlet temperature to determine temperature rise (see chapter 7 of the NOPR TSD for more details). In addition, DOE developed building-specific Btu load adders to account for the heat losses of building types that typically use recirculation loops to distribute hot water to end uses. DOE converted daily hot water building loads (calculated for each month using monthly inlet water temperatures) to annual water heater Btu loads for use in determining annual energy use of water heaters at each efficiency level.

DOE developed a maximum hot water loads methodology for buildings for determining the number of representative equipment needed using the data and calculations from a major water heater manufacturer's sizing calculator.[58] DOE notes that the sizing calculator used was generally more comprehensive and transparent in its maximum hot water load calculations than other publicly-available sizing calculators identified. This methodology was applied to commercial building records in 2012 CBECS and residential building records in 2009 RECS to

[45] U.S. Census Bureau. 2017 Annual Retail Trade Survey. 2019. Available at *www.census.gov/retail/.*

[46] *The Sales Tax Clearing House.* 2021. Available at *www.thestc.com/STrates.stm.* Last accessed March 21, 2021.

[47] In this case, these efficiency levels comprise combinations of thermal efficiency and standby mode performance.

[48] U.S. Department of Energy—Office of Energy Efficiency and Renewable Energy. *Commercial Prototype Building Models.* 2013. Available at *www.energycodes.gov/commercial-prototype-building-models.*

[49] Such commercial building types included the following: Small office, medium office, large office, stand-alone retail, strip mall, primary school, secondary school, outpatient healthcare, hospital, small hotel, large hotel, warehouse, quick service restaurant, and full service restaurant.

[50] U.S. Energy Information Administration (EIA). *2012 Commercial Building Energy Consumption Survey (CBECS) Data.* 2012. Available at *www.eia.gov/consumption/commercial/data/2012/.*

[51] U.S. Department of Energy—Office of Energy Efficiency and Renewable Energy. *Final Rule Technical Support Document: Energy Conservation Standards for Residential Water Heaters, Direct Heating Equipment, and Pool Heaters.* April 8, 2010. EERE–2006–STD–0129–0149. Available at *www.regulations.gov/#!documentDetail;D=EERE-2006-STD-0129-0149.*

[52] U.S. Energy Information Administration (EIA). *2009 Residential Energy Consumption Survey (RECS) Data.* 2009. Available at *www.eia.gov/consumption/residential/data/2009/.*

[53] DOE is aware that a new version of CBECS will likely be available for the next rulemaking phase, and DOE will evaluate its applicability for the commercial water heater energy analysis in that phase. As discussed in section IV.F, the 2009 RECS contained information specific to multifamily buildings that was not available in the 2015 RECS analysis. EIA plans to release the characteristics data for the 2020 RECS in late 2021, and DOE will also evaluate its applicability for the commercial water heater energy analysis in the next rulemaking phase.

[54] DOE used 8.29 gallons per pound.

[55] DOE used 1.000743 Btu per pound per degree Fahrenheit.

[56] U.S. Department of Energy—Office of Energy Efficiency and Renewable Energy. *EnergyPlus Energy Simulation Software.* TMY3 data. Available at *apps1.eere.energy.gov/buildings/energyplus/cfm/weather_data3.cfm/region=4_north_and_central_america_wmo_region_4/country=1_usa/cname=USA.* Last accessed October 2014.

[57] Hendron, R. *Building America Research Benchmark Definition, Updated December 15, 2006.* January 2007. National Renewable Energy Laboratory: Golden, CO. Report No. TP–550–40968. Available at *www.nrel.gov/docs/fy07osti/40968.pdf.*

[58] A.O. Smith. *Pro-Size Water Heater Sizing Program.* Available at *www.hotwatersizing.com/.* Last accessed in March 2015.

determine their maximum gallons-per-hour requirements, assuming a temperature rise specific to the building. DOE divided these maximum building loads by the first-hour capability of the baseline representative model of each equipment category to determine the number of representative water heater units required to service the maximum load, but for buildings with maximum load durations of 2 or 3 hours, DOE divided maximum loads by the 2- or 3-hour delivery capability of the baseline representative model. For each equipment category, DOE sampled CBECS and RECS building loads in need of at least 0.9 water heaters, based on the representative model analyzed, to fulfill their maximum load requirements. Due to the maximum input capacity and storage specifications of residential-duty commercial gas-fired storage water heaters, DOE limited the buildings sample of this equipment class to building records requiring four or fewer representative water heaters to fulfill maximum load since larger maximum load requirements are more likely served by larger capacity equipment. For gas-fired tankless water heaters, an adjustment factor was applied to the first-hour capability to account for the shorter time duration for sizing this equipment, given its minimal stored water volume. DOE used the Modified Hunter's Curve method [59] for sizing of gas-fired instantaneous water heaters to develop the adjustment factors for tankless water heaters. Gas-fired circulating water heaters and hot water supply boilers were teamed with unfired storage tanks to determine their first-hour capabilities since this is the predominant installation approach for this equipment.

To the extent that there are concerns that the annual energy use for commercial gas instantaneous tankless water heaters is significantly lower than commercial gas-fired storage water heaters even where thermal efficiency input rates are similar, DOE notes that the applied adjustment factor modifies the first hour delivery capability calculations of commercial gas-fired tankless water heaters to account for the shorter time duration used to size for a very short ''instantaneous'' peak for this equipment, given the minimal volume of stored water to buffer meeting short duration peaks during the one hour maximum load period used for the first hour rating. DOE used the Modified Hunter's Curve method to develop the adjustment factors, or divisors, based on residential or commercial building type (as shown in appendix 7B of the NOPR TSD). These adjustment factors adapt the sizing methodology for water heaters with storage to a methodology suitable for sizing water heaters or water heating systems without storage. The result of this adjustment is that the tankless water heater representative model, relative to the commercial gas-fired storage water heater representative model with a similar input rate, is sized to meet a significantly smaller overall maximum hot water load. This results in the lower annual energy use across all efficiency levels, since for a given end use or building, the smaller maximum load being serviced per unit also proportionally correlates with the lower average daily loads serviced by the tankless water heater.

Given the hot water load requirements as well as the equipment needs of the sampled buildings, DOE was able to calculate the hours of operation to serve hot water loads and the hours of standby mode for the representative model of each equipment category to service each sampled building. Since the number of water heaters allocated to a specific building was held constant at the baseline efficiency level, a water heater's hours of operation decreased as its thermal efficiency improved. This decrease in operation, in combination with standby loss performance, led to the energy savings achieved at each efficiency level above the baseline. For commercial gas-fired storage water heaters, DOE used the standby loss levels identified in the engineering analysis to estimate energy savings from more-stringent standby loss levels. For residential-duty gas-fired storage water heaters, DOE estimated standby loss levels for each UEF level developed in the Engineering Analysis. To estimate standby loss levels DOE first estimated recovery efficiency. DOE developed a regression between the measured recovery efficiency and the increase in UEF over the minimum UEF specified by current standards for equipment in DOE's CCMS database. Recovery efficiency was assumed to be equivalent to thermal efficiency, and the regression results were in turn used to translate UEF at different analyzed efficiency levels analyzed to thermal efficiency. DOE used the Water Heater Analysis Model (''WHAM'') equation as modified for the daily energy consumption in the current UEF test procedure (based on the high usage draw profile), the analyzed UEF from the engineering analysis, and the regression based recovery efficiency to calculate the standby energy loss (Btu/hr °F) at each UEF efficiency level. This conversion is discussed in Chapter 7 of the NOPR TSD. Section IV.C.4 of this NOPR and chapter 5 of the NOPR TSD include additional details on the thermal efficiency, standby loss, and UEF levels identified in the engineering analysis.

For this NOPR, DOE also further consulted ASHRAE [60] and Electric Power Research Institute (''EPRI'') [61] handbooks. These resources contain data on distribution losses and maximum load requirements of different building types and applications, which were used to compare and corroborate analyses of the average and peak loads derived from the CBECS and RECS data.

To be clear, while DOE described calculations above relating to the number of units required to meet a building load, the LCC analysis calculates results for individual pieces of equipment. The energy usage analyses discussed in this section of this NOPR provide key inputs to the LCC analysis, namely monthly and annual energy consumption at each efficiency level for each sampled building as well as the hours of burner operation at rated input rate and the hours in standby mode per unit for water heaters to examine relative energy savings from thermal efficiency and standby loss changes. The energy analysis also helps DOE identify buildings for which each specific water heater might be suited (*i.e.,* if the building load is too low to require 0.9 units of a defined representative unit or so large the building requires more than 4 residential duty units, DOE excludes that building from sampling for that equipment).

DOE received multiple comments on its energy use analysis presented in the withdrawn 2016 NOPR. There was discussion of the need or lack thereof of incorporating backup or redundant water heaters into the energy and life cycle cost analysis as well as a concern that manufacturing engineering guidelines tend to oversize equipment.

DOE agrees that manufacturing engineering guidelines are likely to result in oversizing hot water equipment in many applications, and that the level

[59] PVI Industries Inc. ''Water Heater Sizing Guide for Engineers,'' Section X, pp. 18–19. Available at *oldsizing.pvi.com/pv592%20sizing%20guide%2011-2011.pdf.*

[60] American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (ASHRAE). *ASHRAE Handbook of HVAC Applications: Chapter 51 (Service Water Heating.* 2019. pp. 51.1–51.37. Available at *www.ashrae.org/resources--publications/handbook.*

[61] Electric Power Research Institute (EPRI). *Commercial Water Heating Applications Handbook.* 1992. Electric Power Research Institute: Palo Alto, CA. Report No. TR–100212. Available at *www.epri.com/abstracts/Pages/ProductAbstract.aspx?ProductId=TR–100212.*

of built-in oversizing using such guidelines in this regard likely also results in the LCC analysis providing conservative estimates of economic benefits than might otherwise be the case. DOE did not include redundant units in the LCC analysis. Although redundant units may exist in certain buildings, DOE was not able to identify any information or data on this topic, nor have commenters in the course of this rulemaking provided information or detail as to the type of water heater plants where installation of a redundant unit would be considered common practice; therefore, DOE assumed that fully redundant units would be the exception in most installations. DOE considered how such a unit would be integrated into a system, but it is not clear if a redundant unit is piped into the system and actively part of the operating service hot water system (such that a hot water ''plant'' serving the building is further oversized from sizing guidelines), or if it is purchased and not utilized, in the latter case effectively a pre-purchase available for a subsequent installation or use. DOE also notes that increases in efficiency increase the overall hot water delivery capacity for similar input capacity water heaters in either single- or multiple-service water heater unit ''plants'' in a building. DOE's analysis has not considered increased purchase costs for fully redundant units when they may occur, however it has also not included the potential cost savings for downsizing the input rating of the water heaters that would be needed to service a building's known hot water load and any subsequent benefit from downsizing of a venting system, providing in this regard a conservative assessment of the costs to install the water heating system. DOE also considered that incorporation of redundant units, which might be expected to exist at all efficiency levels anyway, would add unnecessary complication given the lack of available information on how likely and in what building types a redundant unit would be purchased and whether such a unit is piped into the domestic water system and utilized directly or simply pre-purchased, to be installed at a later date for immediate replacement when necessary. In the latter case, the earlier purchase does not affect the eventual life of the equipment or additional installation costs not already captured. Given that DOE's current analysis does not reflect the benefits of downsizing that would occur for all CWH consumers, and its understanding that manufacturer sizing guidelines may already allow for CWH systems to be conservatively sized, incorporation of redundant units would be overly conservative in establishing the first-cost impact to the average consumer.

To the extent that parties may be concerned that DOE's commercial packaged boiler analysis also included commercial water heating loads in some portion of buildings that uses space heating boilers to meet both space and service water heating loads and that DOE is double counting those loads, DOE clarifies that its analysis does not double count the national energy savings from service hot water loads included in the commercial packaged boiler final rule in this CWH equipment NOPR. The CBECS and RECS data are used in the CWH equipment analysis to develop a representative hot water load profile (*i.e.,* how much hot water is supplied to the buildings), which in turn is used to develop estimates of the operating hours and energy use for representative CWH equipment when they are installed. This is distinct from the shipments data, which are used to determine the number of units introduced into the market. However, the shipments data do not specify the type of building in which the equipment is actually installed, and such data are not available. The energy use analysis provides an estimate of how the shipped equipment is distributed across the various applications and the associated operating hours. The boiler loads in the commercial packaged boiler analysis included an assumption that some buildings use space heating boilers to provide for service hot water, however that assumption was used to develop representative loads for the boiler equipment where space heating boilers were used in place of commercial water heaters (*i.e.,* in accounting for the hot water load of buildings that use the same fuel for water and space heating in the overall energy use analysis, 20 percent of those boiler installations were assumed to use a commercial packaged boiler for both space and water heating based on other reviewed data). The boiler representative energy consumption numbers were drawn from CBECS and RECS data and are separately applied to the shipments of commercial space heating boiler. 85 FR 1592 (January 10, 2020) The CWH analysis, which did not rely directly on hot water load estimates from CBECS, did not separately make such an allowance since it would simply have reduced the building count without impacting the hot water load profiles used in the CWH analysis.

In this NOPR, the energy use analysis develops a typical energy usage for installations of the representative CWH equipment in buildings that are appropriate for using this equipment but relies on characteristics data rather than CBECS or RECS estimates for water heating energy consumption in the buildings. The shipments analysis is separate from the energy use analysis and uses AHRI CWH equipment shipment data where available. DOE applies the CWH energy use analysis to the shipments analysis to calculate the national energy savings achieved by this NOPR. Thus, the shipment analysis for the CWH rule does not rely on CBECs and RECs energy estimates directly, so the national energy impact is not affected if, in fact, a particular building may have served its domestic water heating load with a boiler in place of a water heater.

Because DOE models a diverse set of buildings with differing loads and usage schedules, following is additional information explaining how the statistical analysis results in a single estimated average energy usage for CWH equipment. DOE conducted its energy use analysis using a Monte Carlo approach, selecting from thousands of commercial building records in 2012 CBECS and thousands of residential housing records from 2009 RECS, including the impact of the building weight from CBECS and RECS, for those buildings that are appropriate uses of CWH equipment. Based on the characteristics data provided in each CBECS and RECS record, DOE determined maximum hot water loads for sizing equipment and daily hot water loads to determine equipment operation. Energy use was based on the equipment operation to meet the daily hot water loads, including recirculation loop losses for buildings which typically have this system design. The Monte Carlo approach (using the Crystal Ball Excel add-in) develops a distribution of inputs, as well as distributions of energy and energy savings as results which provides for calculating a statistical, weighted average of key model outputs, including average energy use, for all CWH equipment categories at each efficiency level. The calculated average CWH equipment utilization rates in terms of operating hours to meet the hot water loads are provided for each equipment type and efficiency level, which are available in appendix 7B of the NOPR TSD. Appendix 7B of the NOPR TSD also provides a table of building types that DOE assumed to use recirculation loops, as well as the operation hours of the recirculation loops. DOE estimates that commercial building records assigned recirculation loops comprised

29 percent of sampled commercial buildings from CBECS 2012. In addition, residential building records assigned recirculation loops comprised 68 percent of sampled residential buildings from RECS 2009. However, DOE notes that the economics for each individual commercial consumer modeled in the LCC are based on the energy usage attributed to that consumer, and do not rely on the statistical weighted-average energy use or utilization rates. Additional detail about the energy use analysis methodology is explained in detail in chapter 7 of the NOPR TSD. Additional detail about the LCC analysis is explained in detail in chapter 8 of the NOPR TSD.

DOE notes that the analysis accounts for recirculation loop losses in average daily hot water loads. In its NOPR analysis, DOE assigned insulated supply, return, and riser recirculation loop piping to sampled buildings with a year of construction of 1970 or later. For buildings constructed prior to 1970, DOE assigned uninsulated supply piping to 25 percent of sampled buildings and uninsulated return piping to 25 percent of sampled buildings. DOE acknowledges that its energy use analysis may not account for the extent of all possible heat losses that occur in the field. These losses can result from poor control of circulating system flow, uninsulated or poorly insulated piping, leaks or other higher than expected tap flows, and poor water heater performance due to aging. These issues may result in higher hot water energy use than predicted by DOE's models. Due to the lack of field data on the magnitude of these energy losses across building applications, vintage, and location, DOE did not further attempt to include them into its analysis. DOE develops daily hot water loads for each building analyzed and normalizes building hot water loads to the hot water service capacity of the representative products using industry sizing tools and methodologies. DOE acknowledges that its approach for a given building loads treats multiple units for CWH equipment as equally sharing the hot water load.

To the extent that commenters may be concerned whether the analysis fairly represents individual water heater operation for water heaters in buildings in which multiple representative model units operate to meet the building's load, DOE notes that this would be system and building specific and its analysis may not capture the extremes of hot water loading on an individual water in all applications but would capture the average hot water loads on the equipment in those building. DOE notes that its analysis examines maximum sizing hot water loads and average daily hot water loads of 17 commercial building applications and 4 residential building applications, with additional variability in terms of specific end uses where identified in the CBECS or RECS data including variability based on inputs such as occupants, water fixtures, clothes washers, dishwashers, and food service as well as water mains inlet and outlet temperatures for estimating hot water loads. It also includes estimates of piping losses in circulating systems. Chapter 7 and appendix 7B in the NOPR TSD describe the calculation of hot water loads in the building. Appendix 7B also provides a table of building types that DOE assumed to use recirculation loops, as well as the operation hours of the recirculation loops. DOE estimates that commercial building records assigned recirculation loops comprised 29 percent of sampled commercial buildings from CBECS 2012. In addition, residential building records assigned recirculation loops comprised 68 percent of sampled residential buildings from RECS 2009.

All of this variability is accounted for in the weighted results of the Monte Carlo analysis. While there may be further variability in hot water loads between multiple, individual water heaters operating in unison to meet a building's hot water load, DOE's analysis focuses on equipment operation over longer timeframes and developing representative loads for the equipment in the building. Equipment operated in unison in a building will experience, on average and over large populations represented, energy use reflecting the per-unit averaged building hot water load. As such, DOE did not directly account for the variability in operation of individual equipment when multiple units are installed and operated in tandem. DOE notes that with condensing equipment in particular, operation in parallel under part-load conditions can result in higher thermal efficiencies than those obtained under rated conditions, which reflect peak load thermal efficiencies. However, due to lack of detail of actual multiple water heaters installations exist the sampled buildings, DOE did not take this potential increase in field-efficiency into account and DOE.

DOE notes that its sizing methodology was based on industry sizing tools and guideline and was used to establish peak water heat loads that would reflect the anticipated peak in the buildings based on those guidelines and known or estimated building characteristics. These peaks were then used to establish the number of representative units (by CWH type) that would be installed to meet the anticipated peak loads, with the hot water load apportioned across the estimated number of representative units needed. DOE notes that its sizing methodology was customized to the building application, size, and accounted for building size, occupancy, and specific end uses. For the hot water delivery capability of each equipment category, DOE uses representative equipment designs. The representative design of each equipment category has a specific input capacity and volume as shown in Table IV.5 of this document. These representative specifications are used in a calculation of hot water delivery capability. For each equipment category, DOE sampled CBECS and RECS building loads in need of at least 0.9 water heaters of the representative capacity, based on the representative model analyzed, to fulfill their maximum load requirements, and allows multiple representative units to serve the building load. As a result, DOE does not adjust input capacity and volume of equipment for a given building application. This individual building level of detail would complicate the engineering analysis requirements since every building record could potentially call for distinct equipment size or combination of equipment sizes, or combination of different storage volumes and input ratings in its specifications based on a wide variety of purchaser preferences.

In addition, DOE assumed the circulating water heater equipment class is equipped with a storage tank since this is the predominant installation configuration for this equipment. For this equipment class and representative input capacity, the analysis used a variable storage tank size of 250 to 350 gallons in volume, based on a triangle distribution consistent with manufacturer literature guidance as to typical storage tanks for the representative equipment input rating. However, DOE recognizes that for this equipment class as well, further variation in the storage tank sized with the equipment might also occur based on each individual building owner's preferences. DOE received no comment on its sizing of storage tanks in conjunction with circulating water heaters and boilers. DOE therefore retained this use of representative installation practices for the NOPR analysis. Chapter 7 of the NOPR TSD provides more information on the hot water delivery calculations for circulating water heaters.

DOE's energy use analysis used the A.O. Smith Pro Size Water Heating Sizing Program as a primary resource in determining the type, size, and number of water heaters needed to meet the hot water demand load applications. DOE did not identify a universal industry sizing methodology and reviewed a number of online sizing tools prior to its decision to use A.O. Smith's online sizing tool as the basis for its water heater sizing methodology. Based on DOE's initial review, the chosen sizing tool was most appropriate because of its transparency allowing it to be evaluated for fixture flow assumptions and other industry-accepted sizing methodologies. This tool provided peak-hour delivery in its sizing output, whereas several others manufacturing sizing tools reviewed provided equipment recommendations and/or equipment sizes only in their outputs. This made the chosen sizing tool easier to understand and allowed DOE to reverse engineer the methodology in detail. In addition, of the tools reviewed this tool was the most comprehensive and straightforward in its inputs. DOE reviewed the relationships between input data and outputs for this tool in detail for use in establishing the basis for its sizing calculations and made certain adjustments to improve the accuracy of its maximum load determinations, as shown in detail in appendix 7B.

DOE utilized the Modified Hunter's Curve approach for developing hot water delivery adjustment factors, or divisors, to adapt the sizing methodology for water heaters with storage to a methodology suitable for sizing water heaters without storage. DOE used the PVI Industries ''Water Heater Sizing Guide for Engineers'' which implements the Modified Hunter's Curve approach to develop the adjustment factors for sizing tankless water heaters. This guide provided a clear and thorough methodology for how to apply the Modified Hunter's curve to determine tankless water heater sizing. DOE's research indicates that mechanical contractors and design engineers commonly rely on this general sizing methodology for determining appropriately-sized equipment to install in commercial and residential buildings, and the PVI tool captures the need and general industry methodology required to size tankless water heating equipment to address short-duration loads peaks. In addition, DOE consulted the *ASHRAE Handbook of HVAC Applications,*[62] which provides guidance for sizing tankless and instantaneous water heaters. While the ASHRAE guidance also illustrates the Modified Hunter's Curve methodology, it was not as clear in application as the guidance provided by PVI tool. In this area of CWH equipment selection, DOE research indicates that manufacturer sizing tools are more commonly used than ASHRAE handbooks. Because of the lack of storage and the need to meet instantaneous building loads at sub-hour intervals, the sizing strategy for instantaneous water heaters results in a lower hot water service and lower energy consumption per unit of input capacity than is the case for either storage water heaters, or equipment like circulating water heaters and boilers where separate storage tanks are typically used. DOE received comment on the withdrawn 2016 NOPR noting that there were applications that used set point temperatures greater than the 140 °F high temperature used in that analysis, including specifically certain food service and restaurant applications. (AHRI, Public Meeting Transcript, No. 20 at p. 69; Raypak, No. 41 at pp. 3–4) It was also noted that in these higher water temperature applications, condensing technology performs less efficiently for any stainless steel heat exchanger. (Raypak, No. 41 at pp. 3–4) For this NOPR, DOE reviewed the set point temperatures in the 2013 DOE commercial prototype building models and determined that the hospital and nursing home set point temperatures should be 140 °F. These building applications would need set point temperatures greater than 120 °F to prevent outbreaks of Legionella, and they would have mixing valves installed to prevent scalding.

While DOE agrees that often food service and restaurant applications often have end uses requiring set point temperatures greater than 140 °F, these applications commonly use booster water heaters to increase hot water temperature for specific uses. Thus, DOE did not change the set point temperature universally for these applications in its analysis. The 2012 CBECS building record data included a data field for certain building applications, notably food service, that indicated whether the building used a booster water heater. Given this data field, DOE updated its analysis for the fast food restaurant, full-service restaurant/cafeteria, and bar/pub/lounge building applications. If these building records contained one or more booster water heaters, DOE assigned a set point temperature of 140 °F for determining maximum and average daily hot water loads. In these instances, DOE assumed the booster water heater would receive hot water from the main water heater and increase the temperature to 180 °F for purposes of dishwashing. If the CBECS building record did not contain a booster water heater, DOE assigned a set point temperature of 150 °F for determining maximum hot water loads. The set point temperature of 150 °F is a weighted average based on shipment data of low-temperature and high-temperature commercial dishwashers.[63] DOE assumed a food service building application that does not have a booster water heater uses either a low-temperature or high-temperature commercial dishwasher to clean dishes. Low-temperature commercial dishwashers typically call for an inlet water temperature of around 140 °F,[64] whereas high-temperature commercial dishwashers call for an inlet water temperature of 180 °F. This set point temperature assignment for food service building applications addresses higher delivery temperature in that market.

DOE reviewed data submitted on the withdrawn 2016 NOPR in Raypak comment to support its assertion that a set point temperature of 160 °F decreases the efficiency of condensing equipment. These data refer to decreases in condensing equipment efficiency; however, DOE's review of the data found that the decreased efficiency shown is likely primarily the result of the increased inlet water temperature referenced in the literature, not the increased set point or delivery temperature. Thus, DOE did not use the referenced data to adjust the thermal efficiency in the NOPR analysis.

To clarify how DOE developed the inlet water temperature, DOE conducted its energy use analysis using a Monte Carlo approach, selecting commercial building records from 2012 CBECS and residential building records from 2009 RECS in the development of maximum and daily hot water loads. Daily hot water loads were converted to energy use based on the equipment operation necessary to meet the load. Each

[62] American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (ASHRAE). *ASHRAE Handbook of HVAC Applications: Chapter 51 (Service Water Heating).* 2019. pp. 51.1–51.37. Available at *www.ashrae.org/resources--publications/handbook.*

[63] Koeller and Company, and H.W. Hoffman & Associates. *A Report on Potential Best Management Practices—Commercial Dishwashers.* June 2010. Prepared for The California Urban Water Conservation Council. Available at *p2infohouse.org/ref/53/52002.pdf.* Last accessed May 1, 2020.

[64] Lim, E. Low-Temp Dish Machine Water Temperature. March 21, 2016. On Cleaner Solutions website. Available at *cleanersolutions.net/low-temp-dish-machine-water-temperature/.* Last accessed: November 2016.

building record's location is associated with a U.S. State. Using this State location, DOE assigned an average monthly inlet temperature for the CBECS Census Division or RECS Reportable Domain that the building resided in using monthly dry bulb temperature estimates for each State based on the TMY temperature data as captured in location files provided for use with the DOE EnergyPlus energy simulation software,[65] along with an equation and methodology developed by NREL.[66] DOE then summed the daily hot water loads of each month to determine the monthly hot water loads. DOE then summed the monthly hot water loads to determine annual hot water loads. The relationship between inlet temperature and energy use is for a given hot water usage, as inlet temperature is colder, energy use increases, since the water heater impart more heat to bring the inlet temperature to the set point temperature. Chapter 7 of the NOPR TSD provides detailed information on how energy use was calculated using inlet water temperature.

DOE developed daily hot water loads for building applications using the building service water heating schedules in the 2013 DOE commercial prototype building models. These schedules reflect typical building operation hours with different schedules for weekdays, Saturdays, Sundays, and holidays. While there may be greater variation of individual usage schedules in the general population even within a building type, DOE's use of these typical schedules and weighting by the relative frequency of the buildings in the general population is appropriate for the energy use analysis.

DOE notes that there is limited actual data on commercial hot water usage in the field. To the extent that stakeholders feel that DOE's analysis may under or overstate hot water usage, DOE notes that the analysis reflects both variation in direct hot water loads, inlet and outlet temperatures and piping/recirculation losses with a referenced estimating procedure. In the latter case, DOE assigned insulated supply, return, and riser recirculation loop piping to sampled buildings with a year of construction of 1970 or later. For buildings constructed prior to 1970, DOE assigned uninsulated supply piping to 25 percent of sampled buildings and uninsulated return piping to 25 percent of sampled buildings. DOE acknowledges that its energy use analysis may not account for the extent of all possible heat losses that occur in the field. These losses can result from poor control of circulating system flow, uninsulated or poorly insulated piping, leaks or other higher than expected tap flows, and poor water heater performance due to aging. These issues may result in higher hot water energy use than predicted by DOE's models. Due to the lack of field data on the magnitude of these energy losses across building applications, vintage, and location, DOE did not further attempt to include them into its analysis. While DOE recognizes that additional energy losses can occur in the field, to the extent that these losses occur, it suggests that the results of DOE's energy use analysis are conservative. In the withdrawn 2016 NOPR analysis, DOE received comment that the United States has reduced hot water use through DOE appliance and commercial equipment standards, as well as the ENERGY STAR program. (EEI, Public Meeting Transcript, No. 20 at p. 118; AHRI, Public Meeting Transcript. No. 20 at pp. 117–118) In this NOPR, DOE used schedules and loads from ASHRAE prototype models with augmented data reflecting recent standards affecting water heater used by commercial appliances and equipment. Specifically, DOE developed commercial building hot water loads using the daily schedules and square footage from the scorecards of the 2013 DOE commercial prototype building models and corresponding normalized peak water heater loads from the DOE EnergyPlus energy simulation input decks for these prototypes, both of which were vetted by the ASHRAE 90.1 Committee. DOE developed residential building hot water loads using the hot water loads model created by the LBNL for the 2010 final rule for Energy Conservation Standards for Residential Water Heaters, Direct Heating Equipment, and Pool Heaters. 75 FR 20112 (April 16, 2010). These data sources reflect expected hot water use at the time of their publication, including reductions of typical hot water use for certain appliances and commercial equipment based upon amended Federal standards and certain voluntary programs where those appliances are identified as part of the end use. DOE notes that its analysis and any eventual CWH standards are dominated by existing buildings and influenced by a lesser extent by shipments to new construction. Furthermore, DOE notes that to the extent that regulatory standards have or will reduce water loads, manufacturer sizing tools (as used in DOE's analysis for sizing water heaters in different applications) should also reflect the reduction in water usage for sizing purposes, thereby minimizing the impact of reduced hot water loads resulting from DOE regulation on the overall economic evaluation of higher standards.

With regards to the use of CWH equipment in residential buildings, DOE clarifies here that the only residential building type excluded from the analysis of CWH equipment was manufactured housing, since DOE determined that manufactured housing is not suitable for CWH equipment installation or use. Otherwise, for all other residential and commercial building types, if the estimated maximum sizing load of a sampled building was not at least 90 percent of the hot water delivery capability of the baseline representative model for any analyzed equipment category, then the building was not sampled since the building's maximum load is deemed not large enough to warrant the installation of the specific CWH equipment to service the load. When a residential building does not have a maximum sizing load that is large enough to justify the type of commercial water heater being analyzed, DOE assumes the residential building will use residential water heating equipment to service its load. In such a case, DOE did not sample the building in its energy use analysis. In particular, residential-duty gas-fired storage water heaters were modeled for energy use using a sample of 494 applicable CBECS records and 471 applicable RECS records. Single-family homes represented a small percentage of building records in the weighted Monte Carlo results of the energy use analysis. Multifamily 2–4 unit and 5+ unit apartment buildings were the primary building applications sampled in the residential sector. While the input rating for the representative residential-duty gas-fired storage water heaters is at the bottom of the range for that equipment, these units are still capable of delivering a significant amount of hot water. Based on the residential hot water loads analysis, the vast majority of single-family home records examined for sizing did not need a water heater with this much hot water delivery capability, given their maximum calculated hot water loads.

[65] U.S. Department of Energy—Office of Energy Efficiency and Renewable Energy. *EnergyPlus Energy Simulation Software*. TMY3 data. Available at *apps1.eere.energy.gov/buildings/energyplus/cfm/weather_data3.cfm/region=4_north_and_central_america_wmo_region_4/country=1_usa/cname=USA*. Last accessed October 2014.

[66] Hendron, R. *Building America Research Benchmark Definition, Updated December 15, 2006*. January 2007. National Renewable Energy Laboratory: Golden, CO. Report No. TP–550–40968. Available at *www.nrel.gov/docs/fy07osti/40968.pdf*.

Chapter 7 of the NOPR TSD provides details of DOE's energy use analysis and sizing.

F. Life-Cycle Cost and Payback Period Analysis

The purpose of the LCC and PBP analysis is to analyze the effects of potential amended energy conservation standards on consumers of CWH equipment by determining how a potential amended standard affects their operating expenses (usually decreased) and their total installed costs (usually increased). DOE used the following two metrics to measure consumer impacts:

- The LCC is the total consumer expense of equipment over the life of the equipment, consisting of total installed cost (manufacturer selling price, distribution chain markups, sales tax, and installation costs) plus operating costs (expenses for energy use, repair, and maintenance). To compute the operating costs, DOE discounts future operating costs to the time of purchase and sums them over the lifetime of the equipment.
- The PBP is the estimated amount of time (in years) it takes consumers to recover the increased purchase cost (including installation) of a more-efficient type of equipment through lower operating costs. DOE calculates the PBP by dividing the change in purchase cost at higher efficiency levels by the change in annual operating cost for the year that amended or new standards are assumed to take effect.

For any given efficiency level, DOE measures the change in LCC relative to the LCC in the no-new-standards-case, which reflects the estimated efficiency distribution of CWH equipment in the absence of new or amended energy conservation standards. In contrast, the PBP for a given efficiency level is measured relative to the baseline product.

DOE conducted the LCC and PBP analyses using a commercially-available spreadsheet tool and a purpose-built spreadsheet model, available on DOE's website.[67] This spreadsheet model developed by DOE accounts for variability in energy use and prices, installation costs, repair and maintenance costs, and energy costs. As a result, the LCC results are also displayed as distributions of impacts compared to the no-new-standards-case (without amended standards) conditions. The results of DOE's LCC and PBP analysis are summarized in section V.B.1.a of this NOPR and described in detail in chapter 8 of the NOPR TSD.

As previously noted, DOE's LCC and PBP analyses generate values that calculate the PBP for commercial consumers of potential energy conservation standards, which includes, but is not limited to, the 3-year PBP contemplated under the rebuttable presumption test. However, DOE routinely conducts a full economic analysis that considers the full range of impacts, including those to the consumer, manufacturer, Nation, and environment, as required under 42 U.S.C. 6313(a)(6)(ii). The results of this analysis serve as the basis for DOE to definitively evaluate the economic justification for a potential standard level (thereby supporting or rebutting the results of any preliminary determination of economic justification).

DOE expressed the LCC and PBP results for CWH equipment on a single, per-unit basis, and developed these results for each thermal efficiency and standby loss level, or UEF level, as appropriate. In addition, DOE reported the LCC results by the percentage of CWH equipment consumers experiencing negative economic impacts (*i.e.,* LCC savings of less than 0, indicating net cost).

DOE modeled uncertainty for specific inputs to the LCC and PBP analysis by using Monte Carlo simulation coupled with the corresponding probability distributions, including distributions describing efficiency of units shipped in the no-new-standards case. The Monte Carlo simulations randomly sample input values from the probability distributions and CWH equipment user samples. For this rulemaking, the Monte Carlo approach is implemented in MS Excel together with the Crystal Ball™ add-on.[68] Then, the model calculated the LCC and PBP for equipment at each efficiency level for the 10,000 simulations using the sampled inputs. More details on the incorporation of uncertainty and variability in the LCC are available in appendix 8B of the NOPR TSD.

For the May 2016 CWH ECS NOPR, DOE analyzed the potential for variability by performing the LCC and PBP calculations on a nationally representative sample of individual commercial and residential buildings. This same general process was used for this NOPR analysis, however, with updates to the data set. One update was switching to CBECS 2012 consistent with DOE's general practice of relying on updated data sources to the extent practicable and appropriate.[69] DOE notes that the CBECS 2012 microdata needed for its analysis were not available when DOE conducted the May 2016 CWH ECS NOPR analysis; hence, DOE used CBECS 2003 (the most recent available version at the time) for the NOPR analysis. In this NOPR, DOE updated its LCC model to use EIA's CBECS 2012 microdata that became available in May 2016.[70] DOE investigated but did not update to the 2015 RECS. In reviewing the 2015 RECS, DOE noted the absence of information on the number of apartments in buildings with an apartment reference in the database; the removal of the number of building floors for multifamily buildings with an apartment reference in the database; a reduction in the available occupant age data; and the removal of characteristics data describing whether an occupant directly pays for hot water usage—all of which were variables from the 2009 RECS database that DOE used to model water usage.

Following is a discussion of the development and validation of DOE's LCC model. Across its energy conservation standards rulemakings, DOE incorporates tools that enable stakeholders to reproduce DOE's published rulemaking results. DOE routinely utilizes Monte Carlo simulations using Crystal Ball for LCC model simulation purposes. More specifically, utilizing a spreadsheet program with Crystal Ball enables DOE to test the combined variability in different input parameters on the final life-cycle performance of the equipment. The CWH LCC model specifically includes macros to run the standards analysis with default settings that enable stakeholders to download the LCC model, run it on their own computers, and reproduce results published in this NOPR.[71] To validate models, DOE develops models with

[67] DOE's web page for commercial water heating equipment is available at *www1.eere.energy.gov/buildings/appliance_standards/standards.aspx?productid=36*. Last accessed on July 7, 2021.

[68] Crystal Ball™ is commercially-available software tool to facilitate the creation of these types of models by generating probability distributions and summarizing results within Excel, available at *www.oracle.com/middleware/technologies/crystalball/* (last accessed July 12, 2021).

[69] DOE utilized the building types defined in CBECS 2012, as well as residential buildings defined in RECS 2009. More information on the types of buildings considered is discussed later in this section. CBECS: *www.eia.gov/consumption/commercial/data/2012/* and RECS: *www.eia.gov/consumption/residential/data/2009/*. Both links last accessed on July 12, 2021.

[70] CBECS 2018 microdata were not available in early July 2021, when the analyses for this NOPR were completed.

[71] To reiterate, DOE's web page for commercial water heating equipment is available at *www1.eere.energy.gov/buildings/appliance_standards/standards.aspx?productid=36*.

contractors familiar with Crystal Ball and Monte Carlo tools and other models generally, and regularly tests the models during development, both at average and atypical (extreme) conditions. DOE further notes that the LCC model using the Crystal Ball software can output the assumed values and results of each assumption and provide forecasted results for each iteration in the Monte Carlo simulation, if desired by stakeholders to review or trace the output. In addition, it is possible to directly modify the assumption cells in the model to examine impacts of changes to assumptions on the LCC, and, in fact, DOE relies on both of these techniques for model testing.[72] DOE additionally seeks expert validation by going through a comprehensive stakeholder review of the assumptions and making its models and TSD publicly available during the comment period during each phase of its regulatory proceedings. DOE uses the Monte Carlo models for predicting the impact of future standards, a use different than many other uses that are envisioned generally for Monte Carlo tools (like industrial process examination), so direct validation against data demonstrating the impact of future standards is not possible. With regard to specifying correlations between inputs as part of modeling practices, DOE notes that while one can specify correlation parameters between two variables where such correlation and the data to provide for the level of correlation are known, specifying such correlations is not necessary to maintain the general integrity and accuracy of the analytical framework. Variable values may be selected based on other coding decisions unique to each iteration (*e.g.,* correlation with building type or location or vintage) without specific reference to correlation variables, and DOE does this routinely. For instance, entering water temperature and fuel costs are effectively correlated based on data and the use of the geographic region, which impacts both through the available data or models. The use of explicit correlations between Crystal Ball variables, where data are available to determine or represent a degree of correlation, absent other influences, would be useful, but often, DOE's experience is that the data to express the degree of correlation are not available and are influenced by other factors already dealt with explicitly in the model framework.

In response to the withdrawn 2016 NOPR, Spire commented that certain simulation trials may be unrealistic, citing an example of a storage water heater being replaced by multiple tankless units in a vintage 1960 multi-story building. Spire considers this scenario to be highly unlikely, describing tankless units as point-of-use water heaters and stating that multiple units may need to be installed to provide the same service as a single central commercial water heater and that the complexity goes far beyond a single one-for-one replacement scenario due to multiple runs of gas lines, venting, and electrical supply required, as well as the need for localized venting; Spire argued that while DOE's development and usage of CBECS N-Weights discounts the number of such scenarios in the data set used by DOE, it does not solve the problem caused by the inclusion of unreasonable scenarios. (Spire, No. 45 at p. 22)

The unlikely scenario of replacing a storage water heater by multiple tankless units does not reflect a purposeful replacement scenario but results from using existing CBECS data to develop hot water load scenarios for newer water heating technologies (*i.e.,* tankless units), the use of which is not identified specifically in CBECS data. However, to address potentially unlikely installation scenarios, DOE modified its energy use analysis for tankless water heaters for this NOPR to use only building stock with construction dates of 1980 or later, reflecting more recent construction, in its hot water load analysis.

DOE calculated the LCC and PBP for all commercial consumers as if each would purchase a new CWH unit in the year that compliance with amended standards is required. As previously discussed, DOE is conducting this rulemaking pursuant to its 6-year-lookback authority under 42 U.S.C. 6313(a)(6)(C). At the time of preparation of the NOPR analyses, the expected issuance date was 2015, leading to an anticipated final rule publication in 2016. For this NOPR, DOE relied on 2023 as the expected publication date of a final rule. EPCA states that amended standards prescribed under this subsection shall apply to equipment manufactured after a date that is the later of (I) the date that is 3 years after publication of the final rule establishing a new standard or (II) the date that is 6 years after the effective date of the current standard for a covered equipment. (42 U.S.C. 6313(a)(6)(C)(iv)) The date under clause (I), projected to be 2026, is later than the date under clause (II), which is 2009. Therefore, for the purposes of its analysis for this NOPR, DOE used January 1, 2026 as the beginning of compliance with potential amended standards for CWH equipment.

1. Approach

Recognizing that each consumer that uses CWH equipment is unique, DOE analyzed variability and uncertainty by performing the LCC and PBP calculations on a nationally representative stock of commercial and residential buildings. Commercial buildings can be categorized based on their specific activity, and DOE considered commercial buildings such as offices (small, medium, and large), stand-alone retail and strip-malls, schools (primary and secondary), hospitals and outpatient healthcare facilities, hotels (small and large), warehouses, restaurants (quick service and full service), assemblies, nursing homes, and dormitories. These encompass 89.4 percent of the total sample of commercial building stock in the United States. The residential buildings can be categorized based on the type of housing unit, and DOE considered single-family (attached and detached) and multi-family (with 2–4 units and 5+ units) buildings in its analysis. This encompassed 95.5 percent of the total sample of residential building stock in the United States, though not all of this sample would use CWH equipment. DOE developed financial data appropriate for the consumers in each business and building type. Each type of building has typical consumers who have different costs of financing because of the nature of the business. DOE derived the financing costs based on data from the Damodaran Online website.[73] For residential applications, the entire population was categorized into six income bins, and DOE developed the probability distribution of real interest rates for each income bin by using data from the Federal Reserve Board's Survey of Consumer Finances.[74]

The LCC analysis used the estimated annual energy use for every unit of CWH equipment described in section

[72] The model being discussed in this section, the LCC, has few if any locked cells, meaning most if not all cells are available for editing by users as stated in the text. DOE does in some cases lock cells and worksheets in order to protect proprietary data. Such is not the case with the LCC model used in this rulemaking, so users should be able to edit assumptions in this model.

[73] *Damodaran Online.* Commercial Applications. Available at *pages.stern.nyu.edu/~adamodar/New_Home_Page/home.htm.* Last accessed on July 8, 2021.

[74] The real interest rates data for the six income groups (residential sector) were estimated using data from the Federal Reserve Board's Survey of Consumer Finances (1989, 1992, 1995, 1998, 2001, 2004, 2007, 2010, 2013, 2016, and 2019). Available at *www.federalreserve.gov/pubs/oss/oss2/scfindex.html.*

IV.C of this NOPR. Aside from energy use, other important factors influencing the LCC and PBP analyses are energy prices, installation costs, and equipment distribution markups. At the national level, the LCC spreadsheets explicitly model both the uncertainty and the variability in the model's inputs, using probability distribution functions.

As mentioned earlier, DOE generated LCC and PBP results for individual CWH consumers, using business type data aligned with building type and by geographic location, and DOE developed weighting factors to generate national average LCC savings and PBPs for each efficiency level. As there is a unique LCC and PBP for each calculated combination of building type and geographic location, the outcomes of the analysis can also be expressed as probability distributions with a range of LCC and PBP results. A distinct advantage of this type of approach is that DOE can identify the percentage of consumers achieving LCC savings or attaining certain PBP values due to an increased efficiency level, in addition to the average LCC savings or average PBP for that efficiency level.

2. Life-Cycle Cost Inputs

For each efficiency level that DOE analyzed, the LCC analysis required input data for the total installed cost of the equipment, its operating cost, and the discount rate. Table IV.19 summarizes the inputs and key assumptions DOE used to calculate the consumer economic impacts of all energy efficiency levels analyzed in this rulemaking. A more detailed discussion of the inputs follows.

TABLE IV.19—SUMMARY OF INPUTS AND KEY ASSUMPTIONS USED IN THE LCC AND PBP ANALYSES

Inputs	Description
Affecting Installed Costs	
Product Cost	Derived by multiplying manufacturer sales price or MSP (calculated in the engineering analysis) by distribution channel markups, as needed, plus sales tax from the markups analysis.
Installation Cost	Installation cost includes installation labor, installer overhead, and any miscellaneous materials and parts, derived principally from RS Means 2021 data books [A B C] and converted to 2020$.
Affecting Operating Costs	
Annual Energy Use	Annual unit energy consumption for each class of equipment at each efficiency and standby loss level estimated at different locations and by building type using building-specific load models and a population-based mapping of climate locations. The geographic scale used for commercial and residential applications are Census Divisions and reportable domains respectively.
Electricity Prices, Natural Gas Prices.	DOE developed average residential and commercial electricity prices based on EIA Form 861M, using data for 2019.[D] Future electricity prices are projected based on *AEO2021.* DOE developed residential and commercial natural gas prices based on EIA State-level prices in EIA Natural Gas Navigator, using data for 2019.[E] Future natural gas prices are projected based on *AEO2021.*
Maintenance Cost	Annual maintenance cost did not vary as a function of efficiency.
Repair Cost	DOE determined that the materials portion of the repair costs for gas-fired equipment changes with the efficiency level for products. The different combustion systems varied among different efficiency levels, which eventually led to different repair costs.
Affecting Present Value of Annual Operating Cost Savings	
Product Lifetime	Table IV.21 provides lifetime estimates by equipment category. DOE estimated that the average CWH equipment lifetimes range between 10 and 25 years, with the average lifespan dependent on equipment category based on estimates cited in available literature.[F]
Discount Rate	Mean real discount rates (weighted) for all buildings range from 3.2% to 5.0%, for the six income bins relevant to residential applications. For commercial applications, DOE considered mean real discount rates (weighted) from 10 different commercial sectors, and the rates ranged between 3.2% and 7.2%.
Analysis Start Year	Start year for LCC is 2026, which would be the anticipated compliance date for potential amended standards, if such were to be adopted by a final rule of this rulemaking.
Analyzed Efficiency Levels	
Analyzed Efficiency Levels	DOE analyzed baseline efficiency levels and up to five higher thermal efficiency levels. For Residential-Duty Gas-Fired Storage DOE analyzed baseline and up to five higher UEF levels which combine thermal efficiency and standby loss improvements. See the engineering analysis for additional details on selections of efficiency levels and costs.

[A] RSMeans. 2021 Plumbing Costs with RSMeans Data. Available at *www.rsmeans.com/products/books/2021-cost-data-books/2021-plumbing-costs-book.*

[B] RSMeans. 2021 Facilities Maintenance & Repair Costs with RSMeans Data. Available at *www.rsmeans.com/products/books/2021-facilities-maintenance-repair-costs-book.*

[C] RSMeans. Estimating Costs with RSMeans Data, CostWorks CD, Mechanical Costs 2021. Available at *www.rsmeans.com/products/books/2021-mechanical-costs-book.* All RS Means links, last accessed on July 8, 2021.

[D] U.S. Energy Information Administration (EIA). Average Retail Price of Electricity (Form EIA–861). Available at *www.eia.gov/electricity/data/browser/.* Last accessed on February 21, 2021.

[E] U.S. Energy Information Administration (EIA). Average Price of Natural Gas Sold to Commercial Consumers—by State. Available at *www.eia.gov/dnav/ng/ng_pri_sum_a_EPG0_PCS_DMcf_a.htm.* Prices for Residential Consumers are available at the same site using the Data Series menu. Last accessed on February 26, 2021.

[F] American Society of Heating, Refrigerating, and Air-Conditioning Engineers. 2011 ASHRAE Handbook: Heating, Ventilating, and Air-Conditioning Applications. 2011. Available at *www.ashrae.org/resources--publications.* Last accessed on October 16, 2016.

DOE calculates energy savings for the LCC and PBP analysis using only onsite electricity and natural gas usage. For determination of consumer cost savings, the onsite electricity and natural usage are estimated separately with appropriate electricity and natural gas prices, or marginal prices, applied to each. Primary and FFC energy savings are not used in the LCC analysis.

a. Equipment Cost

To calculate equipment costs, DOE multiplied the MPCs developed in the engineering analysis by the markups described previously in section IV.D of this document (along with sales taxes). DOE used different markups for baseline products and higher-efficiency products, because DOE applies an incremental markup to the increase in MSP associated with higher-efficiency products. For each equipment category, the engineering analysis provided contractor costs for the baseline equipment and up to five higher equipment efficiencies. DOE examined whether equipment costs for CWH equipment would change over time. DOE determined that there is no clear historical price trend for CWH equipment. Therefore, DOE used costs established in the engineering analysis directly for determining 2026 equipment costs and future equipment costs (equipment is purchased by the consumer during the first year in 2026 at the estimated equipment price, after which the equipment price remains constant in real dollars). See section IV.H.4 of this document and chapter 10 of the NOPR TSD for more details.

The markup is the percentage increase in cost as the CWH equipment passes through distribution channels. As explained in section IV.D of this NOPR, CWH equipment is assumed to be delivered by the manufacturer through a variety of distribution channels. There are several distribution pathways that involve different combinations of the costs and markups of CWH equipment. The overall resulting markups in the LCC analysis are weighted averages of all of the relevant distribution channel markups.

b. Installation Costs

The primary inputs for establishing the total installed cost are the retail cost of the CWH equipment and its corresponding installation costs, which includes labor, overhead, and any miscellaneous materials and parts needed to install the product. Installation costs vary by efficiency level, primarily due to venting costs. For new construction installations, the installation cost is added to the product cost to arrive at a total installed cost. For replacement installations, the costs to remove the previous equipment (including venting when necessary) and the installation costs for new equipment, including venting and additional expenses, are added to the product cost to arrive at the total replacement installation cost.

DOE derived national average installation costs for commercial equipment from data provided in RS Means 2021 data books.[75] RS Means provides estimates for installation costs for CWH units by equipment capacity, as well as cost indices that reflect the variation in installation costs for 295 cities in the United States. The RS Means data identify several cities in each of the 50 States, as well as the District of Columbia. DOE incorporated location-based cost indices into the analysis to capture variation in installation costs, depending on the location of the consumer. Based upon the RS Means data, relationships were developed for each product subcategory to relate the amount of labor to the size of the product—either the storage volume or the input rate. Generally, the RS Means data were in agreement with other national sources, such as the Whitestone Facility Maintenance and Repair Cost Reference.[76]

DOE calculated venting costs for each building in the CBECS and RECS. A variety of installation parameters impact venting costs; among these, DOE simulated the type of installation (new construction or retrofit), water heater type, draft type (atmospheric venting or power venting), building vintage, number of stories, and presence of a chimney. A combination of Crystal Ball variable distributions and MS Excel macros and logic are used to address the identified variables to determine the venting costs for each instance of equipment for each building within the Monte Carlo analysis. With regard to the venting material for condensing equipment, the primary assumptions used in this logic are listed below:

- 25 percent of commercial buildings built prior to 1980 were assumed to have a masonry chimney, and 25 percent of masonry chimneys required relining.
- Condensing equipment with vent diameters smaller than 5 inches were modeled using PVC (polyvinyl chloride) as the vent material.
- Condensing equipment with vent diameters of 8 inches or greater were assigned AL29–4C (superferritic stainless steel) as the vent material.
- Condensing equipment with vent diameters of 5 inches and up to 8 inches were assigned vent material based on a random selection process in which, on average, 50 percent of installations received PVC as the vent material and the remaining received AL29–4C.
- 5 percent of all condensing CWH equipment installations were modeled as direct vent installations. The intake air pipe material for condensing products was modeled as PVC.

Additional details of the venting logic sequence are found in chapter 8 and Appendix 8D of the NOPR TSD.

1. Data Sources

For this NOPR analysis, DOE used the most recent datasets available at the time the analysis was conducted. DOE makes its best attempt to update data to recent datasets available at its various rulemaking stages and has updated the CWH equipment LCC model with the most recent data estimates available for this NOPR, including use of the 2012 CBECs and 2021 RS Means data (including 2021 RS Means Plumbing Costs Data, 2021 RS Means Mechanical Cost Data, and 2021 RS Means Facility Maintenance and Repair Costs).

2. Condensate Removal and Disposal

In response to the withdrawn NOPR, Anonymous, Raypak and AHRI commented about the difficulty in installing condensing water heaters is challenging in buildings lacking floor drains or other ways to drain condensate. (Raypak, No. 41 at p. 7; AHRI, No. 40 at p. 5; Anonymous, No. 21 at p. 2) NEEA stated that the raw costs and application of costs for condensate removal appear high, specifically for the condensate pump, electrical receptacle for the pump, drain line, and heat tape. NEEA argued that since the International Plumbing Code[77] calls for temperature and pressure relief valves to be piped to drain, non-condensing CWH equipment should already have an existing drainage system. NEEA also stated that a condensate neutralizer is not required in certain jurisdictions, though it is good design practice. (NEEA, No. 37 at p. 1)

In response, DOE's LCC analysis accounted for condensate disposal in its installation cost estimates for condensing CWH equipment. The

[75] DOE notes that RS Means publishes data books in one year for use the following year; hence, the 2021 data book has a 2020 copyright date.

[76] Whitestone Research. *The Whitestone Facility Maintenance and Repair Cost Reference 2012–2013 (17th Annual edition).* 2012. Whitestone Research: Santa Barbara, CA.

[77] *See www.iccsafe.org/content/international-plumbing-code-ipc-home-page/.* The model International Plumbing Code has been adopted 35 states for state or local plumbing codes.

International Plumbing Code is widely used in the U.S. as the model for state and local plumbing codes. Given this fact and given NEEA's information on the International Plumbing Code requirement, DOE revised the assumption of 25 percent used in the withdrawn 2016 NOPR to the assumption for this NOPR of 10 percent of replacement installations requiring the installment and associated costs of a condensate pump and insulated condensate piping to dispose of condensate. For this NOPR analysis, a condensate neutralizer was assigned to 12.5 percent of replacement installations, which was unchanged from the assumption used in the withdrawn 2016 NOPR. For this NOPR, the cost of heat tape was assigned to 10 percent of replacement installations, which was unchanged from the withdrawn 2016 NOPR assumption. The cost of an electrical outlet specifically for heat tape was added for this NOPR in 10 percent of instances in which heat tape was installed. For this NOPR, DOE also conducted research on the appropriate condensate pump size and associated cost for each equipment category, which resulted in an update to the condensate pump assignment for residential-duty and commercial gas-fired storage water heaters. For the withdrawn 2016 NOPR, DOE used one condensate pump for all equipment types while for this NOPR DOE used two sizes of condensate pumps. The representative designs for these residential-duty and commercial gas-fired storage water heaters are met using a condensate pump with a lower volume capacity and gallons-per-hour performance. Chapter 8 of the TSD contains more information on the methodology, raw costs, and sources for the installation cost for condensate removal.

3. Vent Replacement

In response to the withdrawn NOPR stakeholders submitted comments describing challenges building owners may have installing condensing equipment using sidewall venting, while other commenters noted sidewall venting provided a cheaper option in some cases. (AHRI, No. 40 at p. 35; Spire, No. 45 at pp. 34, 35; Bradford White, No. 42 at p. 4; HTP, No. 44 at pp. 1–2; NEEA, No. 37 at p. 1) In both the withdrawn NOPR and in this NOPR DOE conducted its analysis under the assumption that condensing CWH equipment would use the same chase for the venting system as the non-condensing CWH equipment that it replaces. Condensing CWH equipment is not required to sidewall vent exclusively and presents no special limitations restricting vertical vent scenarios. In instances in which a building has a centrally-located mechanical room, relocation of this mechanical room should not be necessary to accommodate condensing CWH equipment. The local building codes that may limit or prohibit sidewall venting in certain buildings should not be a factor for vertical venting systems. To the extent that horizontal natural draft venting is used at a job site, it is indicative that horizontal venting is allowed by the jurisdiction and potentially that vent runs may be different than DOE's vertical venting assumption (shorter vertically, but with a horizontal length component). DOE received no information from commenters on the relative frequency of less-costly sidewall venting installations nor did DOE receive information or data suggesting that DOE's assumption of vertical venting using the existing chase is unsound. Therefore, DOE has maintained its venting methodology and associated venting costs for scenarios in which non-condensing CWH equipment is replaced by condensing CWH equipment.

NEEA recommended that DOE account for the cost of a high and low sidewall air ducts (per mechanical code) to the installation cost of non-condensing CWH equipment. (NEEA, No. 37 at p. 2) In response, DOE acknowledges that all combustion appliances require adequate air for combustion and that in installations where adequate combustion air is not provided through infiltration alone, high and low sidewall air ducts providing ventilation air are an installation option alone, or in combination with infiltration. The requirement for adequate combustion air exists regardless of whether naturally-vented or fan-assisted vent systems are used, but is not required for direct vent systems where combustion air is provided through dedicated means per manufacturers specifications. While there are certain differences in the requirements for fan-assisted versus naturally-vented equipment, the cost of providing for combustion air is similar for non-condensing or condensing non-direct-vent CWH equipment, and in fact, minimum room volume requirements before requiring separate ventilation openings are larger for natural draft versus fan-assisted combustion appliances. Direct vent equipment provides another option where fan-assisted combustion equipment is used, and may provide better control of outside air into a building as well as providing combustion air that is free from indoor contaminants that can damage water heaters in certain circumstances (where necessary). Another option is to install a mechanical combustion air system (*e.g.,* ''fan in a can'') in the room to ensure proper make-up air for the equipment. NEEA did not provide information or data indicating how common these situations are in buildings, and DOE was unable to find this information in its research, and the Department has concluded that the cost to provide adequate combustion air will be similar for non-condensing and condensing CWH equipment.

In response to the withdrawn NOPR NEEA commented that sleeving of vents in replacement scenarios avoids the cost of removing the existing venting system while Spire asked for clarification as to whether DOE considers existing vent systems to be sleeved. (NEEA, No. 37 at p. 2; Spire, Public Meeting Transcript, No. 20 at p. 83) In response, DOE incorporated the sleeving of existing vent systems in its SNOPR analysis. For existing buildings with natural draft (B-vent type) venting systems that have no elbows and possess vent lengths less than or equal to 30 feet, DOE assigned sleeving of the existing vent with PVC venting to 50 percent of replacement scenarios. DOE's assumption of 50 percent sleeving under these conditions presumes that sleeving of new vents can be done but that with plastic piping other limitations to sleeving, including access for joints, may present themselves. While DOE recognizes that with other venting systems, particularly polypropylene or stainless flexible venting, additional sleeving options are possible, DOE's existing analysis adequately accounts for the potential for sleeved venting.

Stakeholders commented on the withdrawn NOPR that jurisdictions in certain parts of the country do not allow for non-metallic vents (an estimated 5 percent of installations), that many local municipalities disallow PVC usage when the vent diameter is greater than 4 inches, and that polypropylene as a venting material is an option available to consumers that is widely used due to the growing number of municipality building codes and contractor requests calling for the use of this vent material. (*See* (A.O. Smith, No. 39 at p. 12; Rheem, No. 43, at p. 22; Rheem, No. 43, at p. 22; Bradford White, No. 42 at p. 8) DOE conducted further research as to the local or regional jurisdictions that prohibit certain vent materials for CWH equipment installation. While DOE found that PVC vent material is

disallowed in certain jurisdictions (*e.g.,* New York, NY), DOE did not identify jurisdictions in which non-metallic vents are disallowed, and comments on the withdrawn NOPR did not provide examples for DOE to investigate. DOE also reviewed manufacturer product literature and costs for polypropylene vents. DOE did not identify physical limitations for using polypropylene venting with condensing CWH equipment. Polypropylene material costs have decreased significantly with increasing demand, and fewer labor hours are required to install polypropylene venting systems, which are found as ''snap-together'' gasketed systems, than for PVC or CPVC venting. For jurisdictions prohibiting PVC venting, polypropylene venting is a viable alternative and if it becomes more commonly used DOE expects it will be an even more viable, cost-competitive alternative by 2026. While polypropylene venting has the potential in some cases to reduce installation costs, DOE did not modify its analysis for this NOPR to explicitly include polypropylene venting.

PHCC argued that, in some cases, vent replacement can be physically impossible and prohibitively expensive due to the uniqueness of each replacement situation. (PHCC, No. 34 at p. 1) Spire stated that DOE's estimated installation and venting costs are too low in cases where installations are intrinsically difficult. (Spire, No. 45 at pp. 44–45) For this NOPR DOE's analysis accounts for installation costs in the commercial and residential sectors for both replacement and new construction markets, along with an appropriate set of installation scenarios within each market and sector combination. Equipment installation and removal costs are separate from venting system installation and removal costs. The equipment installation labor hours for representative CWH models ranged from 4 to 22.4 hours, depending on the equipment category. The labor hours to remove CWH equipment in replacement situations were determined to be an additional 37.5 percent of the installation labor hours on average, meaning they ranged from an additional 1.5 to 8.4 hours depending on the equipment category. These labor hour calculations were based on a linear regression formula using data from the RS Means Facilities Construction Cost Data, ENR Mechanical Cost book, and Whitestone Facility Maintenance and Repair Cost Reference. This formula escalated equipment installation labor hours based on the input capacity and/or volume of the CWH equipment, as expressed in the sources that DOE relied upon. DOE has found no information that suggests basic CWH equipment installation or removal cost varies based on thermal efficiency rather than input capacity and/or volume. DOE accepts the methodologies of its sources that the activities required to install minimum-efficiency and high-efficiency equipment are inherently similar. This approach to developing costs for CWH equipment installation or removal was not changed from the withdrawn NOPR.

In addition to equipment installation and removal, DOE accounted for the labor hours to install and remove venting, scaled to the vent length in linear feet and/or the number of components (*e.g.,* elbows) in the venting system. These costs differed based on the vent material and diameter involved in the installation. For example, the labor to install PVC venting for condensing CWH equipment in the commercial sector ranged from 0.302 hours per linear foot for three-inch diameter vents to 0.333 hours per linear foot for 4-inch diameter vents. [78] The labor to install Type-B vent in the commercial sector for non-condensing CWH equipment ranged from 0.235 hours per linear foot for 4-inch diameter vents to 0.286 hours per linear foot for 7-inch diameter vents.[79] The labor rates in DOE's analysis depended on the crew type conducting the installation, region in which the installation occurred, and whether venting was installed in residential or commercial buildings. For the installation of Type-B venting for non-condensing CWH equipment, average labor rates (including overhead and profit) ranged from $65 per hour in the residential sector to $87 per hour in the commercial sector. [80] For the installation of PVC venting for condensing CWH equipment, average labor rates used by DOE (including overhead and profit) ranged from $66 per hour in the residential sector to $89 per hour in the commercial sector.[81] Regional adjustments to these labor rates called for multipliers ranging from 0.59 (South Carolina and North Carolina) to 1.68 (New York).[82] For this NOPR, DOE did not further adjust labor rates for venting except to use the most up-to-date source data.

In addition to accounting for equipment installation and removal, and venting installation and removal, DOE also incorporated an appropriate set of installation cost additions and subtractions, which included labor and material, arising from unique circumstances in replacement scenarios. These installation costs included reusing existing vent systems (when replacing non-condensing CWH equipment with similar non-condensing CWH equipment), relining of chimneys, installing condensate drainage, and sleeving of existing vent systems with certain replacement venting systems, introduced in this NOPR analysis. DOE did not incorporate the costs of sealing off chases and roof vents or moving mechanical rooms because it is logical that condensing CWH equipment would reside in the same location and use the same chase as the non-condensing CWH equipment it replaced. DOE found this to be appropriate since there are no technological limitations preventing condensing CWH equipment from using vertical venting systems.

4. Extraordinary Venting Cost Adder

In response to the withdrawn NOPR, PHCC and Spire argued that, in some cases, vent replacement can be physically impossible and/or prohibitively expensive in cases where installations are intrinsically difficult. (PHCC, No. 34 at p. 1; Spire, No. 45 at pp. 44–45) DOE acknowledges the possibility that its analysis of installation costs may not capture outlier installation scenarios that involve uncommon building conditions that may further reduce or increase installation costs. Neither PHCC nor Spire provided data or evidence to substantiate the extent that these unique, additional installation challenges occur for condensing CWH equipment in buildings, descriptions of what would be necessary to resolve these installations challenges, or amount of labor and materials required to perform the solution. DOE expects that these situations would be small in number and that it has captured an appropriate set of installation scenarios that are typical of residential and commercial buildings. For this NOPR, DOE researched the question of the prevalence and cost of extraordinarily costly installations. The one source identified that could be used to quantify extraordinary vent costs was the report submitted by NEEA in DOE Docket EERE–2018–BT–STD–0018.[83] Using this

[78] RSMeans. Estimating Costs with RSMeans Data, CostWorks CD, Mechanical Costs 2021.

[79] *Id.*

[80] RSMeans. Estimating Costs with RSMeans Data, CostWorks CD, Mechanical Costs 2021.

[81] *Id.*

[82] *Id.*

[83] NEEA, Northeast Energy Efficiency Partnerships, Pacific Gas & Electric, and National Grid. *Joint comment response to the Notice of Petition for Rulemaking; request for comment (report attached—Memo: Investigation of Installation Barriers and Costs for Condensing Gas Appliances).* Docket EERE–2018–BT–STD–0018, document number 62. *www.regulations.gov/*

as a reference, DOE implemented an extraordinary venting cost adder, which was included in the SNOPR LCC model as a feature of the main case.

To account for the extraordinarily expensive venting installation costs hypothesized by stakeholders as discussed in section IV.F.2.b of this NOPR, DOE added an extraordinary vent cost adder. This is based on the report submitted by NEEA. *Id.* In that report it was stated that due to vent configurations, between 1 and 2 percent of replacements might experience extraordinary costs between 100 and 200 percent above the average installation cost. Because there is no clear linkage between specific situations and extraordinary costs, DOE implemented this by adding for each equipment category two additional variables. One is a probability of occurrence and the second is the multiplier. For 2 percent of cases, DOE assumes a multiplier between 200 percent and 300 percent. In all cases, the LCC model estimates the total installation cost, and multiplies it by the multiplier. In 98 percent of cases, the multiplier is equal to 1.00, or 100 percent. When the LCC model selects the extraordinary installation cost case, it also selects a multiplier between 200 and 300 percent to multiply the estimated installation cost.

Issue 4: DOE seeks comments on the extraordinary venting cost adder. Specifically, DOE seeks data to estimate the fraction of consumers that might incur extraordinary costs, and the level of such extraordinary costs.

5. Common Venting

Spire and AO Smith commented on issues related to common venting of non-condensing equipment including assets being potentially ''stranded'' or needing to be prematurely retired and the cost of engineering a solution. (Spire, No. 45 at pp. 33, 34; AO Smith, No. 39 at p. 12) AHRI commented that one way to replace common vented, non-condensing CWH equipment is to replace all water heaters simultaneously. (AHRI, Public Meeting Transcript, No. 20 at pp. 89–90)

DOE acknowledges that certain CWH equipment installations are commonly vented in certain building applications in which it is feasible. However, in these instances, the CWH equipment typically is not commonly vented with other, disparate gas-fired equipment (like furnaces). Instead, multiple units of CWH equipment are common vented together since the CWH equipment typically operates in unison, calling for a specific vent size. Common venting disparate gas-fired equipment complicates the design and sizing of the common vent, since it needs to accommodate exhaust of a wide range of flue gas volume due to the different operating profiles and flue capacities required for disparate equipment. When multiple units of CWH equipment are common vented, building engineers typically design the common vent system to suit a specific number of units of CWH equipment with certain specifications. The installation of these units typically occurs all at one time. As a result, each unit should have the similar expected lifetime and replacement cycle. Therefore, when one unit fails and requires replacement, the other units sharing the common vent should also be nearing the end of their lifetimes. In this scenario, building engineers will often replace all of the units at one time for sake of simplicity, time, cost, and risk avoidance. Thus, the stranded cost of any naturally-drafted, non-condensing CWH equipment due to this NOPR would have marginal residual value, which often would have been relinquished regardless of this NOPR. In addition, polypropylene common vent kits are available in the market to accommodate the common venting of condensing CWH equipment, and DOE is unaware of building codes issues to prevent such kits from being used widely. This means condensing CWH equipment could be installed in the same location as the naturally-vented, non-condensing CWH equipment that it replaces. Spire, AHRI, and A.O. Smith did not provide information supporting their claim that the building applications and circumstances that call for the design and installation of a common venting system. Moreover, commenters did not indicate how typical common venting is in the commercial and residential building stock, which would allow for an accounting of common venting where it has a substantial impact on the analysis. For all of these reasons, DOE determined that stranded gas-fired equipment due to common venting circumstances would not have a substantial impact on the results of its analysis. The SNOPR retained the assumption embodied in the NOPR analysis that common venting does not impose specific costs that must be captured in the installation cost analysis.

6. Vent Sizing/Material Cost

Raypak commented that the cost used by DOE for replacing venting systems is likely understated due to the selected input capacity for the representative designs of commercial gas-fired tankless water heaters and commercial gas-fired instantaneous circulating water heaters and hot water supply boilers. Raypak argues that higher-capacity commercial CWH equipment calls for larger vent diameters that require more expensive vent material (*i.e.,* AL29–4C) than the material currently used in DOE's analysis (*i.e.,* PVC). (Raypak, No. 41 at p. 7) In response, DOE's analysis uses representative models for each CWH equipment category as described in IV.C.3.

These representative models were determined through research of the most common specifications of models within the equipment category in the market. DOE acknowledges that CWH equipment with higher input capacities calls for vents with larger diameters, and, thus, requires AL29–4C as the venting material for condensing CWH equipment. An examination of the installed costs for vents from 4–10 inches in diameters based on straight vent pipe and national average labor rates suggests the AL29–4C double wall vent is approximately 50 percent more expensive per foot on average than PVC. However, as vent diameter increases linearly in size, the input capacity for the CWH equipment sized to the vent diameter increases roughly as the square of the vent diameter due to the volume of exhaust that can travel through the vent cross-sectional area at the same pressure. CWH equipment with such high input capacities will be installed in buildings with higher maximum and average daily loads, which will result in higher energy and monetized energy cost savings relative to the roughly linear cost increase in vent installation. Therefore, to the extent that CWH equipment requiring larger diameter venting is prevalent in the market, it suggests that DOE's LCC analysis results may be conservative in terms of such CWH equipment.

7. Masonry Chimney/Chimney Relining

Bradford White questioned the validity of DOE's assumptions that 25 percent of buildings built prior to 1980 have a masonry chimney, and that 25 percent of those chimneys need relining. (Bradford White, No. 42 at p. 8)

In the withdrawn NOPR, DOE assumed that 25 percent of pre-1980 buildings have masonry chimneys and that 25 percent need relining. DOE asked for input on these and other primary assumptions used in the logic underlying the calculation of venting costs. While DOE acknowledges Bradford White's uncertainty about

comment/EERE-2018-BT-STD-0018-0062. Last accessed July 8, 2021.

these assumptions, DOE did not receive information or data on the percentage of buildings built prior to 1980 with a masonry chimney and the percentage of those chimneys that require relining. Because no information has been identified to cause DOE to alter the original assumptions, this NOPR continues to use the assumptions that 25 percent of buildings constructed prior to 1980 have masonry chimneys, and 25 percent of those buildings need a relining of the chimney.

8. Downtime During Replacement

In response to the withdrawn NOPR, several stakeholders asked for clarification as to whether the downtime to switch from a non-condensing CWH equipment to condensing equipment was included in DOE's analysis, or encouraged DOE to include tangential factors like downtime in the analysis. (PVI, Public Meeting Transcript, No. 20 at pp. 85–86; AHRI, No. 40 at p. 5–6; Rheem, No. 43 at pp. 7, 15, 23; Raypak, No. 41 at pp. 4–5; NPGA, No. 32 at p. 3) In response, DOE's research indicates that consumers sensitive to the downtime incurred during CWH equipment replacement, such as in hotel and restaurant building applications, already plan ahead to limit the downtime of equipment replacement.[84] These consumers already must schedule planned replacements during off hours or low-use periods to limit the impact on business operation. Therefore, DOE did not account for the loss of business in its LCC analysis.

9. Fuel Switching, Cost Build-Up Versus Survey, Other Comments

DOE's LCC analysis accounts for consumers who experience a net cost due to a payback that is longer than the equipment lifetime of the more-efficient CWH equipment (*i.e.,* non-cost-effective scenario). The results of DOE's calculations of average lifetime cost and percent of consumers experiencing a net cost are presented for each equipment category in chapter 8 of the NOPR TSD. Table V.4 through Table V.12 of this NOPR present LCC savings and PBP results by TSL. DOE's review of fuel switching is available in section IV.H.2 of this NOPR.

In comments on the withdrawn NOPR, two stakeholders claimed that using a cost build-up approach rather than surveys of contractor quotes, leads to systematically understated installation costs. (Spire, No. 45 at pp. 20, 21; AHRI, No. 40 at pp. 35, 36) In response, DOE relied primarily on data from RS Means, Whitestone, and ENR to develop its installation costs. These resources provided itemized data on the installation and removal costs of both equipment and venting systems, as well as the installation costs of condensate drainage systems, electrical outlets, and chimney relining. The itemization of these costs was at the component level for both labor and material, and in both the commercial and residential sectors, which allowed DOE to develop an appropriate set of installation scenarios to factor into the LCC analysis. The use of these resources also provided DOE with a consistent evaluation of costs with a consistent set of location adjustments for each residential and commercial region included in the analysis. DOE notes that surveys of existing contractor quotes may not adequately separate equipment costs from installation costs since installing contractors would commonly be selling and marking up equipment as well as installation labor. Thus, use of surveys would not provide the level of detailed information needed to assess installation costs. For these reasons, the sources relied upon were nationally representative and appropriate for the development of installation costs, as were the methodologies used in the withdrawn NOPR. For this NOPR, DOE continued to use a built-up cost approach to installed cost estimation.

The Joint Advocates referred DOE to a commercial kitchens service center for information on installation costs. (Joint Advocates, Public Meeting Transcript, No. 20 at p. 87) DOE believes this reference is to the Fisher-Nickel Food Technology Service Center. DOE reviewed the Installation Considerations section of the Fisher-Nickel ''Design Guide for Improving Commercial Kitchen Hot Water System'' [85] performance in its analysis. DOE's analysis accounts for the installation recommendations included in this resource, such as the installation of a condensate neutralizer for condensate drainage and use of PVC vent material for condensing CWH equipment. In addition, DOE relied on this resource for certain components of its energy use analysis. Thus, DOE has properly considered this resource in this NOPR analysis.

In response to the withdrawn NOPR four stakeholders mentioned the potential impacts of costs associated with asbestos treatment in venting retrofit cases and asked if asbestos was considered by DOE and/or stated that the presence of asbestos could drive up the costs to change to a new vent system. (Bradford White, No. 42 at pp. 8–9; A.O. Smith, No. 39 at pp. 3, 13; NegaWatt, Public Meeting Transcript, No. 20 at p. 90; CA IOUs, No. 28 at p. 3) In response to these comments, DOE researched the prevalence and vintage of asbestos insulation in venting systems. Asbestos-lined vents were installed in the 1970s to insulate single-wall vents as a safety precaution (*i.e.,* prevent safety hazards resulting from hot vent temperatures). This practice was phased out in the 1980s due to the human health risks associated with asbestos material. In addition, EPAct 1992 mandated a minimum thermal efficiency of 78 percent for CWH equipment, which went into effect in 1994. As a result of this legislation, many consumers replacing CWH equipment also needed to replace the venting system due to the improper vent diameter of their existing system, at which time asbestos issues likely would have been addressed. Commenters seemed to agree this is an uncommon situation now and would be less common over time. DOE also notes that the deterioration of the asbestos-containing venting over time implies that this is a pre-existing building concern and that many of these vents would need to be replaced or circumvented regardless, which when it occurs, points to situations where an existing vent is no longer reusable. DOE agrees that incorporation of costs for asbestos removal would increase the cost of venting generally, but due to these historical circumstances and the need to replace deteriorating and unsafe existing vents, generally, it is unnecessary to account for the additional cost of removing asbestos-lined vents since they are uncommon and will be even less common by 2026. DOE notes that the approach taken for this NOPR analysis is unchanged from the withdrawn NOPR analysis in this regard.

c. Annual Energy Consumption

DOE estimated the annual electricity and natural gas consumed by each category of CWH equipment, by efficiency and standby loss level, based on the energy use analysis described in section IV.E and in chapter 7 of the NOPR TSD.

[84] For examples of the types of steps hotels take to avoid downtime and the planning performed to meet customer needs with minimum downtimes, see *www.usatoday.com/story/travel/hotels/2018/12/03/hot-showers-hotels/2154259002/*or *continuingeducation.bnpmedia.com/courses/watts/water-safety-and-efficiency-in-hospitality-buildings/4/.*

[85] Fisher-Nickel. *Design Guide: Improving Commercial Kitchen Hot Water System: Energy Efficient Heating, Delivery and Use.* March 26, 2010.

d. Energy Prices

Electricity and natural gas prices are used to convert changes in the energy consumption from higher-efficiency equipment into energy cost savings. It is important to consider regional differences in electricity and natural gas prices because the variation in those prices can impact electricity and natural gas consumption savings and equipment costs across the country. DOE determined average effective commercial electricity prices [86] and commercial natural gas prices [87] at the State level from EIA data for 2019. DOE used data from EIA's Form 861 [88] to calculate commercial and residential sector electricity prices, and EIA's Natural Gas Navigator [89] to calculate commercial and residential sector natural gas prices. Future energy prices were projected using trends from the EIA's *AEO2021*.[90] This approach captured a wide range of commercial electricity and natural gas prices across the United States.

CBECS and RECS report data based on different geographic scales. The various States in the United States are aggregated into different geographic scales such as Census Divisions (for CBECS) and reportable domains (for RECS). Hence, DOE weighted electricity and natural gas prices in each State based on the cumulative population in the cluster of one or more States that comprise each Census Division or reportable domain respectively. See appendix 8C of the NOPR TSD for further details.

The electricity and natural gas price trends provide the relative change in electricity and natural gas costs for future years. DOE used the *AEO2021* Reference case to provide the default electricity and natural gas price forecast scenarios. DOE extrapolated the trend in values at the Census Division level to establish prices beyond 2050.

DOE developed the LCC analysis using a marginal fuel price approach to convert fuel savings into corresponding financial benefits for the different equipment categories. This approach was based on the development of marginal price factors for gas and electric fuels based on historical data relating monthly expenditures and consumption. For details of DOE's marginal fuel price approach, see chapter 8 of the NOPR TSD.

DOE received comments on its marginal energy prices and marginal energy price factors, whether they represent the true marginal gas and electric energy costs, and the accuracy with which they represent the marginal energy costs paid by larger load consumers, in the withdrawn 2016 NOPR. Spire commented that DOE's needs to consider how changes in energy consumption are reflected in consumer energy bills based upon actual tariffs. (AGA and APGA, No. 35 at pp. 5, 8–9; Spire, No. 45 at pp. 36, 40; EEI, No. 38 at pp. 3–5).

Regarding the usage of EIA data for development of marginal energy costs and comparisons to tariff data, DOE emphasizes that the EIA data provide complete coverage of all utilities and all customers, including larger commercial and industrial utility customers that may have discounted energy prices. The actual rates paid by individual customers are captured and reflected in the EIA data and are averaged over all customers in a state. DOE has previously compared these two approaches for determining marginal energy price factors in the residential sector. In a September 2016 supplemental notice of proposed rulemaking for residential furnaces, DOE compared its marginal natural gas price approach using EIA data with marginal natural gas price factors determined from residential tariffs submitted by stakeholders. 81 FR 65719, 65784 (Sept. 23, 2016). The submitted tariffs represented only a small subset of utilities and states and were not nationally representative, but DOE found that its marginal price factors were generally comparable to those computed from the tariff data (averaging across rate tiers).[91] DOE noted that a full tariff-based analysis would require information on each household's total baseline gas consumption (to establish which rate tier is applicable) and how many customers are served by a utility on a given tariff. These data were not available in the public domain. By relying on EIA data, DOE noted, its marginal price factors represented all utilities and all states, averaging over all customers, and was therefore ''more representative of a large group of consumers with diverse baseline gas usage levels than an approach that uses only tariffs.'' 81 FR 65719, 65784. While the above comparative analysis was conducted for residential consumers, the general conclusions regarding the accuracy of EIA data relative to tariff data remain the same for commercial consumers. DOE uses EIA data for determining both residential and commercial electricity prices and the nature of the data is the same for both sectors. DOE further notes that not all operators of CWH equipment are larger load utility customers. As reflected in the building sample derived from CBECS 2012 and RECS 2009 data, there are a range of buildings with varying characteristics, including multi-family residential buildings, that operate CWH equipment. The buildings in the LCC sample have varying hot water heating load, square footage, and water heater capacity. Operators of CWH equipment are varied, some large and some smaller, and thus the determination of the applicable marginal energy price should reflect the average CWH equipment operator.

DOE's approach is based on the largest, most comprehensive, most granular national data sets on commercial energy prices that are publicly available from EIA. The data from EIA are the highest quality energy price data available to DOE. The resulting estimated marginal energy prices do represent an average across all commercial customers in a given region (state or group of states for RECS, census division for CBECS). Some customers may have a lower marginal energy price, while others may have a higher marginal energy price. With respect to large customers who may pay a lower energy price, no tariffs were submitted to DOE during the rulemaking for analysis. Tariffs for individual non-residential customers can be very complex and generally depend on both total energy use and peak demand (especially for electricity). These tariffs vary significantly from one utility to another. While DOE was unable to identify data to provide a basis for determining a potentially lower price for larger commercial and industrial utility customers, either on a state-by-state basis or in a nationally representative manner, the historic data on which DOE did rely includes such

[86] U.S. Energy Information Administration (EIA). Form EIA–861M Database Monthly Electric Utility Sales and Revenue Data (aggregated: 1990–current). Available at *www.eia.gov/electricity/data/eia861m/*. Last accessed on April 16, 2021.

[87] U.S. Energy Information Administration (EIA). Natural Gas Prices. Available at *www.eia.gov/dnav/ng/ng_pri_sum_a_EPG0_PCS_DMcf_a.htm*. Last accessed on February 26, 2021.

[88] U.S. Energy Information Administration (EIA). ''Average retail price of electricity;'' pre-generated report 5.6, average retail price of electricity to ultimate customers by end-use sector, by state. Available at *www.eia.gov/electricity/data/browser/*. Last accessed on February 21, 2021.

[89] U.S. Energy Information Administration (EIA). Natural Gas Navigator. Available at *www.eia.gov/dnav/ng/ng_pri_sum_a_EPG0_FWA_DMcf_a.htm*. Last accessed on February 26, 2021.

[90] U.S. Energy Information Administration (EIA). *Annual Energy Outlook 2021 with Projections to 2050: Narrative*. February 2021. Available at *www.eia.gov/outlooks/aeo/*.

[91] *See* appendix 8E of the TSD for the 2016 supplemental notice of proposed rulemaking for residential furnaces for a direct comparison, available at: *www.regulations.gov/document/EERE-2014-BT-STD-0031-0217* (Last accessed January 25, 2022).

discounts. The EIA data include both large non-residential customers with a potentially lower rate as well as more typical non-residential customers with a potentially higher rate. Thus, to the extent larger consumers of energy pay lower marginal rates, those lower rates are already incorporated into the EIA data, which would drive down EIA's marginal rates for all consumers. If DOE were to adjust downward the marginal energy price for a small subset of individual customers in the LCC Monte Carlo, it would also have to adjust upward the marginal energy price for all other customers in the sample to maintain the same marginal energy price averaged over all customers. Even assuming DOE could accomplish those adjustments in a reliable or accurate way, this upward adjustment in marginal energy price would affect the majority of buildings in the LCC sample. Operational cost savings would therefore both decrease and increase for different buildings in the LCC sample, yielding substantially the same overall average LCC savings result as DOE's current estimate.

In summary, DOE's current approach utilizes an estimate of marginal energy prices and captures the impact of actual utility rates paid by all customers in a State, including those that enjoy lower marginal rates for whatever reason, in an aggregated fashion. Adjustments to this methodology are unlikely to change the average LCC results.

DOE uses EIA's forecasted energy prices to compute future energy prices indices (for this NOPR, DOE updated forecasts from data published in the *AEO2021* Reference case), and combines those indices with monthly historical energy prices and seasonal marginal price factors in calculating future energy costs in the LCC analysis. For this NOPR, DOE used 2019 EIA energy price data as a starting point and notes that the 2019 historical average natural gas prices are lower than the historical prices used in the withdrawn NOPR. EIA historical price trends and calculated indices are developed in a reasonable manner using the best available data and models, and DOE uses these trends consistently across its regulatory analyses. DOE points out that this NOPR analyzes potential new standards for gas-fired equipment, and that electricity usage for such commercial equipment occurs both during standby and during firing periods (depending on equipment design) and can occur during periods of utility peak usage. While electricity usage and resultant expenditures are significantly lower than fuel (gas)-related expenditures, they do impact the LCC analysis and have been included, using the calculated marginal electricity costs. DOE's use of marginal cost factors for electricity in this analysis, which is based on overall electric expenditures, including those associated with electricity demand, may result in somewhat higher electricity costs than cost figures which omit the impact of demand costs; however, this is appropriate for the current analysis, barring other information on commercial load profiles and demand-peak windows. After careful consideration during the preparation of this NOPR, DOE concluded that it is appropriate to use its existing approach to the development of electric and fuel costs for the LCC and PBP analysis that (1) considers marginal electric and natural gas costs in its economic analysis, (2) reflects seasonal variation in marginal costs, and (3) uses EIA-recommended future energy price escalation rates. DOE maintained this approach for this NOPR.

e. Maintenance Costs

Maintenance costs are the routine annual costs to the consumer of ensuring continued equipment operation. DOE utilized The Whitestone Facility Maintenance and Repair Cost Reference 2012–2013 [92] [93] to determine the amount of labor and material costs required for maintenance of each of the relevant CWH equipment subcategories. Maintenance costs include services such as cleaning the burner and flue and changing anode rods. DOE estimated average annual routine maintenance costs for each class of CWH equipment based on equipment groupings. Table IV.20 presents various maintenance services identified and the amount of labor required to service the equipment covered in the NOPR analysis.

TABLE IV.20—SUMMARY OF MAINTENANCE LABOR HOURS AND SCHEDULE USED IN THE LCC AND PBP ANALYSES

Equipment	Description	Labor hours	Frequency (years)
Commercial gas-fired storage water heaters; Residential-duty gas-fired storage water heaters.	Clean (Volume ≤275 gallons)	2.67	1
	Clean (Volume >275 gallons)	8	2
	Overhaul	1.84	5
Gas-fired instantaneous tankless water heaters	Service	0.75	1
Gas-fired instantaneous circulating water heaters and hot water supply boilers.	Service	7.12	1

Because data were not available to indicate how maintenance costs vary with equipment efficiency, DOE used preventive maintenance costs that remain constant as equipment efficiency increases. Additional information relating to maintenance of CWH equipment can be found in chapter 8 of the NOPR TSD.

In response to the withdrawn NOPR, PHCC and Bradford White argued that maintenance of condensing equipment takes more labor time when compared to non-condensing equipment, *i.e.,* that maintenance costs are not independent of thermal efficiency. (PHCC, No. 34 at p. 2; Bradford White, No. 42 at pp. 9–10) In preparing this NOPR, DOE reviewed the manuals of non-condensing and condensing CWH equipment for a number of major manufacturers (listed in NOPR TSD Appendix 8E). The maintenance sections of these manuals provide a detailed list of maintenance activities for the corresponding CWH model. Comparing non-condensing to condensing CWH equipment, DOE identified condensate line inspection as the distinct maintenance activity differentiating the two. This activity is neither sophisticated nor time consuming and not separately included. None of the manuals for condensing CWH equipment provided maintenance activities for controls, enclosures, access

[92] Whitestone Research. *The Whitestone Facility Maintenance and Repair Cost Reference 2012–2013 (17th Annual edition).* 2012. Whitestone Research: Santa Barbara, CA.

[93] The Whitestone Research report is the most recent available from this source. The report was used in the determination of labor hours for maintenance and DOE has found no evidence indicating that maintenance tasks and labor hours have changed except as addressed in subsequent sections of this NOPR.

panels, wiring or motors. This suggests that there may be a confusion between what regular maintenance activities are and what would be considered repair. Accordingly, DOE has decided to maintain its current methodology for assigning the maintenance costs for non-condensing and condensing CWH equipment, with one exception. DOE added an additional 0.0833 labor hours per year [94] for checking condensate neutralizers during annual maintenance work, and $10 per year [95] for replacing the material within the neutralizers.

In response to the withdrawn NOPR PHCC and Rheem commented that DOE's assumption of 0.33 hours for tankless water heater maintenance as too low, with Rheem suggesting a minimum of 0.75 hour. (PHCC, No. 34 at p. 1; Rheem, No. 43 at p. 25) In response, DOE relied on Whitestone Facility Maintenance and Repair Cost Reference [96] for the labor hours required for tankless water heater maintenance in the NOPR. Given the time needed to descale a tankless water heater annually, DOE increased the labor hours for tankless water heater maintenance to 0.75 hours per year, as recommended by Rheem. In addition, DOE conducted research on the maintenance labor activities and associated hours needed to maintain commercial gas-fired instantaneous circulating water heaters and hot water supply boilers. This research involved reviewing guidance in manufacturer product manuals in combination with the estimates in the Whitestone Facility Maintenance and Repair Cost Reference and the RS Means Facilities Maintenance and Repair Cost Data.[97] Using these references, DOE updated the maintenance labor hours from 0.33 to 7.12 for this equipment category. Appendix 8E of the NOPR TSD provides more detail on maintenance labor hours assigned to each equipment category of CWH.

f. Repair Costs

The repair cost is the cost to the consumer of replacing or repairing components that have failed in the CWH equipment.

DOE calculated CWH repair costs based on an assumed typical failure rate for key CWH subsystems. DOE assumed a failure rate of 0.5 percent per year for combustion systems, 1 percent per year for controls, and 2 percent per year for high efficiency controls applied with condensing equipment. This probability of repair is assumed to extend through the life of the equipment, but only one major repair in the life of the equipment was considered.

The labor required to repair a subsystem was estimated as 2 hours for combustion systems and 1 hour for combustion controls. Labor costs are based upon servicing by one plumber with overhead and profit included and are based on RSMeans data.[98] Because a repair may not require the complete subsystem replacement, but rather separate components, DOE estimated a typical repair would have material costs of one-half the subsystem total cost, but would require the equivalent labor hours for total subsystem replacement. DOE calculated a cost for repair over the life of a CWH unit with these assumptions, and used that cost or repair in the analysis. A repair year was selected at random over the life for each unit selected in the LCC and the repair cost occurring in that year was discounted to present value for the LCC analysis.

Heat exchanger failure is a unique repair scenario for certain commercial gas-fired instantaneous circulating water heaters and hot water supply boilers and was included in DOE's repair cost analysis. The use of condensing or non-condensing technology determines the rate and timing of heat exchanger failure as well as the cost of repair with an approximately three times greater probability of repair for condensing equipment. DOE's assumptions for the frequency of failure and the mean year of heat exchanger failure were based on a report from the Gas Research Institute (''GRI'') for boilers.[99] The cost of heat exchanger replacement is assumed to be a third of the total water heater replacement cost.

In the October 2014 RFI, DOE asked if repair costs vary as a function of equipment efficiency. 79 FR 62899, 62908 (Oct. 21, 2014). Four stakeholders commented on the relationship between equipment efficiency and repair costs, with emphasis that higher-efficiency equipment incorporates additional components and more complex controls. (Bradford White, No. 3 at p. 3; A.O. Smith, No. 2 at p.4; AHRI, No. 5 at p. 5; Rheem, No. 10 at p.7) DOE considered the feedback from the stakeholders and undertook further research to identify components and subsystems commonly replaced in order to evaluate differences in repair costs relative to efficiency levels.

As a result of its research, DOE learned that the combustion systems and controls used in gas-fired CWH equipment have different costs related to the efficiency levels of these products, a finding in agreement with comments provided on the RFI. For the combustion systems, these differences relate predominately to atmospheric combustion, powered atmospheric combustion, and pre-mixed modulating combustion systems used on baseline-efficiency, moderate-efficiency, and high-efficiency products respectively. The control systems employed on atmospheric combustion systems were found to be significantly less expensive than the controller used on powered combustion systems, which was observed to include a microprocessor in some products.

Where similar component parts and costs were identified that reflected the equipment category and efficiency, DOE's component cost was estimated as the average cost of those replacement components identified. This cost was applied at the frequency identified earlier in this section. DOE understands that this approach may conservatively estimate the total cost of repair for purposes of DOE's analysis, but the percentage of total repair cost remains small compared to the consumer cost and the total installation cost. Additionally, DOE prefers to use this component-level approach to understand the incremental repair cost difference between efficiency levels of equipment. Additional details of this analysis and source references for the subsystem and component costs are found in chapter 8 of the NOPR TSD

[94] U.S. Department of Energy, *Technical Support Document: Energy Efficiency Program for Consumer Products and Commercial and Industrial Equipment: Commercial Warm Air Furnaces.* 2015. Docket No. EERE–2013–BT–STD–0021. The Commercial Warm Air Furnaces NOPR TSD assumed 0.078 hours for replacing neutralizer filler every 3 years. For this NOPR, DOE used 5 minutes per year for checking and/or refilling neutralizers.

[95] The condensate neutralizer DOE included in installation costs weighs approximately 5 pounds. It is essentially a plastic tube with water inlet and outlet, and filled with calcium carbonate pellets, and DOE estimates the pellets comprise 3.5 to 4 pounds of the total. DOE found prices ranging from $0.25 per pound (*phoenixphysique.com/ism-root-pvlsc/91da02-marble-chips-for-condensate-neutralizer*) up to $3 per pound in smaller purpose products. DOE estimates $10 per year would be sufficient to replace the pellets.

[96] Whitestone Research. *The Whitestone Facility Maintenance and Repair Cost Reference 2012–2013 (17th Annual edition).* 2012. Whitestone Research: Santa Barbara, CA.

[97] RS Means Company. *Facilities Maintenance and Repair Cost Data 2021.* 28th Annual Edition. Available at *https://www.rsmeans.com/products/books/2021-facilities-maintenance-repair-costs-book.*

[98] RSMeans. RSMeans Mechanical Costs Book 2021. Available at *www.rsmeans.com/products/books.*

[99] Jakob, F.E., J.J. Crisafulli, J.R. Menkedick, R.D. Fischer, D.B. Philips, R.L. Osbone, J.C. Cross, G.R. Whitacre, J.G. Murray, W.J. Sheppard, D.W. DeWirth, and W.H. Thrasher. *Assessment of Technology for Improving the Efficiency of Residential Gas Furnaces and Boilers.* Volume I and II—Appendices. September 1994, 1994. Gas Research Institute. AGA Laboratories: Chicago, IL. Report No. GRI–94/0175.

and Appendix 8E of the NOPR TSD. DOE's incorporation and approach to repair costs in the LCC did not change from the NOPR implementation.

Anonymous commented that condensing technology combined with electronic ignition is less reliable. (Anonymous, No. 21 at p. 1) Rheem commented that repair costs increase as a function of thermal efficiency, and asked that DOE present a tailored repair analysis for all TSLs considered. (Rheem, Public Meeting Transcript, No. 20 at p. 127). In response, DOE acknowledges the point and again clarifies that in the LCC model, repair costs do vary as a function of thermal efficiency and are comparatively higher for condensing equipment. DOE did not perform an explicit repair/replace type analysis for CWH equipment, and this is documented in appendix 8E. The largest shipments of CWH equipment are storage water heaters and all commercial water heaters are high cost equipment; therefore, minor repairs that can be addressed with a part exchange (*e.g.,* thermostat repair) are assumed to be done as part of regular repair and maintenance operation during the early life of the equipment. Thus, DOE assumed that most failures leading to replacement in non-condensing equipment are tied to storage-tank leakage, which is not considered a long-term repairable situation given the typical glass-lined steel tanks used. Other repairs, such as combustion system repairs, will be made or not based on the assessment of the remaining tank life. Because this is such a fundamental limitation to the equipment life, DOE tentatively concluded that any repair or replacement consideration will have only a minimal effect on the equipment life and the subsequent LCC and NIA analysis.

g. Product Lifetime

Product lifetime is the age when a unit of CWH equipment is retired from service. DOE used a distribution of lifetimes, with the weighted averages ranging between 10 years and 25 years as shown in Table IV.21, which are based on a review of CWH equipment lifetime estimates found in published studies and online documents. Sources include documents from prior DOE efficiency standards rulemaking processes, LBNL, NREL, the EIA, Federal Energy Management Program, Building Owner and Managers Association, Gas Foodservice Equipment Network, San Francisco Apartment Association, and National Grid.[100] Specific document titles and references are provided in Appendix 8F of the NOPR TSD. DOE applied a distribution to all classes of CWH equipment analyzed. Chapter 8 of the NOPR TSD contains a detailed discussion of CWH equipment lifetimes.

TABLE IV.21—AVERAGE CWH LIFETIME USED IN NOPR ANALYSES

CWH equipment	Average lifetime (years)
Commercial gas-fired storage water heaters and storage-type instantaneous	10
Residential-duty gas-fired storage water heaters	12
Gas-fired instantaneous water heaters and hot water supply boilers:	
Tankless water heaters	17
Circulating water heaters and hot water supply boilers	25

DOE notes that the average lifetime of all equipment covered by this proposed rulemaking is the same for baseline and max-tech thermal efficiency levels. The lifetime selected for each simulation run varies, but the weighted-average lifetime is the same across all thermal efficiency levels. DOE does not have data to suggest that the lifetime of condensing CWH equipment is lower than that of non-condensing equipment, despite the comments from industry purporting this viewpoint. DOE does have and has incorporated data regarding increased repair costs for individual component failures that may occur in higher-efficiency equipment, as discussed in section IV.F.2.f of this document. DOE considered basing lifetime on warranty periods, but notes that warranty periods are based on individual business decisions for each manufacturer or entity that offers a warranty, decisions which likely reflect considerations other than expected lifetime. Accordingly, DOE has not used warranty periods to establish equipment lifetime in this NOPR. Additionally, DOE notes that lifetime used for hot water supply boilers in this proposed rulemaking is the same as the lifetime used in the space heating boilers rulemaking. (Docket No. EERE–2014–BT–STD–0030–0083 at p.8F–1)

h. Discount Rate

In the calculation of LCC, DOE applies appropriate discount rates to estimate the present value of future operating costs. DOE determined the discount rate by estimating the cost of capital for purchasers of CWH equipment. Most purchasers use both debt and equity capital to fund investments. Therefore, for most purchasers, the discount rate is the weighted-average cost of debt and equity financing, or the weighted-average cost of capital (''WACC''), less the expected inflation.

DOE applies weighted average discount rates calculated from consumer debt and asset data, rather than marginal or implicit discount rates.[101] DOE notes that the LCC does not analyze the appliance purchase decision, so the implicit discount rate is not relevant in this model. The LCC estimates net present value over the lifetime of the product, so the appropriate discount rate will reflect the general opportunity cost of household funds, taking this time scale into account. Given the long time horizon modeled in the LCC, the application of a marginal interest rate associated with an initial source of funds is inaccurate. Regardless of the method of purchase, consumers are expected to continue to rebalance their debt and asset holdings over the LCC analysis period, based on the restrictions consumers face in their debt payment requirements and the relative size of the interest rates available on debts and assets. DOE estimates the aggregate impact of this rebalancing using the historical distribution of debts and assets.

To estimate the WACC of CWH equipment purchasers, DOE used a sample of detailed business sub-sector statistics, drawn from the database of U.S. companies presented on the Damodaran Online website.[102] This database includes most of the publicly-traded companies in the United States. Using this database, Damodaran developed a historical series of sub-sector-level annual statistics for 100+ business sub-sectors. Using data for 1998–2019, inclusive, DOE developed sub-sector average WACC estimates, which were then assigned to aggregate categories. For commercial water heaters, the applicable aggregate categories include retail and service, property/real-estate investment trust (''REIT''), medical facilities, industrial,

[100] DOE attempted to only include only unique sources, as opposed to documents citing other sources already included in DOE's reference list.

[101] The implicit discount rate is inferred from a consumer purchase decision between two otherwise identical goods with different first cost and operating cost. It is the interest rate that equates the increment of first cost to the difference in net present value of lifetime operating cost, incorporating the influence of several factors: Transaction costs; risk premiums and response to uncertainty; time preferences; interest rates at which a consumer is able to borrow or lend.

[102] *Damodaran Online.* Damodaran financial data used for determining cost of capital. Available at *pages.stern.nyu.edu/~adamodar/.* Last accessed on February 16, 2021.

hotel, food service, office, education, and other. The WACC approach for determining discount rates accounts for the applicable tax rates for each category. DOE did not evaluate the marginal effects of increased costs, and, thus, depreciation due to more expensive equipment, on the overall tax status.

DOE used the sample of business sub-sectors to represent purchasers of CWH equipment. For each observation in the sample, DOE derived the cost of debt, percentage of debt financing, and cost of equity from industry-level data on the Damodaran Online website, from long-term nominal S&P 500 returns also developed by Damodaran, and risk-free interest rates based on nominal long-term Federal government bond rates. DOE then determined the weighted-average values for the cost of capital, and the range and distribution of values of WACC for each of the sample business sectors. Deducting expected inflation from the cost of capital provided estimates of the real discount rate by ownership category.

For most educational buildings and a portion of the office buildings occupied by public schools, universities, and State and local government agencies, DOE estimated the cost of capital based on a 40-year geometric mean of an index of long-term tax-exempt municipal bonds (>20 years).[103] [104] Federal office space was assumed to use the Federal bond rate, derived as the 40-year geometric average of long-term (>10 years) U.S. government securities.[105]

Based on this database, DOE calculated the weighted-average, after-tax discount rate for CWH equipment purchases, adjusted for inflation, made by commercial users of the equipment.

To establish residential discount rates for the LCC analysis, DOE identified all relevant household debt or asset classes in order to approximate a consumer's opportunity cost of funds related to appliance energy cost savings. It estimated the average percentage shares of the various types of debt and equity by household income group using data from the Federal Reserve Board's Survey of Consumer Finances (SCF) [106] for 1995, 1998, 2001, 2004, 2007, 2010, 2013, 2016, and 2019. Using the SCF and other sources, DOE developed a distribution of rates for each type of debt and asset by income group to represent the rates that may apply in the year in which amended standards would take effect. In the Crystal Ball™ analyses, when an LCC model selects a residential observation, the model selects an income group and then selects a discount rate from the distribution for that group. Chapter 8 of the NOPR TSD contains the detailed calculations related to discount rates.

Use of discount rates in each section of the analysis is specific to the affected parties and the impacts being examined (*e.g.,* LCC: Consumers, MIA: Manufacturers; NIA: National impacts using OMB-specified discount rates), consistent with the general need to examine these impacts independently. In addition, where factors indicate that a range or variability in discount rates is an important consideration and can be or is provided, DOE uses a range of discount rates in its various analyses.

For this NOPR, DOE examined its established process for development and use of discount rates and has tentatively concluded that it sufficiently characterizes the discount rate facing consumers.

i. Energy Efficiency Distribution in the No-New-Standards Case

To accurately estimate the share of consumers that would be affected by a potential energy conservation standard at a particular efficiency level, DOE's LCC analysis considered the projected distribution (market shares) of product efficiencies under the no-new-standards case (*i.e.,* the case without amended or new energy conservation standards).

To estimate the energy efficiency distribution of CWH equipment for 2026, DOE developed the no-new-standards distribution of equipment using data from DOE's Compliance Certification database and data submitted by AHRI regarding condensing versus non-condensing equipment.

Each building in the sample was then assigned a water heater efficiency sampled from the no-new-standards case efficiency distribution for the appropriate equipment class, shown in Table IV.22. DOE was not able to assign a CWH efficiency to a building in the no-new-standards case based on building characteristics, since CBECS 2012 and RECS 2009 did not provide enough information to distinguish installed water heaters disaggregated by efficiency. The efficiency of a CWH was assigned based on the forecasted efficiency distribution (which is constrained by the shipment and model data collected by DOE and submitted by AHRI) and accounts for consumers that are already purchasing efficient CWHs.

While DOE acknowledges that economic factors may play a role when building owners or builders decide on what type of CWH to install, assignment of CWH efficiency for a given installation, based solely on economic measures such as life-cycle cost or simple payback period, most likely would not fully and accurately reflect actual real-world installations. There are a number of commercial sector market failures discussed in the economics literature, including a number of case studies, that illustrate how purchasing decisions with respect to energy efficiency are likely to not be completely correlated with energy use, as described below.

There are several market failures or barriers that affect energy decisions generally. Some of those that affect the commercial sector specifically are detailed below. However, more generally, there are several behavioral factors that can influence the purchasing decisions of complicated multi-attribute products, such as water heaters. For example, consumers (or decision makers in an organization) are highly influenced by choice architecture, defined as the framing of the decision, the surrounding circumstances of the purchase, the alternatives available, and how they're presented for any given choice scenario.[107] The same consumer or decision maker may make different choices depending on the characteristics of the decision context (*e.g.,* the timing of the purchase, competing demands for funds), which have nothing to do with the characteristics of the alternatives themselves or their prices. Consumers or decision makers also face a variety of other behavioral phenomena including loss aversion, sensitivity to information salience, and other forms of bounded rationality.[108] Thaler, who won the

[103] Federal Reserve Bank of St. Louis. *State and Local Bonds—Bond Buyer Go 20-Bond Municipal Bond Index.* Data available through 2015 at *research.stlouisfed.org/fred2/series/MSLB20/downloaddata?cid=32995.* Last accessed April 3, 2020.

[104] Bartel Associates, LLC. *Ba 2019–12–31 20 Year AA Municipal Bond Rates.* Averaged quarterly municipal bond rates to develop annual averages for 2016–2020. *bartel-associates.com/resources/select-gasb-67-68-discount-rate-indices.* Last accessed on February 18, 2021.

[105] Rate calculated with rolling 40-year data series for the years 1989–2020. Data source: U.S. Federal Reserve. Available at *www.federalreserve.gov/releases/h15/data.htm.* Last accessed on February 18, 2021.

[106] Board of Governors of the Federal Reserve System. *Survey of Consumer Finances.* Available at *www.federalreserve.gov/PUBS/oss/oss2/scfindex.html.*

[107] Thaler, R.H., Sunstein, C.R., and Balz, J.P. (2014). ''Choice Architecture'' in *The Behavioral Foundations of Public Policy,* Eldar Shafir (ed).

[108] Thaler, R.H., and Bernartzi, S. (2004). ''Save More Tomorrow: Using Behavioral Economics in Increase Employee Savings,'' *Journal of Political Economy* 112(1), S164–S187. *See also* Klemick, H., et al. (2015) ''Heavy-Duty Trucking and the Energy

Continued

Nobel Prize in Economics in 2017 for his contributions to behavioral economics, and Sunstein point out that these behavioral factors are strongest when the decisions are complex and infrequent, when feedback on the decision is muted and slow, and when there is a high degree of information asymmetry.[109] These characteristics describe almost all purchasing situations of appliances and equipment, including CWHs. The installation of a new or replacement CWH in a commercial building is a complex, technical decision involving many actors and is done very infrequently, as evidenced by the CWH mean lifetime of up to 25 years.[110] Additionally, it would take at multiple billing cycles for any impacts on operating costs to be fully apparent. Further, if the purchaser of the CWH is not the entity paying the energy costs (*e.g.,* a building owner and tenant), there may be little to no feedback on the purchase. These behavioral factors are in addition to the more specific market failures described as follows.

It is often assumed that because commercial and industrial customers are businesses that have trained or experienced individuals making decisions regarding investments in cost-saving measures, some of the commonly observed market failures present in the general population of residential customers should not be as prevalent in a commercial setting. However, there are many characteristics of organizational structure and historic circumstance in commercial settings that can lead to underinvestment in energy efficiency.

First, a recognized problem in commercial settings is the principal-agent problem, where the building owner (or building developer) selects the equipment and the tenant (or subsequent building owner) pays for energy costs.[111] [112] Indeed, a substantial fraction of commercial buildings with a CWH in the CBECS 2012 sample are occupied at least in part by a tenant, not the building owner (indicating that, in DOE's experience, the building owner likely is not responsible for paying energy costs). Additionally, some commercial buildings have multiple tenants. There are other similar misaligned incentives embedded in the organizational structure within a given firm or business that can impact the choice of a CWH. For example, if one department or individual within an organization is responsible for capital expenditures (and therefore equipment selection) while a separate department or individual is responsible for paying the energy bills, a market failure similar to the principal-agent problem can result.[113] Additionally, managers may have other responsibilities and often have other incentives besides operating cost minimization, such as satisfying shareholder expectations, which can sometimes be focused on short-term returns.[114] Decision-making related to commercial buildings is highly complex and involves gathering information from and for a variety of different market actors. It is common to see conflicting goals across various actors within the same organization as well as information asymmetries between market actors in the energy efficiency context in commercial building construction.[115]

Second, the nature of the organizational structure and design can influence priorities for capital budgeting, resulting in choices that do not necessarily maximize profitability.[116] Even factors as simple as unmotivated staff or lack of priority-setting and/or a lack of a long-term energy strategy can have a sizable effect on the likelihood that an energy efficient investment will be undertaken.[117] U.S. tax rules for commercial buildings may incentivize lower capital expenditures, since capital costs must be depreciated over many years, whereas operating costs can be fully deducted from taxable income or passed through directly to building tenants.[118]

Third, there are asymmetric information and other potential market failures in financial markets in general, which can affect decisions by firms with regard to their choice among alternative investment options, with energy efficiency being one such option.[119]

Efficiency Paradox: Evidence from Focus Groups and Interviews,'' *Transportation Research Part A: Policy & Practice,* 77, 154–166. (providing evidence that loss aversion and other market failures can affect otherwise profit-maximizing firms).

[109] Thaler, R.H., and Sunstein, C.R. (2008). Nudge: Improving Decisions on Health, Wealth, and Happiness. New Haven, CT: Yale University Press.

[110] American Society of Heating, Refrigerating, and Air-Conditioning Engineers. 2011 ASHRAE Handbook: Heating, Ventilating, and Air-Conditioning Applications. 2011. Available at *www.ashrae.org/resources--publications.* Last accessed on October 16, 2016.

[111] Vernon, D., and Meier, A. (2012). ''Identification and quantification of principal-agent problems affecting energy efficiency investments and use decisions in the trucking industry,'' *Energy Policy,* 49, 266–273.

[112] Blum, H. and Sathaye, J. (2010). ''Quantitative Analysis of the Principal-Agent Problem in Commercial Buildings in the U.S.: Focus on Central Space Heating and Cooling,'' Lawrence Berkeley National Laboratory, LBNL–3557E. (Available at: *escholarship.org/uc/item/6p1525mg*) (Last accessed January 20, 2022).

[113] Prindle, B., Sathaye, J., Murtishaw, S., Crossley, D., Watt, G., Hughes, J., and de Visser, E. (2007). ''Quantifying the effects of market failures in the end-use of energy,'' Final Draft Report Prepared for International Energy Agency. (Available from International Energy Agency, Head of Publications Service, 9 rue de la Federation, 75739 Paris, Cedex 15 France).

[114] Bushee, B.J. (1998). ''The influence of institutional investors on myopic R&D investment behavior,'' *Accounting Review,* 305–333.

DeCanio, S.J. (1993). ''Barriers Within Firms to Energy Efficient Investments,'' *Energy Policy,* 21(9), 906–914. (explaining the connection between short-termism and underinvestment in energy efficiency).

[115] International Energy Agency (IEA). (2007). Mind the Gap: Quantifying Principal-Agent Problems in Energy Efficiency. OECD Pub. (Available at: *www.iea.org/reports/mind-the-gap*) (Last accessed January 20, 2022).

[116] DeCanio, S.J. (1994). ''Agency and control problems in US corporations: The case of energy-efficient investment projects,'' *Journal of the Economics of Business,* 1(1), 105–124.

Stole, L.A., and Zwiebel, J. (1996). ''Organizational design and technology choice under intrafirm bargaining,'' *The American Economic Review,* 195–222.

[117] Rohdin, P., and Thollander, P. (2006). ''Barriers to and driving forces for energy efficiency in the non-energy intensive manufacturing industry in Sweden,'' *Energy,* 31(12), 1836–1844.

Takahashi, M and Asano, H (2007). ''Energy Use Affected by Principal-Agent Problem in Japanese Commercial Office Space Leasing,'' In *Quantifying the Effects of Market Failures in the End-Use of Energy.* American Council for an Energy-Efficient Economy. February 2007.

Visser, E and Harmelink, M (2007). ''The Case of Energy Use in Commercial Offices in the Netherlands,'' In *Quantifying the Effects of Market Failures in the End-Use of Energy.* American Council for an Energy-Efficient Economy. February 2007.

Bjorndalen, J. and Bugge, J. (2007). ''Market Barriers Related to Commercial Office Space Leasing in Norway,'' In *Quantifying the Effects of Market Failures in the End-Use of Energy.* American Council for an Energy-Efficient Economy. February 2007.

Schleich, J. (2009). ''Barriers to energy efficiency: A comparison across the German commercial and services sector,'' *Ecological Economics,* 68(7), 2150–2159.

Muthulingam, S., et al. (2013). ''Energy Efficiency in Small and Medium-Sized Manufacturing Firms,'' *Manufacturing & Service Operations Management,* 15(4), 596–612. (Finding that manager inattention contributed to the non-adoption of energy efficiency initiatives).

Boyd, G.A., Curtis, E.M. (2014). ''Evidence of an 'energy management gap' in US manufacturing: Spillovers from firm management practices to energy efficiency,'' *Journal of Environmental Economics and Management,* 68(3), 463–479.

[118] Lovins, A. (1992). Energy-Efficient Buildings: Institutional Barriers and Opportunities. (Available at: *rmi.org/insight/energy-efficient-buildings-institutional-barriers-and-opportunities/*) (Last accessed January 20, 2022).

[119] Fazzari, S.M., Hubbard, R.G., Petersen, B.C., Blinder, A.S., and Poterba, J.M. (1988). ''Financing constraints and corporate investment,'' *Brookings Papers on Economic Activity,* 1988(1), 141–206.

Cummins, J.G., Hassett, K.A., Hubbard, R.G., Hall, R.E., and Caballero, R.J. (1994). ''A reconsideration of investment behavior using tax reforms as natural experiments,'' *Brookings Papers on Economic Activity,* 1994(2), 1–74.

DeCanio, S.J., and Watkins, W.E. (1998). ''Investment in energy efficiency: do the characteristics of firms matter?'' *Review of Economics and Statistics,* 80(1), 95–107.

Asymmetric information in financial markets is particularly pronounced with regard to energy efficiency investments.[120] There is a dearth of information about risk and volatility related to energy efficiency investments, and energy efficiency investment metrics may not be as visible to investment managers,[121] which can bias firms towards more certain or familiar options. This market failure results not because the returns from energy efficiency as an investment are inherently riskier, but because information about the risk itself tends not to be available in the same way it is for other types of investment, like stocks or bonds. In some cases energy efficiency is not a formal investment category used by financial managers, and if there is a formal category for energy efficiency within the investment portfolio options assessed by financial managers, they are seen as weakly strategic and not seen as likely to increase competitive advantage.[122] This information asymmetry extends to commercial investors, lenders, and real-estate financing, which is biased against new and perhaps unfamiliar technology (even though it may be economically beneficial).[123] Another market failure known as the first-mover disadvantage can exacerbate this bias against adopting new technologies, as the successful integration of new technology in a particular context by one actor generates information about cost-savings, and other actors in the market can then benefit from that information by following suit; yet because the first to adopt a new technology bears the risk but cannot keep to themselves all the informational benefits, firms may inefficiently underinvest in new technologies.[124]

In sum, the commercial and industrial sectors face many market failures that can result in an under-investment in energy efficiency. This means that discount rates implied by hurdle rates [125] and required payback periods of many firms are higher than the appropriate cost of capital for the investment.[126] The preceding arguments for the existence of market failures in the commercial and industrial sectors are corroborated by empirical evidence. One study in particular showed evidence of substantial gains in energy efficiency that could have been achieved without negative repercussions on profitability, but the investments had not been undertaken by firms.[127] The study found that multiple organizational and institutional factors caused firms to require shorter payback periods and higher returns than the cost of capital for alternative investments of similar risk. Another study demonstrated similar results with firms requiring very short payback periods of 1–2 years in order to adopt energy-saving projects, implying hurdle rates of 50 to 100 percent, despite the potential economic benefits.[128] A number of other case studies similarly demonstrate the existence of market failures preventing the adoption of energy-efficient technologies in a variety of commercial sectors around the world, including office buildings,[129] supermarkets,[130] and the electric motor market.[131]

The existence of market failures in the commercial and industrial sectors is well supported by the economics literature and by a number of case studies. If DOE developed an efficiency distribution that assigned boiler efficiency in the no-new-standards case solely according to energy use or economic considerations such as life-cycle cost or payback period, the resulting distribution of efficiencies within the building sample would not reflect any of the market failures or behavioral factors above. DOE thus concludes such a distribution would not be representative of the CWH market. Further, even if a specific building/organization is not subject to the market failures above, the purchasing decision of CWH efficiency can be highly complex and influenced by a number of factors not captured by the building characteristics available in the CBECS or RECS samples. These factors can lead to building owners choosing a CWH efficiency that deviates from the efficiency predicted using only energy use or economic considerations such as life-cycle cost or payback period (as calculated using the information from CBECS 2012 or RECS 2009).

DOE notes that EIA's Annual Energy Outlook [132] (''AEO'') is another energy use model that implicitly includes market failures in the commercial sector. In particular, the commercial demand module [133] includes behavioral rules regarding capital purchases such that in replacement and retrofit decisions, there is a strong bias in favor of equipment of the same technology (*e.g.,* water heater efficiency) despite the potential economic benefit of choosing other technology options. Additionally, the module assumes a distribution of time preferences regarding current versus future expenditures. Approximately half of the total commercial floorspace is assigned one of the two highest time preference premiums. This translates into very high discount rates (and hurdle rates) and represents floorspace for which equipment with the lowest capital cost will almost always be purchased without consideration of operating costs. DOE's assumptions regarding market failures are therefore consistent

Hubbard R.G. and Kashyap A. (1992). ''Internal Net Worth and the Investment Process: An Application to U.S. Agriculture,'' *Journal of Political Economy,* 100, 506–534.

[120] Mills, E., Kromer, S., Weiss, G., and Mathew, P.A. (2006). ''From volatility to value: analysing and managing financial and performance risk in energy savings projects,'' *Energy Policy,* 34(2), 188–199.

Jollands, N., Waide, P., Ellis, M., Onoda, T., Laustsen, J., Tanaka, K., and Meier, A. (2010). ''The 25 IEA energy efficiency policy recommendations to the G8 Gleneagles Plan of Action,'' *Energy Policy,* 38(11), 6409–6418.

[121] Reed, J.H., Johnson, K., Riggert, J., and Oh, A. D. (2004). ''Who plays and who decides: The structure and operation of the commercial building market,'' U.S. Department of Energy Office of Building Technology, State and Community Programs. (Available at: *www1.eere.energy.gov/buildings/publications/pdfs/commercial_initiative/who_plays_who_decides.pdf*) (Last accessed January 20, 2022).

[122] Cooremans, C. (2012). ''Investment in energy efficiency: do the characteristics of investments matter? '' *Energy Efficiency,* 5(4), 497–518.

[123] Lovins 1992, op. cit. The Atmospheric Fund. (2017). Money on the table: Why investors miss out on the energy efficiency market. (Available at: *taf.ca/publications/money-table-investors-energy-efficiency-market/*) (Last accessed January 20, 2022).

[124] Blumstein, C. and Taylor, M. (2013). Rethinking the Energy-Efficiency Gap: Producers, Intermediaries, and Innovation. Energy Institute at Haas Working Paper 243. (Available at: *haas.berkeley.edu/wp-content/uploads/WP243.pdf*) (Last accessed April 6, 2022).

[125] A hurdle rate is the minimum rate of return on a project or investment required by an organization or investor. It is determined by assessing capital costs, operating costs, and an estimate of risks and opportunities.

[126] DeCanio 1994, op. cit.

[127] DeCanio, S.J. (1998). ''The Efficiency Paradox: Bureaucratic and Organizational Barriers to Profitable Energy-Saving Investments,'' *Energy Policy,* 26(5), 441–454.

[128] Andersen, S.T., and Newell, R.G. (2004). ''Information programs for technology adoption: the case of energy-efficiency audits,'' *Resource and Energy Economics,* 26, 27–50.

[129] Prindle 2007, op. cit. Howarth, R.B., Haddad, B.M., and Paton, B. (2000). ''The economics of energy efficiency: insights from voluntary participation programs,'' *Energy Policy,* 28, 477–486.

[130] Klemick, H., Kopits, E., Wolverton, A. (2017). ''Potential Barriers to Improving Energy Efficiency in Commercial Buildings: The Case of Supermarket Refrigeration,'' *Journal of Benefit-Cost Analysis,* 8(1), 115–145.

[131] de Almeida, E.L.F. (1998). ''Energy efficiency and the limits of market forces: The example of the electric motor market in France'', *Energy Policy,* 26(8), 643–653. Xenergy, Inc. (1998). United States Industrial Electric Motor Systems Market Opportunity Assessment. (Available at: *www.energy.gov/sites/default/files/2014/04/f15/mtrmkt.pdf*) (Last accessed January 20, 2022).

[132] EIA, Annual Energy Outlook, *www.eia.gov/outlooks/aeo/* (Last accessed January 25, 2022).

[133] For further details, see: *www.eia.gov/outlooks/aeo/assumptions/pdf/commercial.pdf* (Last accessed January 25, 2022).

with other prominent energy consumption models.

The estimated market shares for the no-new-standards case for CWH equipment are shown in Table IV.22. See chapter 8 of the NOPR TSD for further information on the derivation of the efficiency distributions.

TABLE IV.22—MARKET SHARES FOR THE NO-NEW-STANDARDS CASE BY EFFICIENCY LEVEL FOR CWH EQUIPMENT

EL	Commercial gas-fired storage water heaters (%)	Residential-duty gas-fired storage water heaters (%)	Gas-fired instantaneous tankless water heaters (%)	Gas-fired circulating water heaters and hot water supply boilers (%)
0	33.9	17.9	17.0	4.3
1	3.2	12.0	0.0	12.0
2	0.0	7.2	0.0	15.1
3	12.3	31.5	0.0	2.1
4	49.7	27.0	20.8	15.8
5	0.9	4.5	62.3	50.7

3. Payback Period

The PBP is the amount of time it takes the consumer to recover the additional installed cost of more-efficient products, compared to baseline products, through energy cost savings. PBPs are expressed in years. PBPs that exceed the life of the product mean that the increased total installed cost is not recovered in reduced operating expenses.

The inputs to the PBP calculation for each efficiency level are the change in total installed cost of the product and the change in the first-year annual operating expenditures relative to the baseline. The PBP calculation uses the same inputs as the LCC analysis, except that discount rates are not needed.

As noted previously, EPCA establishes a rebuttable presumption that a standard is economically justified if the Secretary finds that the additional cost to the consumer of purchasing a product complying with an energy conservation standard level will be less than three times the value of the first year's energy savings resulting from the standard, as calculated under the applicable test procedure. (42 U.S.C. 6295(o)(2)(B)(iii)) For each considered efficiency level, DOE determined the value of the first year's energy savings [134] by calculating the energy savings in accordance with the applicable DOE test procedure, and multiplying those savings by the average energy price projection for the year in which compliance with the amended standards would be required. Chapter 8 of the NOPR TSD provides additional details about the PBP.

G. Shipments Analysis

DOE uses projections of annual equipment shipments to calculate the national impacts of potential amended or new energy conservation standards on energy use, NPV, and future manufacturer cash flows.[135] The shipments model, discussed in section IV.G.5 of this NOPR, takes an accounting approach, tracking market shares of each equipment category and the vintage of units in the stock. Stock accounting uses equipment shipments as inputs to estimate the age distribution of in-service equipment stocks for all years. The age distribution of in-service equipment stocks is a key input to calculations of both the NES and NPV because operating costs for any year depend on the age distribution of the stock.

As part of the analysis, DOE examined the possibility of fuel switching. DOE recognizes that some cities and states are passing legislation to eliminate fossil fuel use in new building construction, while other states have made moves to ban electrification legislation. Additionally, section 433 of the Energy Independence and Security Act of 2007 (''EISA 2007'') amendments to the Energy Conservation and Production Act requires that fossil fuel generated energy consumption be reduced to zero (as compared to a 2003 baseline) by 2030 for new construction and major renovations of Federal buildings. Depending on whether these various fossil fuel bans or electrification mandates allow for the purchase of renewable energy credits to offset natural gas usage, such bans could potentially result in a decrease in projected shipments of gas-fired CWH equipment. For 2026, DOE estimates that shipments of CWH equipment to new construction that are the subject of this rulemaking will comprise approximately 20 percent of total shipments. New Federal government construction is approximately 2 percent of new commercial construction; therefore, it would be estimated to make up a very small percentage of these shipments. DOE's shipment projections do not adjust for the impacts of electrification laws and regulations explicitly, as DOE has no data with which to make such an adjustment. However, since DOE used regression techniques and historical shipments data for this NOPR analysis, as described in sections IV.G.1 and IV.G.2 of this document, some impact may be accounted for implicitly. Beyond this, DOE has no data with which to adjust shipments, and DOE has historically not speculated about legislation or its impacts. Section IV.H.2 discusses fuel switching in more detail.

1. Commercial Gas-Fired and Electric Storage Water Heaters

To develop the shipments model, DOE started with known information on shipments of commercial electric and gas-fired storage water heaters collected for the years 1994–2020 from the AHRI website,[136] and extended back to 1989 with data contained in a DOE rulemaking document published in 2000.[137] The historical shipments of commercial electric and gas-fired storage water heaters are summarized in Table IV.23 of this NOPR. Given that the estimated average useful lifetimes of these two types of equipment are 12 and 10 years, respectively, the historical

[134] The DOE test procedure for CWH equipment at 10 CFR 431.106 does not specify a calculation method for determining energy use. For the rebuttable presumption PBP calculation, DOE used average energy use estimates.

[135] DOE uses data on manufacturer shipments as a proxy for national sales, as aggregate data on sales are lacking. In general, one would expect a close correspondence between shipments and sales.

[136] Air Conditioning, Heating, and Refrigeration Institute. *Commercial Storage Water Heaters Historical Data.* Available at *www.ahrinet.org/site/494/Resources/Statistics/Historical-Data/Commercial-Storage-Water-Heaters-Historical-Data.* Last accessed May 17, 2021.

[137] U.S. Department of Energy. *Screening Analysis for EPACT-Covered Commercial HVAC and Water-Heating Equipment. Volume 1—Main Report.* 2000. EERE–2006–STD–0098–0015. Available at *www.regulations.gov/#!documentDetail;D=EERE-2006-STD-0098-0015.*

shipments provided a basis for the development of a multi-year series of stock values. Using the stock values, a saturation rate was determined by dividing equipment stock by building stock, and this saturation rate was combined with annual building stock additions to estimate the shipments to new construction. With these data elements, a yearly accounting model was developed for the historical period to identify shipments deriving from new construction and from replacements of existing equipment. The accounting model also identified consumer migration into or out of the storage water heater equipment classes by calculating the difference between new plus replacement shipments and the actual historical shipments.

TABLE IV.23—HISTORICAL SHIPMENTS OF COMMERCIAL GAS-FIRED AND ELECTRIC STORAGE WATER HEATERS

Year	Commercial gas-fired storage	Commercial electric storage
1994	91,027	22,288
1995	96,913	23,905
1996	127,978	26,954
1997	96,501	30,339
1998	94,577	35,586
1999	100,701	39,845
2000	99,317	44,162
2001	93,969	46,508
2002	96,582	45,819
2003	90,292	48,137
2004	96,481	57,944
2005	82,521	56,178
2006	84,653	63,170
2007	90,345	67,985
2008	88,265	68,686
2009	75,487	55,625
2010	78,614	58,349
2011	84,705	60,257
2012	80,490	67,265
2013	88,539	69,160
2014	94,247	73,458
2015	98,095	88,251
2016	97,026	127,344
2017	93,677	152,330
2018	94,473	137,937
2019	88,548	150,667
2020	80,070	140,666

At the public meeting for the withdrawn NOPR, AHRI stated the shipment projections are based on the projections of building stock growth, but the commenter suggested that DOE should compare its assumptions to the historical data in CBECS 2012 to determine whether the trend in the proposal makes sense. (AHRI, NOPR Public Meeting Transcript, No. 20 at pp. 123–125) In written comments, AHRI restated its belief that the projection of shipments of gas-fired storage water heaters is too high when compared to the 25-year historical data set, suggesting that a more reasonable forecast of shipments might be a flat 85,000 units per year. AHRI also stated its opinion that something systematic seems to be happening, such that the stock accounting approach used in the withdrawn NOPR might not be serving DOE well and that DOE should investigate other methods such as using actual historical data trends. (AHRI, No. 40 at p. 15)

DOE agrees with AHRI that an alternative to the stock accounting method might better serve DOE's purposes. For this NOPR, DOE utilized regression techniques to develop the shipments forecast based on the assumption that shipments of gas-fired storage water heaters are a function of relative prices of natural gas and electricity, building stocks (*i.e.,* the replacement market), and building stock additions (the new market). DOE investigated the use of variables that lead (*e.g.,* building stock additions 1 or 2 years in the future) or lag (*e.g.,* relative prices experienced 1 year in the past). Using historical data for the years 1994–2020, DOE investigated multiple model specifications to find the best trade-off between model statistics and making the most use of historical data. The result was a model yielding a forecast of shipments that increases 0.5 percent per year from 2021–2055, reaching just under 113,700 units by 2055. See chapter 9 of the NOPR TSD for further details. The resulting growth rate for shipments is less than the underlying growth in building stocks (1.0 percent between 2021–2055), a result that makes sense to DOE when combined with the forecast of continuing low natural gas prices well into the future. In summary, consistent with AHRI's suggestion, DOE investigated an alternative forecasting method—and the alternative DOE chose uses an econometric model to project commercial gas-fired storage unit shipments. For this NOPR, DOE used an econometric model that: (1) Makes use of all of the historical shipments data collected for the withdrawn NOPR, (2) projects shipments with embedded shifts that will rise and fall based on relative fuel prices and building stock projections, and (3) eliminates the need for DOE to make assumptions and adjustments to the level of apparent shifts when the expected shipments derived in the stock accounting framework exceeds or falls short of the actual shipments discussed in the withdrawn NOPR.

For the withdrawn May 2016 NOPR and for this NOPR, no historical information was available that specifically identified shipments of gas-fired storage-type instantaneous water heaters. The AHRI online historical shipments data explicitly states residentially marketed equipment is excluded but does not explicitly state whether instantaneous storage equipment is included or excluded. Because of the similarities between the commercial storage gas water heaters and the gas-fired storage-type instantaneous water heaters, DOE has included both in downstream analyses in this NOPR. However, DOE recognizes that some or all of the storage-type instantaneous shipments may not be captured in the historical AHRI shipments data. The DOE shipments analysis is derived from AHRI historical shipments data and thus may underrepresent future shipments of gas-fired storage-type instantaneous water heaters.

2. Residential-Duty Gas-Fired Storage and Instantaneous Water Heaters

For the withdrawn NOPR, no historical shipment information was available for residential-duty gas-fired storage water heaters, gas-fired tankless water heaters, or gas-fired hot water supply boilers. Therefore, the NOPR and the NOPR TSD presented DOE's analysis, which estimated both past shipments and forecasts of future shipments for residential-duty gas-fired storage water heaters, gas-fired tankless waters, or gas-fired hot water supply boilers. DOE explained its shipments forecast methodology in some detail in the withdrawn NOPR, and the Department also requested feedback on the approaches used, actual historical data, or both. 81 FR 34440, 34488–34490 (May 31, 2016).

AHRI stated that shipments of instantaneous water heaters are significantly higher, and shipments of hot water supply boilers are significantly lower than DOE's estimates presented as part of the withdrawn NOPR. While AHRI conceded that they do not track hot water supply boiler shipments, they offered their opinion that DOE's estimate of shipments was overstated by an order of magnitude. AHRI stated that hot water supply boilers are a subset of commercial packaged boilers with changes to make them suitable for potable water. (AHRI, No. 40 at p. 15) AHRI and the water heater manufacturers also collected and submitted efficiency distribution data for gas-fired instantaneous equipment to DOE. (AHRI, No. 40 at p. 10) AHRI provided data from manufacturers on instantaneous water heater shipments to DOE's contractors under a confidentiality agreement and indicated that the data include shipments of gas-

fired instantaneous tankless and circulating water heating equipment. A.O. Smith's written comments stated that data were being provided which DOE interprets to be referring to the data being provided through AHRI. A.O. Smith urged DOE to use these data, arguing that doing so will improve the estimates of national energy savings and other critical items. (A.O. Smith, No. 39 at p. 3) A.O. Smith also singled out for reconsideration what it described as the erratic aggregate growth in DOE's forecasted total shipments, particularly the gas-fired instantaneous tankless water heaters. (A.O. Smith, No. 39 at p. 14) Bradford White called on DOE to revise the methodology used to estimate historical shipments for residential-duty gas-fired storage water heaters and hot water supply boilers. Bradford White stated its opinion that it was not fair to draw conclusions that the decline in commercial gas-fired storage unit shipments from 1994 to 2009 and that the resurgence of such shipments to 1994 levels by 2013 were related to or a result of increasing shipments of hot water supply boilers or residential-duty gas-fired storage water heaters. (Bradford White, No. 42 at p. 10)

DOE acknowledges the work of AHRI and water heater manufacturers in collecting and submitting instantaneous water heater shipment data. As suggested by A.O. Smith, DOE is using this information. For this NOPR, DOE developed an econometric model similar to that described for commercial gas-fired storage water heater shipments; DOE used the AHRI-provided data to estimate an equation relating commercial instantaneous shipments to building stock additions and commercial electricity prices.[138] Because the historical data did not provide sufficient detail to identify the percentages represented by tankless and circulating water heater shipments, DOE estimated that 50 percent of the shipments are instantaneous tankless shipments and the remainder are circulating water heaters. Because the actual information provided by AHRI is confidential and cannot be disclosed, the only information being made available in this NOPR is the econometric forecast made for use in the analysis.

Since the equipment that DOE has been calling hot water supply boilers includes what AHRI calls circulators as well as a second type of equipment AHRI calls boilers, DOE clarifies that the new DOE forecast for hot water supply boilers includes both circulating water heating equipment and hot water supply boilers. The circulating water heater shipments were developed as described earlier. As noted in this shipments discussion, the withdrawn NOPR requested shipments data or information for projecting the number of hot water supply boilers. AHRI was the only stakeholder who responded to DOE's request for input related to shipments of hot water supply boilers. AHRI opined that the withdrawn NOPR forecast was an order of magnitude too high, and that hot water supply boilers are a subset of commercial packaged boilers with changes in headers and other factors that make them suitable for providing potable water. (AHRI, No. 40, p. 15) DOE clarifies that hot water supply boilers are considered ''packaged boilers'' within DOE's regulations, but are regulated as CWH equipment and do not meet DOE's definition of ''commercial packaged boiler,'' which specifically excludes hot water supply boilers.[139] However, DOE acknowledges the similarities in design between hot water supply boilers and commercial packaged boilers. DOE notes that AHRI offered their opinion that the hot water supply boiler shipment value was too high by a factor of 10 (an order of magnitude) in the context of having just collected shipments data on commercial gas-fired instantaneous water heaters and recently collected similar data on commercial packaged boilers. While AHRI provided an opinion as to the appropriateness of the hot water supply boiler shipment values used by DOE, this opinion is in the context of the collection of significant amounts of related data as indicated by AHRI. For this reason, DOE utilized AHRI's input to create a 2013 shipments estimate for hot water supply boilers by dividing the NOPR value for 2013 by 10. DOE then used the historical and forecasted growth rates in shipments of commercial small gas-fired packaged boilers to estimate historical and forecasted shipments of hot water supply boilers. This approach addresses the comments and information supplied by AHRI; it unlinks the hot water supply boiler forecast from the forecast of commercial gas-fired storage water heaters as suggested by Bradford White; it results in a smoother, less erratic forecast than the NOPR forecast that A.O. Smith asked DOE to reconsider; and it breaks the equivalency between hot water supply boilers and gas-fired commercial storage equipment types to which Spire objected. The hot water supply boiler shipments were combined with the aforementioned and described forecast of circulating water heater shipments to generate a forecast for the instantaneous products referred to in this notice as circulating water heaters and hot water supply boilers.

DOE was not able to identify additional information sources for residential-duty gas-fired shipments. DOE clarifies that residential-duty gas-fired storage water heaters are not residential water heaters. Instead, they are a type of CWH equipment and DOE draws no conclusions about residential-duty gas-fired storage shipments replacing or being replaced by commercial gas-fired storage water heater shipments. Rather, the linkage used in the DOE model would essentially have shipments of both types of storage equipment going up or down in parallel. DOE retained the forecasting method used for the withdrawn NOPR. To maintain a shipments forecast that is roughly consistent in magnitude with the NOPR forecast, DOE used the same 20 percent factor used for the NOPR. In other words, DOE assumes residential-duty gas-fired storage water heater shipments track with commercial gas-fired storage water heaters, and shipments of the former are assumed to be 20 percent of the shipments of the latter.

Issue 5: DOE seeks input on actual historical shipments for residential-duty gas-fired storage water heaters, gas-fired storage-type instantaneous water heaters, and for hot water supply boilers.

Issue 6: DOE seeks additional actual historical shipment information for commercial gas-fired instantaneous tankless water heaters covering the period between 2015 and 2020 to supplement the data provided in response to the withdrawn NOPR.

See section VII.E of this document for a list of issues on which DOE seeks comment.

3. Available Products Database and Equipment Efficiency Trends

In response to the withdrawn NOPR, AHRI, Bradford White, and Raypak objected to the use of the number of models listed in the AHRI directory as representative of the number of shipments by efficiency level. Bradford White, A.O. Smith, and Raypak stated

[138] While the instantaneous units are gas-fired, natural gas variables consistently exhibited incorrect signs on the estimated coefficients. For example, the ratio of commercial electric price divided by commercial gas had a negative sign, meaning that higher ratios would lead to lower shipments. This is the opposite of what was expected. Higher electric prices relative to gas prices should lead to higher, not lower, shipments of the natural gas products. Thus, commercial natural gas price variables were omitted from the model.

[139] *See* 10 CFR 431.82. Hot water supply boiler is defined at 10 CFR 431.102.

that DOE should rely instead on the shipments data collected and provided by AHRI. (AHRI, No. 40 at p. 13; Bradford White, No. 42 at pp. 2–3; A.O. Smith, No. 39 at p. 3; Raypak, No. 41 at p. 5) Raypak further stated that DOE should have looked for alternative ways to fill in this information, and offered its opinion that DOE personnel are aware that the number of units listed in the AHRI directory do not correlate to shipments. (Raypak, No. 41 at p. 5) Bradford White provided examples of how counting models in the database may lead to inaccurate results and stated that sales of the older models listed in the AHRI database tend to decline over time. (Bradford White, No. 42 at p. 14) Rheem also disputed DOE's methodology to estimate historical shipments for all equipment classes, stating the number of certified models is inadequate for determining the number of shipments. (Rheem, No. 43 at p. 26) AHRI argued that available models are a lagging indicator, and similar to the Bradford White comment, stated that shipments of older models tend to decline as new units are introduced into the market. AHRI added that when DOE uses available models, it needs to find a methodology to adjust share to account for underlying growth in high-efficiency products. (AHRI, No. 40 at p. 13)

Several stakeholders asserted that the assumption used for the analysis in the withdrawn NOPR of constant equipment efficiency over time was incorrect. PHCC commented that market evidence indicates growth in energy-efficient product uptake without new standards, pointing to manufacturers increasing their product offerings due to competitive pressures to differentiate themselves from competitors. (PHCC, No. 34 at p. 1) AHRI commented that the percentage of condensing products actually shipped is much higher than DOE projected in its analysis, and to support its point, the trade association provided historical data on the share of shipments represented by condensing equipment for commercial gas-fired storage and instantaneous products. (AHRI, No. 40 at pp. 10–13) AHRI recommended that DOE recalculate the NIA in order to ensure national energy savings reflect the market-driven savings from the purchases of condensing equipment in the absence of such standards and as reflected in shipments-by-efficiency bin data provided. (AHRI, No. 40 at p. 14) Bock, A.O. Smith, and Spire pointed to AHRI's comments as evidence of the growth in equipment efficiency over the course of the currently effective standard, which they argue is occurring in absence of new standards. (Bock, No. 33 at p. 2; A.O. Smith, No. 39 at p. 5; Spire, No. 45 at p. 14) A.O. Smith added that its company sales data demonstrate annual growth of higher-efficiency CWH equipment and urged DOE to reconcile its data set with the data compiled by AHRI. (A.O. Smith, No. 39 at p. 5) Rheem believes DOE's assumption of no growth in equipment efficiency is flawed based on an incorrect premise that the number of available models by efficiency level is directly proportional to the market penetration. Rheem added there is a much higher shipment rate of higher-efficiency CWH models by Rheem than the proportional number of higher-efficiency certified models, and that shipments of high-efficiency CWH equipment are increasing steadily and disproportionately to the number of certified models. (Rheem, No. 43 at pp. 7, 25)

DOE acknowledges the efforts of AHRI and the water heater manufacturers in collecting and providing efficiency distribution data for commercial gas-fired storage water heater and for instantaneous gas-fired water heater shipments. DOE also acknowledges the anecdotal evidence provided by A.O. Smith and Rheem about shipments of efficient models. DOE, as suggested by AHRI, revised the shipments and other analyses to reflect this information. Thus, in response to the suggestions of A.O. Smith, Rheem, and others, DOE did reconcile the analyses to account for the AHRI data rather than relying heavily on the number of available models. In response to the parties that objected to the analyses not showing an increasing efficiency trend, DOE's NOPR analyses do now show such a trend.

To the extent that there may be concerns about data availability, DOE notes that analyses are based to the largest extent possible on actual data. The available model database provided actual data illustrating a point in time, and DOE did not possess actual data from other points in time to provide evidence of a trend. While manufacturers may provide data during manufacturer interviews, such information is subject to non-disclosure agreements and is typically manufacturer-specific. It can become available for use in analyses such as the shipments analysis when sufficient data points are collected from multiple parties to enable the interview team to mask an individual party's data sufficiently; the use of the data provided by AHRI allows for inclusion of actual data at an aggregate level.

With respect to potential concerns about the impact of federal, state, and local building energy codes on shipments of CWH equipment, DOE notes that under EPCA, State building codes are generally prohibited from requiring standards for CWH equipment that require energy efficiency levels more stringent than the applicable minimum energy efficiency requirement in the amended ASHRAE 90.1. (42 U.S.C. 6316(b)(2)(A) & (B))

Similarly, DOE also recognizes that there are businesses, government entities, educational institutions, health care facilities, and other institutional purchasers of CWH equipment that are already adopting environmental, sustainability, or climate plans in which they seek reduction in energy consumption and carbon emissions. These factors indicate a sizable share of the market will be purchasing efficient equipment. DOE notes that the ENERGY STAR CWH criteria became effective in March 2013, and a comparison of the first 2 years of ENERGY STAR results mirror the efficiency distribution data provided by AHRI and the water heater manufacturers. Additionally, Federal buildings are subject to Federal Energy Management Program (''FEMP'') purchasing requirements, and have been required to purchase condensing equipment since 2012. Currently, the FEMP requirement is to purchase ENERGY STAR-qualifying equipment or FEMP-designated equipment for commercial gas-fired storage and instantaneous tankless gas-fired commercial water heaters.[140] In summary, DOE has tentatively concluded that these shipments are likely already reflected in the AHRI shipment statistics, which have been used to update DOE's analyses for this NOPR, and therefore no further adjustments are necessary.

To the extent that there are concerns about the length of the analysis period, DOE recognizes that a 30-year study period is a long time, and much can happen in 30 years that would affect the results, but notes that this rulemaking includes circulating water heaters and hot water supply boilers with 25-year expected lives; therefore, a study period less than 30 years might not even cover the lifetime of the longest-lived piece of equipment shipped. DOE acknowledges that in the future, more-stringent efficiency standards are possibilities. However, the energy savings and other benefits accruing from standards set by

[140] 42 U.S.C. 8259b; 10 CFR part 436, subpart C. For FEMP requirements for commercial gas-fired water heaters see the FEMP web page: *energy.gov/eere/femp/purchasing-energy-efficient-commercial-gas-water-heaters.*

this rulemaking are analyzed and attributed to this standard. In future standards analyses, the standards set by this proposed rulemaking become part of the baseline.

Issue 7: DOE seeks historical shipments data dividing shipments between condensing and non-condensing efficiencies, for all product types that comprise the subject of this proposed rulemaking.

4. Shipments to Residential Consumers

DOE determined the fractions of commercial and residential applications for each equipment category based on the number of samples (in both CBECS and RECS) selected as relevant to be served by each equipment category considered in this rulemaking. With regard to what types of residential building starts are relevant to forecasting commercial equipment shipments, in response to the withdrawn NOPR, Bradford White stated that multi-family buildings are the only building stock where CWH shipments would be appropriate. Bradford White believes shipments of commercial water heaters to single-family homes are minimal, though the commenter has heard of some such use in really large single-family houses. (Bradford White, No. 42 at p. 10) Rheem's input was similar, with the additional detail that single-family homes greater than 5,000 square feet are more likely to use commercial water heaters. (Rheem, No. 43 at p. 27) A.O. Smith stated that in its experience, multi-family buildings were the only residential application for commercial water heaters. (A.O. Smith, No. 39 at p. 16) Based upon these comments, for this NOPR, DOE did not include residential single-family building stock growth and used only residential multi-family building stocks and building additions when considering the potential non-commercial consumer component in the development of the shipments forecasts.

5. NOPR Shipments Model

To project shipments and equipment stocks for 2021 through the end of the 30-year analysis period (2055), DOE used the shipments forecasting models (described in sections IV.G.1 and IV.G.2 of this NOPR) and a stock accounting model. For each class of equipment, DOE forecasted shipments exogenously as described in the response to comments. The stock accounting model keeps track of shipments and calculates replacement shipments based on the historical shipments, the expected useful lifetime of each equipment class, and a Weibull distribution that identifies a percentage of units still in existence from a prior year that will fail and need to be replaced in the current year. In each year, DOE assumed a fraction of the replacement market will be retired rather than replaced due to the demolition of buildings in which this CWH equipment resides. This retirement fraction was derived from building stock data from the *AEO2021*.[141]

To project shipments of CWH equipment for new construction, DOE relied on building stock data obtained from *AEO2021*. For this NOPR, DOE assumes CWH equipment is used in both commercial buildings and residential multi-family buildings. DOE estimated a saturation rate for each equipment type using building and equipment stock values. The saturation rate was applied to new building additions in each year, yielding shipments to new buildings. The building stock and additions projections from *AEO2021* are shown in Table IV.24.

TABLE IV.24—BUILDING STOCK PROJECTIONS

Year	Total commercial building stock (million sq. ft.)	Commercial building stock additions (million sq. ft.)	Multi-family residential building stock (millions of units)	Multi-family residential building additions (millions of units)
2021	92,494	2,015	32.23	0.42
2025	96,109	2,110	33.22	0.42
2026	97,087	2,117	33.47	0.42
2030	100,970	2,155	34.40	0.40
2035	106,060	2,277	35.46	0.38
2040	111,151	2,307	36.45	0.38
2045	116,359	2,418	37.45	0.39
2050	121,825	2,520	38.44	0.39
2055 *	127,540	2,633	39.48	0.41

Source: EIA *AEO2021 Reference case.*
* Post-2050, the projections were extended using the average annual growth rate from 2040 to 2050.

The final component in the stock accounting model is shifts to or away from particular equipment classes. For this NOPR, shipments were an input to the stock model. For both the historical and forecasted period, shifts to or away from a particular equipment class were calculated as a remainder. Using a saturation rate derived from historical equipment and building stocks, the model estimates shipments to new buildings. Using historical stock and retirement rates based on equipment life, the model estimates shipments for stock replacement. Shifts to or away from a particular equipment class equals total shipments less shipments for new buildings and shipments for replacements. While DOE refers to the remainders as ''shifts to or away from the equipment class,'' the remainders could be a result of numerous factors: Equipment lasting longer, which reduces the number of replacements; increased or decreased need for hot water generally due to greater efficiency in water usage; changing patterns of commercial activity; outside influences, such as ENERGY STAR and utility conservation or marketing programs; actual shifts between equipment classes caused by relative fuel prices, relative equipment costs and efficiencies, installation costs, repair and maintenance costs, and consumer preferences; and other factors.

Based on the historic data, there is an apparent shift toward electric storage water heating equipment. The historical shipments summarized in Table IV.23 of this document show a steady growth in commercial electric storage water

[141] U.S. Energy Information Administration (EIA). *2021 Annual Energy Outlook.* January 2021. Available at *www.eia.gov/forecasts/aeo/.*

heaters, with shipments growing from 22,288 in 1994 to 150,665 in 2019. Over the same time period, commercial gas-fired storage water heaters have seen a decline in shipments from 91,027 in 1994 to a low of 75,487 in 2009. After 2009, gas-fired storage water heater shipments rebounded, reaching a shipment level of 88,548 in 2019 (and a peak of 98,095 in 2015). During the period 2009 through 2015, there was a reduction in the apparent shift away from commercial gas-fired storage units compared to the earlier period; however, there appeared to be an increase in 2016–2017 before returning to a reduction in the shift in commercial gas-fired storage units. Because the forecasted shipments of residential-duty gas-fired storage water heaters are linked to commercial gas-fired storage units, there is a similar shift away from the residential-duty gas-fired storage equipment class in the shipment forecast. Gas-fired instantaneous equipment appears to have a positive shift pattern.

Because the commercial gas-fired storage and gas-fired instantaneous CWH shipments forecasts were developed using econometric models based on historical data, these apparent shifts are captured in DOE's shipments model and embedded in the total forecast. For purposes of assigning equipment costs and energy usage in the NIA, DOE needs to know if the increased/decreased shipments are new or replacement shipments. For all equipment classes, DOE assumed that the apparent shift is most likely to occur in new installations rather than in the replacement installations. As described in chapter 9 of this NOPR TSD, DOE assumed that a shift is twice as likely to take place in a new installation as in a replacement installation. For example, if DOE estimated that in 2021, 20 percent of shipments for an equipment class went to new installations and 80 percent went for replacements in the absence of switching, DOE multiplied the 20 percent by 2 (40 percent) and added the 80 percent (which equals 120 percent). Both the 40 percent for new and the 80 percent for replacement were then divided by 120 percent to normalize to 100 percent, yielding revised shipment allocations of 33 percent for new and 67 percent for replacement.

The resulting shipment projection is shown in Table IV.25.

TABLE IV.25—SHIPMENTS OF COMMERCIAL WATER HEATING EQUIPMENT

Year	Commercial gas-fired storage water heaters and gas-fired storage-type instantaneous water heaters (units)	Residential-duty gas-fired storage water heaters (units)	Gas-fired tankless water heaters (units)	Gas-fired circulating water heaters and hot water supply boilers (units)
2021	97,418	19,484	8,708	10,484
2025	98,366	19,673	10,834	12,705
2026	99,373	19,875	11,297	13,236
2030	101,160	20,232	13,146	15,232
2035	103,099	20,620	15,469	17,695
2040	105,765	21,153	17,441	19,620
2045	108,590	21,718	19,712	21,964
2050	111,381	22,276	21,916	24,277
2055	113,671	22,734	24,323	26,797

* The projected shipments are based on historical data for commercial gas-fired storage water heaters which may or may not include storage-type instantaneous shipments. For analysis purposes, DOE has grouped these categories but recognizes that future shipments for storage-type instantaneous may not be captured in the projection.

Because the estimated energy usage of CWH equipment differs by commercial and residential settings, the NIA employs the same fractions of shipments (or sales) to commercial and to residential consumers used by the LCC analysis. The fractions of shipments by type of consumer are shown in Table IV.26.

TABLE IV.26—SHIPMENT SHARES BY TYPE OF CONSUMER

Equipment	Commercial	Residential
Commercial gas-fired storage water heaters and gas-fired storage-type instantaneous water heaters	79%	21%
Residential-duty gas-fired storage water heaters	56	44
Gas-fired instantaneous water heaters and hot water supply boilers:		
Gas-fired tankless water heaters	69	31
Gas-fired circulating water heaters and hot water supply boilers	79	21

For the NIA model, shipments must be disaggregated by efficiency levels that correspond to the levels analyzed in the engineering and LCC analyses. To identify the percentage of shipments corresponding to each efficiency level, DOE combined the efficiency trends based on AHRI and manufacturer shipments data and information derived from a database of equipment currently produced and sold by manufacturers. The sources of information for this database included the DOE Compliance Certification and manufacturer catalogs and websites. DOE used the AHRI shipments data to project the percentage of shipments that are condensing and non-condensing, for the period from 2015 through the end of the analysis period. Starting with the last year of historical data from AHRI, shipments within the non-condensing and condensing efficiency ranges were distributed based on the available models database. Because the efficiency bins used in the AHRI shipments data did not exactly match the thermal efficiency bins studied by DOE, available models were used to re-distribute the historical shipment period

within the non-condensing and condensing efficiency ranges to match the DOE thermal efficiency levels. For each subsequent year in the NOPR analysis period, as the percentage of shipments that are in the condensing efficiency range increases, the shipments are distributed across the condensing thermal efficiency levels by increasing proportionally the percentage of shipments by efficiency level in the previous year. Similarly, as the percentage of non-condensing shipments decrease, DOE distributed shipments across thermal efficiency levels by proportionately decreasing the percentage of shipments in the prior year.

H. National Impact Analysis

The NIA assesses the NES and the NPV from a national perspective of total consumer costs and savings that would be expected to result from amended standards at specific efficiency levels.[142] (''Consumer'' in this context refers to consumers of the equipment being regulated.) DOE calculates the NES and NPV for the potential standard levels considered based on projections of annual equipment shipments, along with the annual energy consumption and total installed cost data from the energy use and LCC analyses. For this NOPR analysis, DOE projected the energy savings, operating cost savings, equipment costs, and NPV of consumer benefits for equipment shipped from 2026 through 2055, the year in which the last standards-compliant equipment would be shipped during the 30-year analysis period.

DOE evaluates the impacts of amended standards by comparing a case without such standards with standards-case projections. The no-new-standards-case characterizes energy use and consumer costs for each equipment class in the absence of any new or amended energy conservation standards. For this projection, DOE considers historical trends in efficiency and various forces that are likely to affect the mix of efficiencies over time. DOE compares the no-new-standards-case with projections characterizing the market for each equipment class if DOE adopted new or amended standards at specific energy efficiency levels (*i.e.,* the TSLs or standards cases) for that class. For the standards cases, DOE considers how a given standard would likely affect the market shares of equipment with efficiencies greater than the standard.

DOE uses a spreadsheet model to calculate the energy savings and the national consumer costs and savings from each TSL. Chapter 10 and appendix 10A of the NOPR TSD explains the model and how to use it. The model and documentation are available on DOE's website.[143] Interested parties can review DOE's analyses by changing various input quantities within the spreadsheet.

Unlike the LCC analysis, the NIA does not use distributions for inputs or outputs, but relies on inputs based on national average equipment costs and energy costs. DOE used the NIA spreadsheet to perform calculations of NES and NPV using the annual energy consumption, maintenance and repair costs, and total installed cost data from the LCC analysis. The NIA also uses energy prices and building stock and additions consistent with the projections from the *AEO2021.* NIA results are presented in chapter 10 of the NOPR TSD.

Table IV.27 summarizes the inputs and methods DOE used for the NIA analysis for this NOPR. Discussion of these inputs and methods follows the table. See chapter 10 of the NOPR TSD for further details.

TABLE IV.27—SUMMARY OF INPUTS AND METHODS FOR THE NATIONAL IMPACT ANALYSIS

Inputs	Method
Shipments	Annual shipments from shipments model.
Compliance Date of Standard	2026.
Efficiency Trends	No-new-standards case, standards cases.
Annual Energy Consumption per Unit	Annual weighted-average values are a function of energy use at each TSL.
Total Installed Cost per Unit	Annual weighted-average values are a function of cost at each TSL.
Annual Energy Cost per Unit	Annual weighted-average values as a function of the annual energy consumption per unit and energy prices.
Repair and Maintenance Cost per Unit	Annual values do not change with efficiency level.
Energy Price Trends	*AEO2021* projections (to 2050) and extrapolation thereafter.
Energy Site-to-Primary and FFC Conversion	A time-series conversion factor based on *AEO2021.*
Discount Rate	3 percent and 7 percent.
Present Year	2021.

1. Equipment Efficiency Trends

A key component of the NIA is the trend in energy efficiency projected for the no-new-standards case and each of the standards cases. DOE uses a no-new-standards-case distribution of efficiency levels to project what the CWH equipment market would look like in the absence of potential standards. For the withdrawn NOPR, DOE developed the no-new-standards-case distribution of equipment by thermal efficiency levels, and by standby loss efficiency levels, for CWH equipment by analyzing a database [144] of equipment currently available. For the standards cases, DOE used a ''roll-up'' scenario to establish the shipment-weighted efficiency for the year that standards are assumed to become effective (2026). In this scenario, the market shares of equipment in the no-new-standards case that do not meet the standard under consideration would ''roll up'' to meet the new standard level, and the market share of equipment above the standard would remain unchanged. The approach is further described in chapter 10 of the NOPR TSD.

In comments filed in response to the withdrawn NOPR, Spire criticized a random selection of standards-case efficiencies as leading to inaccurate forecasts of cost and energy savings. (Spire, No. 45 at pp. 24, 25) Spire also commented on the issue of consumers switching to more-efficient equipment regardless of regulatory standards. (Spire, No. 45 at pp. 25, 32, 33) AHRI

[142] The NIA accounts for impacts in the 50 states and the District of Columbia.

[143] DOE's web page on commercial water heating equipment is available at *www1.eere.energy.gov/buildings/appliance_standards/standards.aspx?productid=36.*

[144] This database was developed using model data from DOE's Compliance Certification database (available at *www.regulations.doe.gov/certification-data/*) and manufacturer websites and catalogs.

also brought up the issue of whether consumers would migrate to condensing options due to economic reasons, even without amended minimum energy efficiency standards. (AHRI, NOPR Public Meeting Transcript, No. 20 at pp. 104, 105)

In response to Spire's comments, DOE notes it constructed the no-new-standards efficiency distribution using its database as discussed in section IV.A.3. of this document. The selections in the LCC model, while random, are based on the distributions created from the best available data. The issue of the random assignment of equipment in the no-new standards case is discussed specifically in section IV.F.2.i. DOE uses this distribution in the LCC to model consumer choices that mirror the market and uses the mean values from the LCC analysis in the NIA. DOE stated at the NOPR public meeting that if data such as that provided by AHRI were available, the forecast of consumer costs and savings would be improved. (DOE, Public Meeting Transcript, No. 20, p. 21) At the public meeting, DOE also stated that if manufacturers provide shipment data, DOE would use it in the analysis, and DOE has made use of the data provided by AHRI. DOE agrees with Spire's and AHRI's contention that some consumers will purchase higher-efficiency equipment even in the absence of amended standards. Consequently, for this NOPR, DOE developed the no-new-standards distribution of equipment by thermal efficiency levels for CWH equipment using data from DOE's Compliance Certification database and data submitted by AHRI regarding condensing versus non-condensing equipment. Using the data provided by AHRI, DOE has modeled a no-new-standards efficiency trend in which 75 to 85 percent of consumers purchase condensing equipment by 2055 by using the historical AHRI data to develop a future trend, but the Department points out that at present, the adoption of equipment equivalent to the standards proposed herein is currently less than half of total shipments.[145] Thus, this NOPR analysis assigns substantial credit to market-driven efficiency accomplishments. DOE further notes that new and replacement markets were modeled using the same efficiency distributions.

The shipments analysis section of this NOPR addresses comments received from stakeholders related to DOE's withdrawn NOPR shipment forecast that included constant equipment efficiency based on the available equipment database (see section IV.G.3). In comments about the NIA, Bock, A.O. Smith, Spire, and AHRI all reiterated their shipments comments concerning their belief that market shares by thermal efficiency derived from the available equipment database differ from the distribution that would be derived from actual shipments. The same stakeholders referenced data collected by AHRI, and stated that the sale of condensing gas-fired storage and/or instantaneous tankless gas-fired water heaters is higher than DOE assumed in the withdrawn NOPR, and called on DOE to use the shipments data provided by AHRI in the calculation of energy savings. AHRI and Bock highlighted the level of the condensing unit sales, with AHRI noting the market share was approaching 46 percent of total shipments in 2015 and with Bock arguing that given historical growth rates, the market share would be expected to achieve majority market share by 2020. Spire stated that DOE overestimated NOPR energy savings by using an efficiency distribution that underrepresents high-efficiency equipment, thereby stripping market-driven efficiency gains from the no-new-standards case and attributing these efficiency gains to the proposed standards. (Bock, No. 33 at p. 1; A.O. Smith, No. 39 at pp. 14–15; Spire, No. 45 at p. 14; AHRI, No. 40 at p. 10)

For this NOPR, DOE used the AHRI efficiency data to fit a Bass Diffusion curve, which shows continued market-driven efficiency improvements over the forecast period up to a point where 75 percent of commercial and residential-duty gas-fired storage and circulating water heaters and hot water supply boiler shipments are condensing in the no-new-standards case. For instantaneous tankless shipments, DOE modeled up to 85 percent of shipments in the condensing efficiency levels because it appears that presently, the percentage is much higher than for the other equipment types. Thus, an increasing efficiency trend is now modeled over the 30-year analysis period in the NIA model. While numerous other changes to the engineering, installation costs, and energy use analyses prevent direct comparisons in terms of varying only the efficiency distribution, the NOPR national energy savings and net present value of consumer benefits for the TSLs evaluated are reduced because a significant percentage of both are now attributed to market forces.

Bradford White cautioned that DOE should understand that AHRI data do not capture the entire industry, but only reporting members. (Bradford White, NOPR Public Meeting Transcript, No. 20 at p. 112) With respect to the shipments information provided by AHRI and manufacturers, DOE considers the data to be a significant improvement over the data available for the May 2016 CWH ESC NOPR phase. DOE uses the data with the caution, as it does with any data, and DOE does make adjustments when information becomes available to enable DOE to improve the quality of such data.

Table IV.28 shows the starting distribution of equipment by efficiency level. In the no-new-standards case, the distributions represent the starting point for analyzing potential energy savings and cumulative consumer impacts of potential standards for each equipment category.

TABLE IV.28—MARKET SHARES BY EFFICIENCY LEVEL IN 2026 *

Equipment	EL 0 ** (%)	EL1 (%)	EL2 (%)	EL3 (%)	EL4 (%)	EL5 (%)
Commercial gas-fired storage water heaters and gas-fired storage-type instantaneous water heaters	34	3	0	12	50	1
Residential-duty gas-fired storage water heaters	18	12	7	31	27	4
Gas-fired instantaneous water heaters and hot water supply boilers:						

[145] U.S. EPA. ENERGY STAR Unit Shipment and Market Penetration Report Calendar Year 2019 Summary. Available at *www.energystar.gov/sites/default/files/asset/document/2019%20Unit%20Shipment%20Data%20Summary%20Report.pdf* (last accessed July 7, 2021).

TABLE IV.28—MARKET SHARES BY EFFICIENCY LEVEL IN 2026 *—Continued

Equipment	EL 0 ** (%)	EL1 (%)	EL2 (%)	EL3 (%)	EL4 (%)	EL5 (%)
Gas-fired tankless water heaters	17	0	0	0	21	62
Gas-fired circulating water heaters and hot water supply boilers	4	12	15	2	16	51

* Due to rounding, shares for each row might not add to 100 percent.
** For the Residential-duty equipment class, efficiency is in terms of UEF. Because minimum UEF under the existing efficiency standard varies by storage tank size, equipment is categorized not by absolute value of UEF but by percentage point increases over the minimum efficiency required on the basis of the equipment's tank size.

For each efficiency level analyzed, DOE used a ''roll-up'' scenario to establish the market shares by efficiency level for the year that compliance would be required with potential standards. The analysis starts with the no-new-standards-case distributions wherein shipments are assumed to be distributed across efficiency levels as shown in Table IV.28. When potential standard levels above the base level are analyzed, as the name implies, the shipments in the no-new-standards case that did not meet the efficiency standard level being considered would roll up to meet the next higher standard level. The ''roll-up'' scenario also suggests that equipment efficiencies in the no-new-standards case that were above the standard level under consideration would not be affected. The no-new-standards-case efficiency distributions for each equipment class are discussed more fully in chapter 10 of the NOPR TSD. The no-new-standards-case efficiency distributions for each equipment category are discussed more fully in chapter 10 of the NOPR TSD.

2. Fuel and Technology Switching

For this NOPR, DOE analyzed whether amended standards would potentially create economic incentives for shifting between fuels, and specifically from natural gas to electricity, beyond any switching inherent in historical trends, as discussed in section IV.G. of this document.

DOE conducted a high-level analysis by using average NIA inputs and equipment operating hour data from the energy analysis to examine consumer PBPs in situations where they might switch from gas-fired to electric water heaters in both new and replacement construction at the proposed standard level. As previously noted, DOE is not analyzing thermal efficiency standards for electric storage water heaters since the thermal efficiency of these units already approaches 100 percent; as such, the underlying technology has most likely not changed, so for comparison purposes in this NOPR, the installation, equipment, and maintenance and repair costs from the withdrawn 2016 NOPR have been adjusted to account for inflation.[146] To make the costs comparable across equipment categories, DOE adjusted the average costs using ratios based on the first-hour ratings shown in Table IV.29.

TABLE IV.29—FIRST-HOUR EQUIPMENT RATINGS USED IN THE FUEL SWITCHING ANALYSIS

Year	Commercial gas-fired storage water heaters	Residential-duty gas-fired storage water heaters	Gas-fired tankless water heaters	Gas-fired circulating water heaters and hot water supply boilers	Electric storage water heaters
First-Hour Rating (gal)	283	134	268	664	165
Ratio to Commercial Gas-fired Storage	1.00	0.47	*0.32	2.34	0.58

* The ratio of the number of installed commercial gas-fired storage water heaters to installed gas-fired tankless water heaters is not directly comparable using only first-hour ratings, here based on a 90 °F temperature rise. The ratio shown reflects in-use delivery capability of the representative gas-fired tankless water heater model relative to the delivery capability of the representative commercial gas-fired storage water heater, and includes an estimated 3-to-1 delivery capability tradeoff for a tankless unit without storage compared to the representative gas-storage water heater with the same first-hour rating.

DOE reviewed the installed cost of commercial electric and gas-fired storage water heaters, both at the no-new-standards-case efficiency level and with the standard level proposed herein for commercial gas-fired water heaters. The analysis uses costs for the year 2026, the first year that an amended standard would be in effect. In new installations, the analysis assumes that the inflation-adjusted commercial electric storage water heater installed cost is $4,205 and the first year maintenance and repair cost is $48.[147] In replacement installations, the analysis assumes that the inflation-adjusted commercial electric storage water heater installed cost is $3,950 and the first year maintenance and repair cost is $48. In further investigating the potential for fuel-switching, DOE first scaled the first costs and the maintenance and repair costs of the electric storage water in new and replacement installations linearly with first-hour rating assuming that the consumer needs to meet the first hour capacity of the representative commercial gas-fired storage water heater. To better compare the electric energy use in a fuel switching scenario, DOE examined the average burner operating hours for the commercial gas water heater to meet the hot water load, as detailed in appendix 7B of the NOPR TSD. By multiplying the input rating of the gas storage water heater by the baseline thermal efficiency and the average 2.60 hour of operation to meet

[146] Electric storage water heater costs were escalated from 2014$ to 2020$ using gross domestic product price deflators. First year electricity costs were recalculated using the *AEO2021* prices for 2026, weighted by the percent of shipments to the commercial and residential markets for the comparison equipment class (commercial gas-fired or residential-duty).

[147] Since the electric storage water heater was dropped from this NOPR, for this analysis the MPC from the withdrawn 2016 ECS NOPR standby loss level 0 was used to represent no-new-standards-case electric storage water heaters.

the water load including piping losses (and not included standby burner operation), the average daily hot water provided by the unit was estimated at 413,920 Btu/day. Assuming a 100% conversion efficiency for the electric energy to provide this load would be would 121.31 kWh/day or 44,279 kWh/yr with an energy cost of $4,852 in the first year. DOE notes that this value does not account for additional energy for electric water heater standby losses.

With the electric water heater costs thus scaled and corresponding energy cost calculated, within new construction installations the commercial gas storage water heater was estimated to be slightly more expensive to purchase and install than the electric storage unit in both the no-new-standards and standards cases, but significantly less costly to operate (see Table IV.30). In these cases, the up-front cost premium of the commercial gas-fired storage unit at the proposed standard level (TSL 3) relative to the scaled electric storage unit costs, divided by the annual operating savings for choosing the gas water heater, yields a PBP of 0.18 years, compared to a PBP of 0.15 years in the no-new-standards case. In replacement markets, the total installed cost of a commercial gas-fired storage unit was compared to the first-hour-rating scaled cost estimate for the commercial electric water heater as a replacement unit from the withdrawn 2016 NOPR. The estimated total installed cost of the comparable electric storage unit exceeds the cost of the commercial gas-fired storage unit. As with new construction, the replacement electric storage unit is substantially more costly to operate.

TABLE IV.30—TYPICAL UNIT COSTS, SCALED FOR FIRST-HOUR RATING (COMMERCIAL GAS-FIRED STORAGE = 1.0)—ELECTRIC STORAGE VERSUS COMMERCIAL GAS-FIRED STORAGE

[2020$]

Equipment	Cost	No-new-standards case new construction	No-new-standards case replacement *	Standards case new construction	Standards case replacement *
Electric Storage	Installed Cost	$7,212	$6,774	$7,212	$6,774
	Energy, Maintenance, and Repair Cost (First Year).	4,935	4,935	4,935	4,935
Commercial Gas-fired Storage	Installed Cost	7,645	4,723	7,789	6,056
	Energy, Maintenance, and Repair Cost (First Year).	1,963	1,961	1,733	1,727

* Installed costs for electric storage water heaters shown for the replacement case do not include cost of infrastructure alterations (*e.g.,* upgraded wiring, removal or modification of gas infrastructure).

DOE further notes that, depending on the specifics of the commercial building, significant additional costs could be incurred in switching to electric storage water heaters if the existing building lacks the electrical wiring and related infrastructure to handle the input rating of a scaled capacity commercial electric water heater. Thus, DOE has tentatively concluded that the proposed standard will not cause a noticeable increase in fuel switching from commercial gas-fired to electric storage water heaters.

A similar analysis to that of the commercial gas storage water heater and electric equivalent was repeated separately for residential-duty water heaters. The first costs and maintenance and repair costs were scaled by first hour rating to that equivalent to the representative residential-duty water heater. The hot water load for the electric equivalent unit was estimated based on the burner operating hours from Appendix 7B of the TSD and the electric water heater energy costs were estimated assume 100% conversion efficiency of the electric input to hot water load. For an electric water heater equivalent to a residential-duty gas water heater, the estimated energy consumption was 19,492 kWh/yr, equating to an energy cost of $2,218 in the first year. This value does not account for additional energy for electric water heater standby losses. The appropriately scaled first costs and operating cost estimates are shown in Table IV.31. In all but the no-new-standards replacement case, the residential-duty water heater is more expensive to install than the electric storage water heater; however, it was less costly to operate in all cases. For the cases in which the electric storage water heater was less expensive to install, the up-front cost premium of the gas-fired residential-duty unit relative to the electric storage unit, divided by the annual operating savings from using the gas water heater, yields a PBP of 0.16 years in the no-new-standards new installation case, of 0.22 years at the proposed standard level (TSL 3) replacement case, and of 0.57 years at the proposed standard level new installation case. Based on the comparison of costs for equivalent electric water heating, DOE has tentatively concluded that amended standards would not introduce additional economic incentives for fuel switching from residential-duty to electric storage water heaters.

TABLE IV.31—TYPICAL UNIT COSTS, SCALED FOR FIRST-HOUR RATING (RESIDENTIAL-DUTY = 1.0)—ELECTRIC STORAGE VERSUS RESIDENTIAL-DUTY

[2020$]

Equipment	Cost	No-new-standards case new construction	No-new-standards case replacement *	Standards case new construction	Standards case replacement *
Electric Storage	Installed Cost	$3,415	$3,208	$3,415	$3,208
	Energy, Maintenance, and Repair Cost (First Year).	2,257	2,257	2,257	2,257
Residential-duty Storage	Installed Cost	3,589	1,941	4,134	3,486

TABLE IV.31—TYPICAL UNIT COSTS, SCALED FOR FIRST-HOUR RATING (RESIDENTIAL-DUTY = 1.0)—ELECTRIC STORAGE VERSUS RESIDENTIAL-DUTY—Continued

[2020$]

Equipment	Cost	No-new-standards case new construction	No-new-standards case replacement *	Standards case new construction	Standards case replacement *
	Energy, Maintenance, and Repair Cost (First Year).	1,182	1,164	999	984

* Installed costs for electric storage water heaters shown for the replacement case do not include cost of infrastructure alterations (*e.g.,* upgraded wiring, removal or modification of gas infrastructure).

DOE did not consider instantaneous gas-fired equipment and electric storage water heaters to be likely objects of gas-to-electric fuel switching, largely due to the disparity in hot water delivery capacity between the instantaneous gas-fired equipment and commercial electric storage equipment. However, DOE understands that systems can be built by plumbing multiple individual water heaters together to achieve the same level of hot water delivery capacity. DOE seeks comment as to the extent that this phenomenon exists in either the no-standards case or the standards case. While technically feasible for consumers not facing space constraints, DOE considered it unlikely that these consumers would choose upon replacement to swap one or more high-output, typically wall-mounted tankless units with physically larger, floor-mounted electric storage water heaters for economic reasons, given the relatively low incremental operating cost for installing condensing tankless units and the much higher operational cost of the electric units. Commercial tankless water heaters could in theory be replaced with one or more electric tankless units. DOE also has tentatively concluded that this would be an unlikely scenario for the same reasons cited for switching to electric storage, however DOE also notes that without hot water storage in such a system the instantaneous electric heating load could disproportionally impact a commercial buildings electric demand in many applications relative to the equivalent electric storage water heater, requiring greater electrical infrastructure upgrades as well as potentially higher and less predictable ongoing electric demand costs. DOE has tentatively concluded that amended standards would not introduce additional economic incentives for fuel switching from gas-fired instantaneous tankless to electric storage or electric tankless water heaters. Similarly, replacement of gas fired circulating water heaters or boilers with an electric equivalent would be expected to require substantial electric capacity upgrades expected as well as much higher operating cost of the electric equipment. The representative 399 kBtu/h baseline gas-fired hot water boiler represents an approximately 94 kW electric instantaneous equivalent, anticipated to be a significant load increase to most commercial buildings that might otherwise use the gas-fired hot water boiler.

In summary, based upon the reasoning mentioned previously, DOE did not explicitly include fuel or technology switching in this NOPR beyond the continuation of historical trends discussed in section IV.G of this document.

Issue 8: DOE seeks comment on the availability of systems that can be built by plumbing multiple individual water heaters together to achieve the same level of hot water delivery capacity.

3. National Energy Savings

The NES analysis involves a comparison of national energy consumption of the considered equipment between each potential standards case (''TSL'') and the case with no new or amended energy conservation standards. DOE calculated the national energy consumption by multiplying the number of units (stock) of each product (by vintage or age) by the unit energy consumption (also by vintage). DOE calculated annual NES based on the difference in national energy consumption for the no-new-standards case and for each higher efficiency standard case. DOE estimated energy consumption and savings based on site energy and converted the electricity consumption and savings to primary energy (*i.e.,* the energy consumed by power plants to generate site electricity) using annual conversion factors derived from *AEO2021.* Cumulative energy savings are the sum of the NES for each year over the timeframe of the analysis.

In 2011, in response to the recommendations of a committee on ''Point-of-Use and Full-Fuel-Cycle Measurement Approaches to Energy Efficiency Standards'' appointed by the National Academy of Sciences, DOE announced its intention to use FFC measures of energy use and greenhouse gas and other emissions in the national impact analyses and emissions analyses included in future energy conservation standards rulemakings. 76 FR 51281 (August 18, 2011). After evaluating the approaches discussed in the August 18, 2011 notice, DOE published a statement of amended policy in which DOE explained its determination that EIA's NEMS is the most appropriate tool for its FFC analysis and its intention to use NEMS for that purpose. 77 FR 49701 (August 17, 2012). NEMS is a public domain, multi-sector, partial equilibrium model of the U.S. energy sector [148] that EIA uses to prepare its *AEO.* The FFC factors incorporate losses in production and delivery in the case of natural gas (including fugitive emissions) and additional energy used to produce and deliver the various fuels used by power plants. The approach used for deriving FFC measures of energy use and emissions is described in appendix 10D of the NOPR TSD.

DOE calculated the NES associated with the difference between the per-unit energy use under a standards-case scenario and the per-unit energy use in the no-new-standards case. The average energy per unit used by the CWH equipment stock gradually decreases in the standards case relative to the no-new-standards case as more-efficient CWH units gradually replaces less-efficient units.

Unit energy consumption values for each equipment category are taken from the LCC spreadsheet for each efficiency level and weighted based on market efficiency distributions. To estimate the total energy savings for each efficiency level, DOE first calculated the per-unit energy reduction (*i.e.,* the difference between the energy directly consumed

[148] For more information on NEMS, refer to The National Energy Modeling System: An Overview 2018, DOE/EIA–0581(2018). April 2019. Available at *www.eia.gov/outlooks/aeo/nems/overview/pdf/0581(2018).pdf* (last accessed July 7, 2021).

by a unit of equipment in operation in the no-new-standards case and the standards case) for each class of CWH equipment for each year of the analysis period. The electricity and natural gas savings or increases (in the case of electricity used for condensing natural gas-fired water heaters) are accounted separately. Second, DOE determined the annual site energy savings by multiplying the stock of each equipment category by vintage (*i.e.,* year of shipment) by the per-unit energy reduction for each vintage (from step one). This second step adds to the electricity impacts an amount of energy savings/increase to account for the losses and inefficiencies in the generation, transmission, and distribution systems. The result of the second step yields primary electricity impacts at the generation source. The second step applies only to electricity; there is no analogous adjustment made to natural gas savings. Third, DOE converted the annual site electricity savings into the annual amount of energy saved at the source of electricity generation (the source or primary energy), using a time series of conversion factors derived from the latest version of EIA's NEMS. This third step accounts for the energy used to extract and transport fuel from mines or wells to the electric generation facilities, and accounts for the natural gas NES for drilling and pipeline energy usage. The third step yields the total FFC impacts. DOE accounts for the natural gas savings separately from the electricity impacts, so the factors used at each step are appropriate for the specific fuel. The coefficients developed for the analysis are mutually exclusive, so there should be no double-counting of impacts. Finally, DOE summed the annual primary energy savings for the lifetime of units shipped over a 30-year period to calculate the total NES. DOE performed these calculations for each efficiency level considered for CWH equipment in this rulemaking. DOE notes that for the LCC and PBP analyses, only site energy impacts are used. The only steps in the analysis wherein FFC savings are used are the calculation of NES. DOE notes that the development of data for site-to-source and other factors is accomplished by running the EIA's model used to generate the *AEO.* DOE has included with this NOPR TSD the previously mentioned chapter 10 and appendix 10D, which reference the development of the FFC factors and provide some of the underlying data.

Regarding the fossil fuel site-to-source values used in the NOPR analysis, DOE used the *AEO2021* Reference case, which reflects the most up-to-date information on resource and fuel costs, but excludes Clean Power Plan (CPP) [149] impacts. Use of the *AEO2021* also incorporates all Federal legislation and regulations in place when EIA prepared the analyses. The growing penetration of renewable electricity generation would have little effect on the trend in site-to-source energy factors because EIA uses an average fossil fuel heat to characterize the primary energy associated with renewable generation. At this time, DOE is continuing to use the ''fossil fuel equivalency'' accounting convention used by EIA. DOE notes the *AEO* projections stop in 2050. Because the trends were relatively flat, DOE maintained the 2050 value for the remainder of the forecast period. When DOE develops the site-to-source and FFC-factors, it models resource mixes representative of the load profile of the equipment covered in the rulemaking that vary by end-use. For this NOPR, DOE has used an average of resources compatible with the general load profile of CWH equipment, and the data used are the most current available.

DOE also considered whether a rebound effect is applicable in its NES analysis for CWH equipment. A rebound effect occurs when an increase in equipment efficiency leads to increased demand for its service. For example, when a consumer realizes that a more-efficient water heating device will lower the energy bill, that person may opt to increase his or her amenity level by taking longer showers and thereby consuming more hot water. In this way, the consumer gives up a portion of the energy cost savings in favor of the increased amenity. For the CWH equipment market, there are two ways that a rebound effect could occur: (1) Increased use of hot water within the buildings in which such units are installed and (2) additional hot water outlets that were not previously installed. Because the CWH equipment addressed in this proposed rule is commercial equipment, the person owning the equipment (*i.e.,* the apartment or commercial building owner) is usually not the person operating the equipment (*e.g.,* the apartment renter, or the restaurant employee using hot water to wash dishes). Because the operator usually does not own the equipment, that person will not have the operating cost information necessary to influence his or her operation of the equipment. Therefore, the first type of rebound is unlikely to occur at levels that could be considered significant. Similarly, the second type of rebound is unlikely because a small change in efficiency is insignificant among the factors that determine whether a company will invest the money required to pipe hot water to additional outlets.

In the October 2014 RFI, DOE sought comments and data on any rebound effect that may be associated with more-efficient commercial water heaters. 79 FR 62908 (Oct. 21, 2014). DOE received two comments. Both A.O. Smith and Joint Advocates did not believe a rebound effect would be significant. A.O. Smith commented that water usage is based on demand and more efficient water heaters would not change the demand. (A.O. Smith, No. 2 at p. 4) Joint Advocates commented that with the marginal change in energy bill for small business owners, they would expect little increased hot water usage, and that for tenant-occupied buildings, it would be ''difficult to infer that more tenants will wash their hands longer because the hot water costs the building owner less.'' Thus, Joint Advocates thought the likelihood of a strong rebound effect is very low. (Joint Advocates, No. 7 at p. 5) As DOE did not receive any comments suggesting the contrary in response to the withdrawn NOPR, DOE has retained its position that rebound effect is unlikely to occur for the CWH that are the subject of this NOPR.

4. Net Present Value Analysis

The inputs for determining the NPV of the total costs and benefits experienced by consumers are (1) total annual installed cost, (2) total annual operating costs (energy costs and repair and maintenance costs), and (3) a discount factor to calculate the present value of costs and savings. DOE calculates net savings each year as the difference between the no-new-standards case and each standards case in terms of total savings in operating costs versus total increases in installed costs. DOE calculates operating cost savings over the lifetime of each product shipped during the projection period. DOE determined the difference between the equipment costs under the standard case and the no-new-standards case in order to obtain the net equipment cost increase resulting from the higher standard level. As noted in section IV.F.2.a of this document, DOE used a constant real price assumption as the default price projection; the cost to manufacture a given unit of higher efficiency neither increases nor

[149] The CPP was repealed in June 2019 as part of EPA's final Affordable Clean Energy (''ACE'') Rule, but the ACE Rule was vacated in January 2021 by the United States Court of Appeals for the District of Columbia Circuit, who also remanded EPA to consider a new regulatory framework to replace the ACE Rule.

decreases over time. The analysis of the price trends is described in chapter 10 of the NOPR TSD.

The operating cost savings are energy cost savings, which are calculated using the estimated energy savings in each year and the projected price of the appropriate form of energy. To estimate energy prices in future years, DOE multiplied the average regional energy prices by the projection of annual national-average commercial energy price changes in the Reference case from *AEO2021,* which has an end year of 2050. To estimate price trends after 2050, DOE used the average annual rate of change in prices from 2020 through 2050. As part of the NIA, DOE also analyzed scenarios that used inputs from variants of the *AEO2021* Reference case that have lower and higher economic growth. Those cases have lower and higher energy price trends compared to the Reference case. NIA results based on these cases are presented in appendix 10B of the NOPR TSD.

DOE then determined the difference between the net operating cost savings and the net equipment cost increase in order to obtain the net savings (or expense) for each year. DOE then discounted the annual net savings (or expenses) to 2021 for CWH equipment bought on or after 2026 and summed the discounted values to provide the NPV for an efficiency level.

In calculating the NPV, DOE multiplies the net savings in future years by a discount factor to determine their present value. For this NOPR, DOE estimated the NPV of consumer benefits using both a 3-percent and a 7-percent real discount rate. DOE uses these discount rates in accordance with guidance provided by the OMB to Federal agencies on the development of regulatory analysis.[150] The discount rates for the determination of NPV are in contrast to the discount rates used in the LCC analysis, which are designed to reflect a consumer's perspective. The 7-percent real value is an estimate of the average before-tax rate of return to private capital in the U.S. economy. The 3-percent real value represents the ''social rate of time preference,'' which is the rate at which society discounts future consumption flows to their present value.

DOE considered the possibility that consumers make purchase decisions based on first cost instead of LCC. DOE projects that new installations meeting a potential standard would not cause the commercial gas-fired storage water heaters to be significantly more expensive than electric storage water heaters of comparable first-hour capacity, as detailed in section IV.H.2. of this document. DOE further notes that only the relative costs of purchasing, installing, and operating equipment were considered in its analysis, and did not consider unrelated issues such as current trends toward electrification of customer loads, as DOE cannot speculate about consumer electrification or other (*see* sections IV.G and IV.H.2 of this document).

DOE notes that governmental and corporate purchasing policies are increasingly resulting in purchases of more-efficient equipment. However, DOE does not infer anything with respect to the remaining market for efficient water heaters simply because of a purchase by one consumer or even by one segment of the consumer base, such as purchases by government consumers. In other words, if all Federal government agencies purchase ENERGY STAR-compliant water heaters, that tells us nothing about the installation costs experienced by any other consumers. DOE assumes the purchases reveal more about the underlying consumer discount rate premiums than about a distribution of installation costs. It is possible that corporate commitment to green purchasing policies might result in situations where, in their rational decision-making process, the consumer gives green purchase alternatives an explicit advantage. As an example, a purchasing policy may specify that that a ''non-green'' alternative must have a PBP of 3 years or less while a ''green'' alternative can have a PBP up to 5 years. This type of corporate decision making would have the outward appearance of providing an apparent discount rate advantage to the ''green'' alternative, or perhaps, an appearance of assessing a lower discount rate premium on the ''green'' alternative than is assessed on all other alternatives. Thus, while significant numbers of purchases are taking place in the market, DOE contends that such purchases reveal an underlying distribution of discount rate premiums rather than an underlying distribution of installation costs. Green policies and programs such as FEMP-designated equipment and ENERGY STAR will continue to effectively reduce even more consumers' discount rate premiums, leading to more green purchases. This assumption underlies DOE's decision to take the efficiency trends data provided by manufacturers and extend the trends into the future rather than holding efficiency constant at current rates.

To the extent that there may be concerns regarding the inconvenience and disruptions caused by installing new venting, DOE would note that installing commercial electric water heaters is not simply a matter of hauling the water heater into the building and plugging it into an existing power outlet. The typical unit DOE analyzed for this NOPR included 18 kilowatt (''kW'') heating elements, and in a setting where the electrical system cannot support a new load of this magnitude (or higher) without being upgraded, installation of an electric water heater might be no less disruptive and just as costly as the venting upgrade for a condensing gas-fired water heater. Within this NOPR analysis, DOE has considered the range of possible repairs and determined that there likely were few if any life-extending repairs that could be made beyond those included by DOE in the LCC and NIA analyses. For some equipment failures, such as tanks leaking, DOE knows of no good way to repair the equipment to extend the equipment's life, so life-extending repair is likely extremely limited beyond the repairs already included by DOE.

I. Consumer Subgroup Analysis

In analyzing the potential impact of new or amended standards on commercial consumers, DOE evaluates the impact on identifiable groups (*i.e.,* subgroups) of consumers, such as residential consumers at comparatively lower income levels that may be disproportionately affected by a new or revised national energy conservation standard level. The purpose of the subgroup analysis is to determine the extent of any such disproportionate impacts. For this rulemaking, DOE identified consumers at the lowest income bracket in the residential sector and only included them for a residential sector subgroup analysis. The following provides further detail regarding DOE's consumer subgroup analysis. Chapter 11 in the NOPR TSD describes the consumer subgroup analysis.

1. Residential Sector Subgroup Analysis

The RECS database divides the residential samples into 24 income bins. The income bins represent total gross annual household income. As far as discount rates are concerned, the survey of consumer finances divides the residential population into six different income bins: Income bin 1 (0–20 percent income percentile), income bin 2 (20–40 percent income percentile),

[150] United States Office of Management and Budget. Circular A–4: Regulatory Analysis. September 17, 2003. Section E. Available at *www.whitehouse.gov/sites/whitehouse.gov/files/omb/circulars/A4/a-4.pdf* (last accessed July 7, 2021).

income bin 3 (40–60 percent income percentile), income bin 4 (60–80 percent income percentile), income bin 5 (80–90 percent income percentile), and income bin 6 (90–100 percent income percentile). In general, consumers in the lower income groups tend to discount future streams of benefits at a higher rate when compared to consumers in the higher income groups.

Hence, to analyze the influence of a national standard on the low-income group population, DOE conducted a (residential) subgroup analysis where only the 0–20 percent income percentile samples were included for the entire simulation run. Subsequently, the results of the subgroup analysis are compared to the results from all consumers.

The results of DOE's LCC subgroup analysis are summarized in section V.B.1.b of this NOPR and described in detail in chapter 11 of the NOPR TSD.

J. Manufacturer Impact Analysis

1. Overview

DOE performed an MIA to estimate the financial impacts of amended energy conservation standards on manufacturers of CWH equipment and to estimate the potential impacts of such standards on employment and manufacturing capacity. The MIA has both quantitative and qualitative aspects and includes analyses of projected industry cash flows, the INPV, investments in research and development (''R&D'') and manufacturing capital, and domestic manufacturing employment. Additionally, the MIA seeks to determine how amended energy conservation standards might affect manufacturing employment, capacity, and competition, as well as how standards contribute to overall regulatory burden. Finally, the MIA serves to identify any disproportionate impacts on manufacturer subgroups, including small business manufacturers.

The quantitative part of the MIA primarily relies on GRIM, an industry cash flow model with inputs specific to this rulemaking. The key GRIM inputs include data on the industry cost structure, unit production costs, product shipments, manufacturer markups, and investments in R&D and manufacturing capital required to produce compliant products. The key GRIM outputs are the INPV, which is the sum of industry annual cash flows over the analysis period, discounted using the industry-weighted average cost of capital, and the impact to domestic manufacturing employment. The model uses standard accounting principles to estimate the impacts of more-stringent energy conservation standards on a given industry by comparing changes in INPV and domestic manufacturing employment between a no-new-standards case and the various standards cases (*i.e.,* TSLs). To capture the uncertainty relating to manufacturer pricing strategies following amended standards, the GRIM estimates a range of possible impacts under different markup scenarios.

The qualitative part of the MIA addresses manufacturer characteristics and market trends. Specifically, the MIA considers such factors as a potential standard's impact on manufacturing capacity, competition within the industry, the cumulative impact of other DOE and non-DOE regulations, and impacts on manufacturer subgroups. The complete MIA is outlined in chapter 12 of the NOPR TSD.

DOE conducted the MIA for this proposed rulemaking in three phases. In Phase 1 of the MIA, DOE prepared a profile of the CWH equipment manufacturing industry based on the market and technology assessment, preliminary manufacturer interviews, and publicly-available information. This included a top-down analysis of CWH equipment manufacturers that DOE used to derive preliminary financial inputs for the GRIM (*e.g.,* revenues; materials, labor, overhead, and depreciation expenses; selling, general, and administrative (''SG&A'') expenses; and R&D expenses). DOE also used public sources of information to further calibrate its initial characterization of the CWH equipment manufacturing industry, including company filings of form 10–K from the SEC,[151] corporate annual reports, the U.S. Census Bureau's Economic Census,[152] and reports from Dunn & Bradstreet.[153]

In Phase 2 of the MIA, DOE prepared a framework industry cash-flow analysis to quantify the potential impacts of amended energy conservation standards. The GRIM uses several factors to determine a series of annual cash flows starting with the announcement of the standard and extending over a 30-year period following the compliance date of the standard. These factors include annual expected revenues, costs of sales, SG&A and R&D expenses, taxes, and capital expenditures. In general, energy conservation standards can affect manufacturer cash flow in three distinct ways: (1) Creating a need for increased investment, (2) raising production costs per unit, and (3) altering revenue due to higher per-unit prices and changes in sales volumes.

In addition, during Phase 2, DOE developed interview guides to distribute to manufacturers of CWH equipment in order to develop other key GRIM inputs, including product and capital conversion costs, and to gather additional information on the anticipated effects of energy conservation standards on revenues, direct employment, capital assets, industry competitiveness, and subgroup impacts.

In Phase 3 of the MIA, DOE conducted structured, detailed interviews with representative manufacturers. During these interviews, DOE discussed engineering, manufacturing, procurement, and financial topics to validate assumptions used in the GRIM and to identify key issues or concerns. As part of Phase 3, DOE also evaluated subgroups of manufacturers that may be disproportionately impacted by amended standards or that may not be accurately represented by the average cost assumptions used to develop the industry cash flow analysis. Such manufacturer subgroups may include small business manufacturers, low-volume manufacturers, niche players, and/or manufacturers exhibiting a cost structure that largely differs from the industry average. DOE identified one subgroup for a separate impact analysis: Small business manufacturers. The small business subgroup is discussed in section VI.B ''Review under the Regulatory Flexibility Act'' of this document and in chapter 12 of the NOPR TSD.

2. Government Regulatory Impact Model and Key Inputs

DOE uses the GRIM to quantify the changes in cash flow due to amended standards that result in a higher or lower industry value. The GRIM uses a standard, annual discounted cash-flow analysis that incorporates manufacturer costs, markups, shipments, and industry financial information as inputs. The GRIM models changes in costs, distribution of shipments, investments, and manufacturer margins that could result from an amended energy conservation standard. The GRIM spreadsheet uses the inputs to arrive at a series of annual cash flows, beginning in 2020 (the base year of the analysis)

[151] U.S. Securities and Exchange Commission, Annual 10–K Reports (Various Years) (Available at *www.sec.gov/edgar/searchedgar/companysearch.html*).

[152] U.S. Census Bureau, Annual Survey of Manufacturers: General Statistics: Statistics for Industry Groups and Industries (2018). Available at *www.census.gov/data/tables/time-series/econ/asm/2018-2019-asm.html.*

[153] Dunn & Bradstreet Company Profiles, Various Companies. Available at *app.dnbhoovers.com.*

and continuing to 2055. DOE calculated INPVs by summing the stream of annual discounted cash flows during this period. For manufacturers of CWH equipment, DOE used a real discount rate of 9.1 percent, which was derived from industry financials and then modified according to feedback received during manufacturer interviews.

The GRIM calculates cash flows using standard accounting principles and compares changes in INPV between the no-new-standards case and each standards case. The difference in INPV between the no-new-standards case and a standards case represents the financial impact of the amended energy conservation standard on manufacturers. As discussed previously, DOE developed critical GRIM inputs using a number of sources, including publicly-available data, results of the engineering analysis, and information gathered from industry stakeholders during the course of manufacturer interviews and through written comments. The GRIM results are presented in section V.B.2. Additional details about the GRIM, the discount rate, and other financial parameters can be found in chapter 12 of the NOPR TSD.

a. Manufacturer Production Costs

Manufacturing more efficient equipment is typically more expensive than manufacturing baseline equipment due to the use of more complex components, which are typically more costly than baseline components. The changes in the MPCs of covered products can affect the revenues, gross margins, and cash flow of the industry. MPCs were derived in the engineering analysis, using methods discussed in section IV.C. of this document. For a complete description of the MPCs, see chapter 5 of the NOPR TSD.

b. Shipments Projections

The GRIM estimates manufacturer revenues based on total unit shipment projections and the distribution of those shipments by efficiency level. Changes in sales volumes and efficiency mix over time can significantly affect manufacturer finances. For this analysis, the GRIM uses the NIA's annual shipment projections derived from the shipments analysis from 2020 (the base year) to 2055 (the end year of the analysis period). See chapter 9 of the NOPR TSD for additional details.

c. Product and Capital Conversion Costs

Amended energy conservation standards could cause manufacturers to incur conversion costs to bring their production facilities and equipment designs into compliance. DOE evaluated the level of conversion-related expenditures that would be needed to comply with each considered efficiency level in each equipment category. For the MIA, DOE classified these conversion costs into two major groups: (1) Product conversion costs; and (2) capital conversion costs.

Product conversion costs are investments in research, development, testing, marketing, and other non-capitalized costs necessary to make product designs comply with amended energy conservation standards. Capital conversion costs are investments in property, plant, and equipment necessary to adapt or change existing production facilities such that new compliant product designs can be fabricated and assembled.

To evaluate potential product conversion costs, DOE estimated the number of platforms manufacturers would have to modify to move their equipment lines to each incremental efficiency level. DOE developed the product conversion costs by estimating the amount of labor per platform manufacturers would need for research and development to raise the efficiency of models to each incremental efficiency level. DOE also assumed manufacturers would incur safety certification costs (including costs for updating safety certification records and for safety testing) associated with modifying their current product offerings to comply with amended standards.

To evaluate the level of capital conversion expenditures manufacturers would likely incur to comply with amended standards, DOE used information derived from the engineering analysis, equipment teardowns, and manufacturer interviews. DOE used the information to estimate the additional investments in property, plant, and equipment that are necessary to meet amended energy conservation standards. In the engineering analysis evaluation of higher efficiency equipment from leading manufacturers of commercial water heaters (both commercial duty and residential duty), DOE found a range of designs and manufacturing approaches. DOE attempted to account for both the range of manufacturing pathways and the current efficiency distribution of shipments in the modeling of industry capital conversion costs.

The capital conversion cost estimates for gas-fired storage water heaters are driven by the cost for industry to double production capacity at condensing ELs. Those costs included, but were not limited to, capital investments in tube bending, press dies, machining, enameling, MIG welding, leak testing, quality assurance stations, conveyer, and additional space requirements.

For gas-fired instantaneous water heaters capital conversion costs, DOE understands that manufacturers produce commercial models on the same production lines as residential models, which have much higher shipment volumes. As such, DOE modeled the scenario in which gas-fired instantaneous water heater manufacturers make incremental investments to increase production capacity, but do not need to setup entirely new production lines or new facilities to accommodate an amended standard requiring condensing technology for gas-fired instantaneous water heaters.

For gas-fired instantaneous circulating water heaters and hot water supply boilers, the design changes to reach condensing efficiency levels were driven by purchased parts (*i.e.,* condensing heat exchanger, burner tube, blower, gas valve). The capital conversion costs for this equipment class are based on incremental warehouse space needed to house additional purchased parts.

DOE assumes all conversion-related investments occur between the year of publication of the final rule and the year by which manufacturers must comply with the new standard. The conversion cost figures used in the GRIM can be found in section V.B.2 of this document. For additional information on the estimated capital and product conversion costs and estimates by equipment category, see chapter 12 of the NOPR TSD.

Issue 9: DOE seeks input on the production facility and manufacturing process changes required as a result of potential amended standards for each equipment category. DOE also requests input on the costs associated with those facility and manufacturing changes.

d. Manufacturer Markup Scenarios

MSPs include manufacturing production costs (*i.e.,* labor, materials, and overhead estimated in DOE's MPCs) and all non-production costs (*i.e.,* SG&A, R&D, and interest), along with profit. To calculate the MSPs in the GRIM, DOE applied a manufacturer markups to the MPCs estimated in the engineering analysis for each equipment category and efficiency level. Modifying these manufacturer markups in the standards case yields different sets of impacts on manufacturers. For the MIA, DOE modeled two standards-case markup scenarios to represent uncertainty regarding the potential

impacts on prices and profitability for manufacturers following the implementation of amended energy conservation standards: (1) A preservation of gross margin percentage markup scenario and (2) a preservation of per-unit operating profit markup scenario. These scenarios lead to different manufacturer markup values that, when applied to the MPCs, result in varying revenue and cash flow impacts.

Under the preservation of gross margin percentage scenario, DOE applied a single uniform ''gross margin percentage'' markup across all efficiency levels, which assumes that manufacturers would be able to maintain the same amount of profit as a percentage of revenues at all efficiency levels within an equipment category. As manufacturer production costs increase with efficiency, this scenario implies that the absolute dollar markup will increase.

To estimate the average manufacturer markup used in the preservation of gross margin percentage markup scenario, DOE analyzed publicly-available financial information for manufacturers of CWH equipment. DOE then requested feedback on its initial markup estimates during manufacturer interviews. The revised markups, which are used in DOE's quantitative analysis of industry financial impacts, are presented in Table IV.32 of this NOPR. These markups capture all non-production costs, including SG&A expenses, R&D expenses, interest expenses, and profit.

TABLE IV.32—MANUFACTURER MARKUPS FOR PRESERVATION OF GROSS MARGIN PERCENTAGE MARKUP SCENARIO

Equipment	Markup
Commercial gas-fired storage and gas-fired storage-type instantaneous water heaters	1.45
Residential-duty gas-fired storage water heaters	1.45
Gas-fired instantaneous water heaters and hot water supply boilers:	
Tankless water heaters	1.43
Circulating water heaters and hot water supply boilers	1.43

DOE also models the preservation of per-unit operating profit scenario because manufacturers stated that they do not expect to be able to mark up the full cost of production in the standards case, given the highly competitive nature of the CWH market. In this scenario, manufacturer markups are set so that operating profit one year after the compliance date of amended energy conservation standards is the same as in the no-new-standards case on a per-unit basis. In other words, manufacturers are not able to garner additional operating profit from the higher production costs and the investments that are required to comply with the amended standards; however, they are able to maintain the same per-unit operating profit in the standards case that was earned in the no-new-standards case. Therefore, operating margin in percentage terms is reduced between the no-new-standards case and standards case.

DOE adjusted the manufacturer markups in the GRIM at each TSL to yield approximately the same per-unit earnings before interest and taxes in the standards case as in the no-new-standards case. The preservation of per-unit operating profit markup scenario represents the lower bound of industry profitability in the standards case. This is because manufacturers are not able to fully pass through to commercial consumers the additional costs necessitated by amended standards for CWH equipment.

A comparison of industry financial impacts under the two markup scenarios is presented in section V.B.2.a of this document.

K. Emissions Analysis

The emissions analysis consists of two components. The first component estimates the effect of potential energy conservation standards on power sector and site (where applicable) combustion emissions of CO_2, NO_X, SO_2, and Hg. The second component estimates the impacts of potential standards on emissions of two additional greenhouse gases, CH_4 and N_2O, as well as the reductions to emissions of other gases due to ''upstream'' activities in the fuel production chain. These upstream activities comprise extraction, processing, and transporting fuels to the site of combustion.

The analysis of power sector emissions of CO_2, NO_X, SO_2, and Hg uses marginal emissions factors that were derived from data in *AEO2021,* as described in section IV.M of this document. Details of the methodology are described in the appendices to chapters 13 and 15 of the NOPR TSD.

Power sector emissions of CO_2, CH_4, and N_2O are estimated using Emission Factors for Greenhouse Gas Inventories published by the EPA.[154] The FFC upstream emissions are estimated based on the methodology described in chapter 15 of the NOPR TSD. The upstream emissions include both emissions from extraction, processing, and transportation of fuel, and ''fugitive'' emissions (direct leakage to the atmosphere) of CH_4 and CO_2.

The onsite operation of CWH equipment requires combustion of fossil fuels and results in emissions of CO_2, NO_X, SO_2, CH_4 and N_2O at the sites where these products are used. DOE accounted for the reduction in these site emissions and the associated FFC upstream emissions due to potential standards. Site emissions of these gases were estimated using Emission Factors for Greenhouse Gas Inventories and emissions intensity factors from an EPA publication.[155]

The emissions intensity factors are expressed in terms of physical units per megawatt-hour (MWh) or million British thermal units (MMBtu) of site energy savings. Total emissions reductions are estimated using the energy savings calculated in the national impact analysis.

1. Air Quality Regulations Incorporated in DOE's Analysis

DOE's no-new-standards case for the electric power sector reflects the *AEO2021,* which incorporates the projected impacts of existing air quality regulations on emissions. *AEO2021* generally represents current legislation and environmental regulations, including recent government actions, that were in place at the time of preparation of *AEO2021,* including the emissions control programs discussed in the following paragraphs.[156]

[154] Available *www.epa.gov/sites/production/files/2021-04/documents/emission-factors_apr2021.pdf* (last accessed July 12, 2021).

[155] U.S. Environmental Protection Agency. External Combustion Sources. In Compilation of Air Pollutant Emission Factors. AP–42. Fifth Edition. Volume I: Stationary Point and Area Sources. Chapter 1. Available at *www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emissions-factors* (last accessed July 1, 2021).

[156] For further information, see the Assumptions to *AEO2021* report that sets forth the major

Continued

SO_2 emissions from affected electric generating units (''EGUs'') are subject to nationwide and regional emissions cap-and-trade programs. Title IV of the Clean Air Act (''CAA'') sets an annual emissions cap on SO_2 for affected EGUs in the 48 contiguous States and the District of Columbia (''D.C.''). (42 U.S.C. 7651 *et seq.*) SO_2 emissions from numerous States in the eastern half of the United States are also limited under the Cross-State Air Pollution Rule (''CSAPR''). 76 FR 48208 (Aug. 8, 2011). CSAPR requires these States to reduce certain emissions, including annual SO_2 emissions, and went into effect as of January 1, 2015.[157] *AEO2021* incorporates implementation of CSAPR, including the update to the CSAPR ozone season program emission budgets and target dates issued in 2016. 81 FR 74504 (Oct. 26, 2016). Compliance with CSAPR is flexible among EGUs and is enforced through the use of tradable emissions allowances. Under existing EPA regulations, any excess SO_2 emissions allowances resulting from the lower electricity demand caused by the adoption of an efficiency standard could be used to permit offsetting increases in SO_2 emissions by another regulated EGU.

However, beginning in 2016, SO_2 emissions began to fall as a result of the Mercury and Air Toxics Standards (''MATS'') for power plants. 77 FR 9304 (Feb. 16, 2012). In the MATS final rule, EPA established a standard for hydrogen chloride as a surrogate for acid gas hazardous air pollutants (''HAP''), and also established a standard for SO_2 (a non-HAP acid gas) as an alternative equivalent surrogate standard for acid gas HAP. The same controls are used to reduce HAP and non-HAP acid gas; thus, SO_2 emissions are being reduced as a result of the control technologies installed on coal-fired power plants to comply with the MATS requirements for acid gas. To continue operating, coal power plants must have either flue gas desulfurization or dry sorbent injection systems installed. Both technologies, which are used to reduce acid gas emissions, also reduce SO_2 emissions. Because of the emissions reductions under the MATS, it is unlikely that excess SO_2 emissions allowances resulting from the lower electricity demand would be needed or used to permit offsetting increases in SO_2 emissions by another regulated EGU. Therefore, energy conservation standards that decrease electricity generation would generally reduce SO_2 emissions. DOE estimated SO_2 emissions reduction using emissions factors based on *AEO2021.*

CSAPR also established limits on NO_X emissions for numerous States in the eastern half of the United States. Energy conservation standards would have little effect on NO_X emissions in those States covered by CSAPR emissions limits if excess NO_X emissions allowances resulting from the lower electricity demand could be used to permit offsetting increases in NO_X emissions from other EGUs. In such case, NO_X emissions would remain near the limit even if electricity generation goes down. A different case could possibly result, depending on the configuration of the power sector in the different regions and the need for allowances, such that NO_X emissions might not remain at the limit in the case of lower electricity demand. In this case, energy conservation standards might reduce NO_X emissions in covered States. Despite this possibility, DOE has chosen to be conservative in its analysis and has maintained the assumption that standards will not reduce NO_X emissions in States covered by CSAPR. Energy conservation standards would be expected to reduce NO_X emissions in the States not covered by CSAPR. DOE used *AEO2021* data to derive NO_X emissions factors for the group of States not covered by CSAPR. DOE used *AEO2021* data to derive NO_X emissions factors for the group of States not covered by CSAPR.

The MATS limit mercury emissions from power plants, but they do not include emissions caps and, as such, DOE's energy conservation standards would be expected to slightly reduce Hg emissions. DOE estimated mercury emissions reduction using emissions factors based on *AEO2021,* which incorporates the MATS.

L. Monetizing Emissions Impacts

As part of the development of this proposed rule, for the purpose of complying with the requirements of Executive Order 12866, DOE considered the estimated monetary benefits from the reduced emissions of CO_2, CH_4, N_2O, NO_X, and SO_2 that are expected to result from each of the TSLs considered. In order to make this calculation analogous to the calculation of the NPV of consumer benefit, DOE considered the reduced emissions expected to result over the lifetime of products shipped in the projection period for each TSL. This section summarizes the basis for the values used for monetizing the emissions benefits and presents the values considered in this NOPR.

On March 16, 2022, the Fifth Circuit Court of Appeals (No. 22–30087) granted the federal government's emergency motion for stay pending appeal of the February 11, 2022, preliminary injunction issued in *Louisiana* v. *Biden,* No. 21–cv–1074–JDC–KK (W.D. La.). As a result of the Fifth Circuit's order, the preliminary injunction is no longer in effect, pending resolution of the federal government's appeal of that injunction or a further court order. Among other things, the preliminary injunction enjoined the defendants in that case from ''adopting, employing, treating as binding, or relying upon'' the interim estimates of the social cost of greenhouse gases—which were issued by the Interagency Working Group on the Social Cost of Greenhouse Gases on February 26, 2021—to monetize the benefits of reducing greenhouse gas emissions. In the absence of further intervening court orders, DOE will revert to its approach prior to the injunction and present monetized benefits where appropriate and permissible under law. DOE requests comment on how to address the climate benefits and other non-monetized effects of the proposal.

1. Monetization of Greenhouse Gas Emissions

For the purpose of complying with the requirements of Executive Order 12866, DOE estimates the monetized benefits of the reductions in emissions of CO_2, CH_4, and N_2O by using a measure of the social cost (''SC'') of each pollutant (*e.g.,* SC–GHGs). These estimates represent the monetary value of the net harm to society associated with a marginal increase in emissions of these pollutants in a given year, or the benefit of avoiding that increase. These estimates are intended to include (but are not limited to) climate-change-related changes in net agricultural productivity, human health, property damages from increased flood risk, disruption of energy systems, risk of conflict, environmental migration, and the value of ecosystem services. DOE exercises its own judgment in

assumptions used to generate the projections in the Annual Energy Outlook. Available at *www.eia.gov/outlooks/aeo/assumptions/* (last accessed July 1, 2021).

[157] CSAPR requires states to address annual emissions of SO_2 and NO_X, precursors to the formation of fine particulate matter ($PM_{2.5}$) pollution, in order to address the interstate transport of pollution with respect to the 1997 and 2006 $PM_{2.5}$ National Ambient Air Quality Standards (''NAAQS''). CSAPR also requires certain states to address the ozone season (May–September) emissions of NO_X, a precursor to the formation of ozone pollution, in order to address the interstate transport of ozone pollution with respect to the 1997 ozone NAAQS. 76 FR 48208 (Aug. 8, 2011). EPA subsequently issued a supplemental rule that included an additional five states in the CSAPR ozone season program; 76 FR 80760 (Dec. 27, 2011) (Supplemental Rule).

presenting monetized climate benefits as recommended by applicable Executive Orders and guidance, and DOE would reach the same conclusion presented in this notice in the absence of the social cost of greenhouse gases, including the February 2021 Interim Estimates presented by the Interagency Working Group on the Social Cost of Greenhouse Gases.

DOE estimated the global social benefits of CO_2, CH_4, and N_2O reductions (''SC–GHG'') using the estimates presented in the ''Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive Order 13990'' published in February 2021 by the Interagency Working Group on Social Cost of Greenhouse Gases, United States Government (IWG) (IWG, 2021). The SC–GHGs is the monetary value of the net harm to society associated with a marginal increase in emissions in a given year, or the benefit of avoiding that increase. In principle, SC–GHGs includes the value of all climate change impacts, including (but not limited to) changes in net agricultural productivity, human health effects, property damage from increased flood risk and natural disasters, disruption of energy systems, risk of conflict, environmental migration, and the value of ecosystem services. The SC–GHGs therefore, reflects the societal value of reducing emissions of the gas in question by one metric ton. The SC–GHGs is the theoretically appropriate value to use in conducting benefit-cost analyses of policies that affect CO_2, N_2O and CH_4 emissions. As a member of the IWG involved in the development of the February 2021 SC–GHG TSD, the DOE agrees that the interim SC–GHG estimates represent the most appropriate estimate of the SC–GHG until revised estimates have been developed reflecting the latest, peer-reviewed science.

The SC–GHG estimates presented here were developed over many years, using transparent process, peer-reviewed methodologies, the best science available at the time of that process, and with input from the public. Specifically, in 2009, an interagency working group (IWG) that included DOE and other executive branch agencies and offices was established to ensure that agencies were using the best available science and to promote consistency in the social cost of carbon ($SC–CO_2$) values used across agencies. The IWG published $SC–CO_2$ estimates in 2010 that were developed from an ensemble of three widely cited integrated assessment models (IAMs) that estimate global climate damages using highly aggregated representations of climate processes and the global economy combined into a single modeling framework. The three IAMs were run using a common set of input assumptions in each model for future population, economic, and CO_2 emissions growth, as well as equilibrium climate sensitivity (ECS)—a measure of the globally averaged temperature response to increased atmospheric CO_2 concentrations. These estimates were updated in 2013 based on new versions of each IAM. In August 2016 the IWG published estimates of the social cost of methane ($SC–CH_4$) and nitrous oxide ($SC–N_2O$) using methodologies that are consistent with the methodology underlying the $SC–CO_2$ estimates. The modeling approach that extends the IWG $SC–CO_2$ methodology to non-CO_2 GHGs has undergone multiple stages of peer review. The $SC–CH_4$ and $SC–N_2O$ estimates were developed by Marten et al. (2015) and underwent a standard double-blind peer review process prior to journal publication. In 2015, as part of the response to public comments received to a 2013 solicitation for comments on the $SC–CO_2$ estimates, the IWG announced a National Academies of Sciences, Engineering, and Medicine review of the $SC–CO_2$ estimates to offer advice on how to approach future updates to ensure that the estimates continue to reflect the best available science and methodologies. In January 2017, the National Academies released their final report, Valuing Climate Damages: Updating Estimation of the Social Cost of Carbon Dioxide, and recommended specific criteria for future updates to the $SC–CO_2$ estimates, a modeling framework to satisfy the specified criteria, and both near-term updates and longer-term research needs pertaining to various components of the estimation process (National Academies, 2017). Shortly thereafter, in March 2017, President Trump issued Executive Order 13783, which disbanded the IWG, withdrew the previous TSDs, and directed agencies to ensure $SC–CO_2$ estimates used in regulatory analyses are consistent with the guidance contained in OMB's Circular A–4, ''including with respect to the consideration of domestic versus international impacts and the consideration of appropriate discount rates'' (E.O. 13783, Section 5(c)).

On January 20, 2021, President Biden issued Executive Order 13990, which re-established the IWG and directed it to ensure that the U.S. Government's estimates of the social cost of carbon and other greenhouse gases reflect the best available science and the recommendations of the National Academies (2017). The IWG was tasked with first reviewing the SC–GHG estimates currently used in Federal analyses and publishing interim estimates within 30 days of the E.O. that reflect the full impact of GHG emissions, including by taking global damages into account. The interim SC–GHG estimates published in February 2021, specifically the $SC–CH_4$ estimates, are used here to estimate the climate benefits for this proposed rule. The E.O. instructs the IWG to undertake a fuller update of the SC–GHG estimates by January 2022 that takes into consideration the advice of the National Academies (2017) and other recent scientific literature.

The February 2021 SC–GHG TSD provides a complete discussion of the IWG's initial review conducted under E.O. 13990. In particular, the IWG found that the SC–GHG estimates used under E.O. 13783 fail to reflect the full impact of GHG emissions in multiple ways. First, the IWG found that a global perspective is essential for SC–GHG estimates because it fully captures climate impacts that affect the United States and which have been omitted from prior U.S.-specific estimates due to methodological constraints. Examples of omitted effects include direct effects on U.S. citizens, assets, and investments located abroad, supply chains, and tourism, and spillover pathways such as economic and political destabilization and global migration. In addition, assessing the benefits of U.S. GHG mitigation activities requires consideration of how those actions may affect mitigation activities by other countries, as those international mitigation actions will provide a benefit to U.S. citizens and residents by mitigating climate impacts that affect U.S. citizens and residents. If the United States does not consider impacts on other countries, it is difficult to convince other countries to consider the impacts of their emissions on the United States. As a member of the IWG involved in the development of the February 2021 SC–GHG TSD, DOE agrees with this assessment and, therefore, in this proposed rule DOE centers attention on a global measure of SC–GHG. This approach is the same as that taken in DOE regulatory analyses from 2012 through 2016. Prior to that, in 2008 DOE presented Social Cost of Carbon (SCC) estimates based on values the Intergovernmental Panel on Climate Change (IPCC) identified in literature at that time. As noted in the February 2021 SC–GHG TSD, the IWG will continue to

review developments in the literature, including more robust methodologies for estimating a U.S.-specific SC–GHG value, and explore ways to better inform the public of the full range of carbon impacts. As a member of the IWG, DOE will continue to follow developments in the literature pertaining to this issue.

Second, the IWG found that the use of the social rate of return on capital (7 percent under current OMB Circular A–4 guidance) to discount the future benefits of reducing GHG emissions inappropriately underestimates the impacts of climate change for the purposes of estimating the SC–GHG. Consistent with the findings of the National Academies (2017) and the economic literature, the IWG continued to conclude that the consumption rate of interest is the theoretically appropriate discount rate in an intergenerational context (IWG 2010, 2013, 2016a, 2016b), and recommended that discount rate uncertainty and relevant aspects of intergenerational ethical considerations be accounted for in selecting future discount rates. As a member of the IWG involved in the development of the February 2021 SC–GHG TSD, DOE agrees with this assessment and will continue to follow developments in the literature pertaining to this issue.

While the IWG works to assess how best to incorporate the latest, peer reviewed science to develop an updated set of SC–GHG estimates, it set the interim estimates to be the most recent estimates developed by the IWG prior to the group being disbanded in 2017. The estimates rely on the same models and harmonized inputs and are calculated using a range of discount rates. As explained in the February 2021 SC–GHG TSD, the IWG has recommended that agencies revert to the same set of four values drawn from the SC–GHG distributions based on three discount rates as were used in regulatory analyses between 2010 and 2016 and subject to public comment. For each discount rate, the IWG combined the distributions across models and socioeconomic emissions scenarios (applying equal weight to each) and then selected a set of four values recommended for use in benefit-cost analyses: An average value resulting from the model runs for each of three discount rates (2.5 percent, 3 percent, and 5 percent), plus a fourth value, selected as the 95th percentile of estimates based on a 3 percent discount rate. The fourth value was included to provide information on potentially higher-than-expected economic impacts from climate change. As explained in the February 2021 SC–GHG TSD, and DOE agrees, this update reflects the immediate need to have an operational SC–GHG for use in regulatory benefit-cost analyses and other applications that was developed using a transparent process, peer-reviewed methodologies, and the science available at the time of that process. Those estimates were subject to public comment in the context of dozens of proposed rulemakings as well as in a dedicated public comment period in 2013.

DOE's derivations of the SC–GHGs (*i.e.,* SC–CO_2, SC–N_2O, and SC–CH_4) values used for this NOPR are discussed in the following sections, and the results of DOE's analyses estimating the benefits of the reductions in emissions of these pollutants are presented in section V.B.6.

a. Social Cost of Carbon

The SC–CO_2 values used for this NOPR were generated using the values presented in the 2021 update from the IWG's February 2021 TSD. Table IV.33 shows the updated sets of SC–CO_2 estimates from the latest interagency update in 5-year increments from 2020 to 2050. The full set of annual values used is presented in Appendix 14A of the NOPR TSD. For purposes of capturing the uncertainties involved in regulatory impact analysis, DOE has determined it is appropriate to include all four sets of SC–CO_2 values, as recommended by the IWG.[158]

TABLE IV.33—ANNUAL SC–CO_2 VALUES FROM 2021 INTERAGENCY UPDATE, 2020–2050

[2020$ per metric ton CO_2]

Year	Discount rate			
	5%	3%	2.5%	3%
	Average	Average	Average	95th percentile
2020	14	51	76	152
2025	17	56	83	169
2030	19	62	89	187
2035	22	67	96	206
2040	25	73	103	225
2045	28	79	110	242
2050	32	85	116	260

In calculating the potential global benefits resulting from reduced CO_2 emissions, DOE used the values from the 2021 interagency report, adjusted to 2020$ using the implicit price deflator for gross domestic product (''GDP'') from the Bureau of Economic Analysis. For each of the four sets of SC–CO_2 cases specified, the values for emissions in 2020 were $14, $51, $76, and $152 per metric ton avoided (values expressed in 2020$). DOE derived values from 2051 to 2070 based on estimates published by EPA.[159] These estimates are based on methods, assumptions, and parameters identical to the 2020–2050 estimates published by the IWG. DOE derived values after 2070 based on the trend in 2060–2070 in each of the four cases in the IWG update.

DOE multiplied the CO_2 emissions reduction estimated for each year by the SC–CO_2 value for that year in each of the four cases. To calculate a present value of the stream of monetary values, DOE discounted the values in each of the four cases using the specific discount rate that had been used to obtain the SC–CO_2 values in each case. See chapter 13 for the annual emissions

[158] For example, the February 2021 TSD discusses how the understanding of discounting approaches suggests that discount rates appropriate for intergenerational analysis in the context of climate change may be lower than 3 percent.

[159] See EPA, *Revised 2023 and Later Model Year Light-Duty Vehicle GHG Emissions Standards: Regulatory Impact Analysis,* Washington, DC, December 2021. Available at: *https://www.epa.gov/system/files/documents/2021-12/420r21028.pdf* (last accessed January 13, 2022).

reduction. See appendix 14A of the TSD for the annual SC–CO_2 values.

b. Social Cost of Methane and Nitrous Oxide

The SC–CH_4 and SC–N_2O values used for this NOPR were generated using the values presented in the February 2021 update from the IWG.[160] Table IV.34 shows the updated sets of SC–CH_4 and SC–N_2O estimates from the latest interagency update in 5-year increments from 2020 to 2050. The full set of annual values used is presented in Appendix 14A of the NOPR TSD. To capture the uncertainties involved in regulatory impact analysis, DOE has determined it is appropriate to include all four sets of SC–CH_4 and SC–N_2O values, as recommended by the IWG.

TABLE IV.34—ANNUAL SC–CH_4 AND SC–N_2O VALUES FROM 2021 INTERAGENCY UPDATE, 2020–2050
[2020$ per metric ton]

Year	SC–CH_4				SC–N_2O			
	Discount rate and statistic				Discount rate and statistic			
	5%	3%	2.5%	3%	5%	3%	2.5%	3%
	Average	Average	Average	95th percentile	Average	Average	Average	95th percentile
2020	670	1,500	2,000	3,900	5,800	18,000	27,000	48,000
2025	800	1,700	2,200	4,500	6,800	21,000	30,000	54,000
2030	940	2,000	2,500	5,200	7,800	23,000	33,000	60,000
2035	1,100	2,200	2,800	6,000	9,000	25,000	36,000	67,000
2040	1,300	2,500	3,100	6,700	10,000	28,000	39,000	74,000
2045	1,500	2,800	3,500	7,500	12,000	30,000	42,000	81,000
2050	1,700	3,100	3,800	8,200	13,000	33,000	45,000	88,000

DOE multiplied the CH_4 and N_2O emissions reduction estimated for each year by the SC–CH_4 and SC–N_2O estimates for that year in each of the cases. To calculate a present value of the stream of monetary values, DOE discounted the values in each of the cases using the specific discount rate that had been used to obtain the SC–CH_4 and SC–N_2O estimates in each case. See chapter 13 for the annual emissions reduction. See appendix 14A for the annual SC–CH_4 and SC_N_2O values.

2. Monetization of Other Air Pollutants

DOE estimated the monetized value of NO_X and SO_2 emissions reductions from electricity generation using benefit per ton estimates based on air quality modeling and concentration-response functions conducted by EPA for the Clean Power Plan final rule. 84 FR 32520. DOE used EPA's reported values for NO_X (as $PM_{2.5}$) and SO_2 for 2020, 2025, and 2030 calculated with discount rates of 3 percent and 7 percent, and EPA's values for ozone season NO_X, which do not involve discounting since the impacts are in the same year as emissions. DOE derived values specific to the sector for commercial water heating using a method described in appendix 14B of the NOPR TSD. DOE used linear interpolation to define values for the years between 2020 and 2025 and between 2025 and 2030; for years beyond 2030 the values are held constant.

DOE estimated the monetized value of NO_X and SO_2 emissions reductions from commercial water heating equipment using 2022 benefit-per-ton estimates from the EPA's ''Technical Support Document Estimating the Benefit per Ton of Reducing $PM_{2.5}$ and Ozone Precursors from 21 Sectors'' (''EPA TSD'').[161] Although none of the sectors refers specifically to residential and commercial buildings, and by association, commercial water heaters, the sector called ''area sources'' would be a reasonable proxy for residential and commercial buildings. ''Area sources'' represents all emission sources for which states do not have exact (point) locations in their emissions inventories. Because exact locations would tend to be associated with larger sources, ''area sources'' would be fairly representative of small dispersed sources like homes and businesses. The EPA TSD provides high and low estimates for 2016, 2020, 2025, and 2030 at 3- and 7-percent discount rates. DOE primarily relied on the low estimates to be conservative.

DOE multiplied the site emissions reduction (in tons) in each year by the associated $/ton values, and then discounted each series using discount rates of 3 percent and 7 percent as appropriate. DOE will continue to evaluate the monetization of avoided NO_X and SO_2 emissions and will make any appropriate updates for the final rule.

M. Utility Impact Analysis

The utility impact analysis estimates several effects on the electric power generation industry that would result from the adoption of new or amended energy conservation standards. The utility impact analysis estimates the changes in installed electrical capacity and generation that would result for each TSL. The analysis is based on published output from the NEMS associated with *AEO2021.* NEMS produces the *AEO* Reference case, as well as a number of side cases that estimate the economy-wide impacts of changes to energy supply and demand. For the current analysis, impacts are quantified by comparing the levels of electricity sector generation, installed capacity, fuel consumption and emissions in the *AEO2021* Reference case and various side cases. Details of the methodology are provided in the appendices to chapters 13 and 15 of the NOPR TSD.

The output of this analysis is a set of time-dependent coefficients that capture the change in electricity generation, primary fuel consumption, installed capacity and power sector emissions due to a unit reduction in demand for a given end use. These coefficients are multiplied by the stream of electricity savings calculated in the NIA to provide estimates of selected utility impacts of potential new or amended energy conservation standards.

[160] See Interagency Working Group on Social Cost of Greenhouse Gases, *Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide. Interim Estimates Under Executive Order 13990,* Washington, DC, February 2021. *www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf.*

[161] U.S. Environmental Protection Agency. Technical Support Document: Estimating the Benefit per Ton of Reducing $PM_{2.5}$ and Ozone Precursors from 21 Sectors, available at: *www.epa.gov/benmap/estimating-benefit-ton-reducing-directly-emitted-pm25-pm25-precursors-and-ozone-precursors.*

N. Employment Impact Analysis

DOE considers employment impacts in the domestic economy as one factor in selecting a proposed standard. Employment impacts from new or amended energy conservation standards include both direct and indirect impacts. Direct employment impacts are any changes in the number of employees of manufacturers of the products subject to standards, their suppliers, and related service firms. The MIA addresses those impacts. Indirect employment impacts are changes in national employment that occur due to the shift in expenditures and capital investment caused by the purchase and operation of more-efficient appliances. Indirect employment impacts from standards consist of the net jobs created or eliminated in the national economy, other than in the manufacturing sector being regulated, caused by (1) reduced spending by consumers on energy, (2) reduced spending on new energy supply by the utility industry, (3) increased consumer spending on the products to which the new standards apply and other goods and services, and (4) the effects of those three factors throughout the economy.

One method for assessing the possible effects on the demand for labor of such shifts in economic activity is to compare sector employment statistics developed by the Labor Department's Bureau of Labor Statistics (''BLS''). BLS regularly publishes its estimates of the number of jobs per million dollars of economic activity in different sectors of the economy, as well as the jobs created elsewhere in the economy by this same economic activity. Data from BLS indicate that expenditures in the utility sector generally create fewer jobs (both directly and indirectly) than expenditures in other sectors of the economy.[162] There are many reasons for these differences, including wage differences and the fact that the utility sector is more capital-intensive and less labor-intensive than other sectors. Energy conservation standards have the effect of reducing consumer utility bills. Because reduced consumer expenditures for energy likely lead to increased expenditures in other sectors of the economy, the general effect of efficiency standards is to shift economic activity from a less labor-intensive sector (*i.e.,* the utility sector) to more labor-intensive sectors (*e.g.,* the retail and service sectors). Thus, the BLS data suggest that net national employment may increase due to shifts in economic activity resulting from energy conservation standards.

DOE estimated indirect national employment impacts for the standard levels considered in this NOPR using an input/output model of the U.S. economy called Impact of Sector Energy Technologies version 4 (''ImSET'').[163] ImSET is a special-purpose version of the ''U.S. Benchmark National Input-Output'' (''I–O'') model, which was designed to estimate the national employment and income effects of energy-saving technologies. The ImSET software includes a computer-based I–O model having structural coefficients that characterize economic flows among 187 sectors most relevant to industrial, commercial, and residential building energy use.

DOE notes that ImSET is not a general equilibrium forecasting model, and that the uncertainties involved in projecting employment impacts, especially changes in the later years of the analysis. Because ImSET does not incorporate price changes, the employment effects predicted by ImSET may over-estimate actual job impacts over the long run for this proposed rule. Therefore, DOE used ImSET only to generate results for near-term timeframes (2026–2030), where these uncertainties are reduced. For more details on the employment impact analysis, see chapter 16 of the NOPR TSD.

V. Analytical Results and Conclusions

The following section addresses the results from DOE's analyses with respect to the considered energy conservation standards for CWH equipment. It addresses the TSLs examined by DOE and the projected impacts of each of these levels. Additional details regarding DOE's analyses are contained in the NOPR TSD supporting this document.

A. Trial Standard Levels

In general, DOE typically evaluates potential amended standards for products and equipment by grouping individual efficiency levels for each class into TSLs. Use of TSLs allows DOE to identify and consider manufacturer cost interactions between the equipment classes, to the extent that there are such interactions, and market cross elasticity from consumer purchasing decisions that may change when different standard levels are set.

In the analysis conducted for this NOPR, for commercial gas-fired storage water heaters, DOE included efficiency levels for both thermal efficiency and standby loss in each TSL because standby loss is dependent upon thermal efficiency. This dependence of standby loss on thermal efficiency is discussed in detail in section IV.C.4.b of this NOPR and chapter 5 of the NOPR TSD. However, as discussed in section IV.C.4.b of this NOPR, for all thermal efficiency levels for commercial gas-fired storage water heaters, DOE only analyzed one standby loss level corresponding to each thermal efficiency level. The thermal efficiency levels for commercial gas-fired storage water heaters and commercial gas-fired instantaneous water heaters and hot water supply boilers, the standby loss levels for commercial gas-fired storage water heaters, and the UEF levels for residential-duty gas-fired storage water heaters that are included in each TSL are described in the following paragraphs and presented in Table V.1 of this NOPR.

TSL 4 consists of the max-tech efficiency levels for each equipment category, which correspond to the highest condensing efficiency levels. TSL 3 consists of intermediate condensing efficiency levels for commercial gas-fired storage water heaters and residential-duty gas-fired storage water heaters, and max-tech efficiency levels for commercial gas-fired instantaneous water heaters and hot water supply boilers. TSL 2 consists of the minimum condensing efficiency levels analyzed for commercial gas-fired storage water heaters and residential-duty gas-fired storage water heaters, and intermediate condensing efficiency levels for commercial gas-fired instantaneous water heaters and hot water supply boilers. These TSLs require similar technologies to achieve the efficiency levels and have roughly comparable equipment availability across each equipment category in terms of the share of models available that meet the efficiency level and having multiple manufacturers that produce those models. TSL 1 consists of the maximum non-condensing thermal efficiency or UEF (as applicable) levels analyzed for each equipment category.

Table V.1 presents the efficiency levels for each equipment category (*i.e.,* commercial gas-fired storage water heaters and storage-type instantaneous water heaters, residential-duty gas-fired storage water heaters, gas-fired tankless water heaters, and gas-fired circulating water heaters and hot water supply

[162] See U.S. Department of Commerce—Bureau of Economic Analysis. Regional Multipliers: A User Handbook for the Regional Input-Output Modeling System (RIMS II). 1997. U.S. Government Printing Office: Washington, DC. Available at *apps.bea.gov/scb/pdf/regional/perinc/meth/rims2.pdf* (last accessed July 7, 2021).

[163] Livingston, O.V., S.R. Bender, M.J. Scott, and R.W. Schultz. ImSET 4.0: Impact of Sector Energy Technologies Model Description and User Guide. 2015. Pacific Northwest National Laboratory: Richland, WA. PNNL–24563.

boilers) in each TSL. Table V.2 presents the thermal efficiency value and standby loss reduction factor for each equipment category in each TSL that DOE considered, with the exception of residential-duty gas-fired storage water heaters (for which TSLs are shown separately in Table V.3). The standby loss reduction factor is a multiplier representing the reduction in allowed standby loss relative to the current standby loss standard and which corresponds to the associated increase in thermal efficiency. Table V.3 presents the UEF equations for residential-duty gas-fired storage water heaters corresponding to each TSL that DOE considered.

TABLE V.1—TRIAL STANDARD LEVELS FOR CWH EQUIPMENT BY EFFICIENCY LEVEL

Equipment	Trial standard level * **							
	1		2		3		4	
	E_t or UEF EL	SL EL	E_t or UEF EL	SL EL	E_t or UEF EL	SL EL	E_t or UEF EL	SL EL
Commercial gas-fired storage water heaters and storage-type instantaneous water heaters	1	0	2	0	4	0	5	0
Residential-duty gas-fired storage water heaters	2	.....	3	.....	4	.....	5	.....
Gas-fired instantaneous water heaters and hot water supply boilers:								
Tankless water heaters	2	.....	4	.....	5	.....	5	.....
Circulating water heaters and hot water supply boilers	2	.....	4	.....	5	.....	5	.....

* E_t stands for thermal efficiency, SL stands for standby loss, UEF stands for uniform energy factor, and EL stands for efficiency level. E_t applies to commercial gas-fired storage water heaters and storage-type instantaneous water heaters, and to gas-fired instantaneous water heaters and hot water supply boilers. SL applies to commercial gas-fired storage water heaters and storage-type instantaneous water heaters. UEF applies to residential-duty gas-fired storage water heaters.

** As discussed in sections III.B.6 and III.B.7 of this NOPR, DOE did not analyze amended standby loss standards for instantaneous water heaters and hot water supply boilers. In addition, standby loss standards are not applicable for residential-duty commercial gas-fired storage water heaters. Lastly, for commercial gas-fired storage water heaters and storage-type instantaneous water heaters DOE only analyzed the reduction that is inherent to increasing E_t and did not analyze SL ELs above EL0.

TABLE V.2—TRIAL STANDARD LEVELS FOR CWH EQUIPMENT BY THERMAL EFFICIENCY AND STANDBY LOSS REDUCTION FACTOR

[Except Residential-Duty Gas-Fired Storage Water Heaters]

Equipment	Trial standard level * **							
	1		2		3		4	
	E_t (percent)	SL factor †	E_t (percent)	SL factor †	E_t (percent)	SL factor †	E_t (percent)	SL factor †
Commercial gas-fired storage water heaters and storage-type instantaneous water heaters	82	0.98	90	0.91	95	0.86	99	0.83
Gas-fired instantaneous water heaters and hot water supply boilers:								
Tankless water heaters	84	.....	94	.....	96	.....	96	.....
Circulating water heaters and hot water supply boilers	84	.....	94	.....	96	.....	96	.....

* E_t stands for thermal efficiency, and SL stands for standby loss.

** As discussed in sections III.B.6 and III.B.7 of this NOPR, DOE did not analyze amended standby loss standards for instantaneous water heaters and hot water supply boilers.

† Standby loss reduction factor is a factor that is multiplied by the current maximum standby loss equations for each equipment class, as applicable. DOE used reduction factors to develop the amended maximum standby loss equation for each TSL. These reduction factors and maximum standby loss equations are discussed in section IV.C.5 of this NOPR.

TABLE—V.3 TRIAL STANDARD LEVELS BY UEF FOR RESIDENTIAL-DUTY GAS-FIRED STORAGE WATER HEATERS

Draw pattern *	Trial standard level **			
	1	2	3	4
	UEF	UEF	UEF	UEF
High	0.7497 − 0.0009*Vr	0.8397 − 0.0009*Vr	0.9297 − 0.0009*Vr	0.9997 − 0.0009*Vr
Medium	0.6902 − 0.0011*Vr	0.7802 − 0.0011*Vr	0.8702 − 0.0011*Vr	0.9402 − 0.0011*Vr
Low	0.6262 − 0.0012*Vr	0.7162 − 0.0012*Vr	0.8062 − 0.0012*Vr	0.8762 − 0.0012*Vr
Very Small	0.3574 − 0.0009*Vr	0.4474 − 0.0009*Vr	0.5374 − 0.0009*Vr	0.6074 − 0.0009*Vr

* Draw pattern is a classification of hot water use of a consumer water heater or residential-duty commercial water heater, based upon the first-hour rating. The draw pattern is determined using the Uniform Test Method for Measuring the Energy Consumption of Water Heaters in in appendix E to subpart B of 10 CFR part 430.

** Vr is rated volume in gallons.

DOE constructed the TSLs for this NOPR to include ELs representative of ELs with similar characteristics (*i.e.,* using similar technologies and/or efficiencies, and having roughly comparable equipment availability). The

use of representative ELs provided for greater distinction between the TSLs. While representative ELs were included in the TSLs, DOE considered all efficiency levels as part of its analysis.[164]

B. Economic Justification and Energy Savings

1. Economic Impacts on Individual Consumers

DOE analyzed the economic impacts on CWH equipment consumers by looking at the effects that potential amended standards at each TSL would have on the LCC and PBP. DOE also examined the impacts of potential standards on selected consumer subgroups. These analyses are discussed in the following sections.

a. Life-Cycle Cost and Payback Period

In general, higher-efficiency products can affect consumers in two ways: (1) Purchase price increases and (2) annual operating costs decrease. Inputs used for calculating the LCC and PBP include total installed costs (*i.e.,* product price plus installation costs) and operating costs (*i.e.,* annual energy use, energy prices, energy price trends, repair costs, and maintenance costs). The LCC calculation also uses product lifetime and a discount rate. Chapter 8 of the NOPR TSD provides detailed information on the LCC and PBP analyses.

Table V.4 through Table V.13 of this NOPR show the LCC and PBP results for the TSLs considered in this NOPR. In the first of each pair of tables, the simple payback is measured relative to the baseline product. In the second table, impacts are measured relative to the efficiency distribution in the no-new-standards case in the compliance year (see section IV.F.2.i of this document). Because some consumers purchase products with higher efficiency in the no-new-standards case, the average savings are less than the difference between the average LCC of the baseline product and the average LCC at each TSL. The savings refer only to consumers who are affected by a standard at a given TSL. As was noted in IV.H.1, DOE assumes a large percentage of consumers are already purchasing higher efficiency condensing equipment by 2027. Those who already purchase a product with efficiency at or above a given TSL are not affected. Consumers for whom the LCC increases at a given TSL experience a net cost.

TABLE V.4—AVERAGE LCC AND PBP RESULTS FOR COMMERCIAL GAS-FIRED STORAGE WATER HEATERS AND STORAGE-TYPE INSTANTANEOUS WATER HEATERS

TSL *	Thermal efficiency (E_t) (percent)	Standby loss (SL) factor	Average costs (2020$)				Simple payback period (years)
			Installed cost	First year's operating cost	Lifetime operating cost	LCC	
0	80	1.00	5,145	1,888	17,874	23,018	.....
1	82	0.98	5,186	1,850	17,558	22,744	1.1
2	90	0.91	6,240	1,728	16,587	22,828	7.0
3	95	0.86	6,306	1,653	16,031	22,338	5.2
4	99	0.83	6,387	1,599	15,584	21,971	4.5

* The results for each TSL are calculated assuming that all consumers use equipment with that efficiency level. The PBP is measured relative to the baseline equipment.
Note: TSL 0 represents the baseline.

TABLE V.5—AVERAGE LCC SAVINGS RELATIVE TO THE NO-NEW-STANDARDS CASE FOR COMMERCIAL GAS-FIRED STORAGE WATER HEATERS AND STORAGE-TYPE INSTANTANEOUS WATER HEATERS

TSL	Thermal efficiency (E_t) level (percent)	Standby loss (SL) factor	Life-cycle cost savings		
			Percentage of commercial consumers that experience a net cost	Percentage of commercial consumers that experience a net benefit	Average life-cycle cost savings * (2020$)
0	80	1.00	0	0	0
1	82	0.98	1	33	93
2	90	0.91	14	22	80
3	95	0.86	12	38	301
4	99	0.83	13	86	664

The calculation includes consumers with zero LCC savings (no impact).
Note: TSL 0 represents the baseline.

TABLE V.6—AVERAGE LCC AND PBP RESULTS FOR RESIDENTIAL-DUTY GAS-FIRED STORAGE WATER HEATERS

TSL *	UEF **	Average costs (2020$)				Simple payback period (years)
		Installed cost	First year's operating cost	Lifetime operating cost	LCC	
0	0.59	2,219	925	12,033	14,253	.....
1	0.68	2,435	855	11,346	13,781	3.1
2	0.77	3,246	806	10,947	14,193	9.4

[164] Efficiency levels that were analyzed for this NOPR are discussed in section IV.C.4 of this document. Results by efficiency level are presented in TSD chapters 8, 10, and 12.

TABLE V.6—AVERAGE LCC AND PBP RESULTS FOR RESIDENTIAL-DUTY GAS-FIRED STORAGE WATER HEATERS—Continued

TSL *	UEF **	Average costs (2020$)				Simple payback period (years)
		Installed cost	First year's operating cost	Lifetime operating cost	LCC	
3	0.86	3,596	754	10,438	14,034	8.6
4	0.93	3,634	725	10,155	13,788	7.5

* The results for each TSL are calculated assuming that all consumers use equipment with that efficiency level. The PBP is measured relative to the baseline equipment.
Note: TSL 0 represents the baseline.
** The UEF shown is for the representative capacity of 75 gallons.

TABLE V.7—AVERAGE LCC SAVINGS RELATIVE TO THE NO-NEW-STANDARDS CASE FOR RESIDENTIAL-DUTY GAS-FIRED STORAGE WATER HEATERS

TSL	UEF *	Life-cycle cost savings		
		Percentage of commercial consumers that experience a net cost	Percentage of commercial consumers that experience a net benefit	Average life-cycle cost savings ** (2020$)
0	0.59	0	0	0
1	0.68	2	28	129
2	0.77	17	20	(20)
3	0.86	26	44	90
4	0.93	18	77	324

* The UEF shown is for the representative capacity of 75 gallons.
** The calculation includes consumers with zero LCC savings (no impact). A value in parentheses is a negative number.
Note: TSL 0 represents the baseline.

TABLE V.8—AVERAGE LCC AND PBP RESULTS BY EFFICIENCY LEVEL FOR GAS-FIRED TANKLESS WATER HEATERS

TSL *	Thermal efficiency (E_t) (percent)	Average costs (2020$)				Simple payback period (years)
		Installed cost	First year's operating cost	Lifetime operating cost	LCC	
0	80	2,875	597	8,338	11,213	.....
1	84	2,911	572	8,052	10,964	1.6
2	94	3,490	519	7,517	11,007	9.4
3	96	3,541	510	7,401	10,942	8.9
4	96	3,541	510	7,401	10,942	8.9

* The results for each TSL are calculated assuming that all consumers use equipment with that efficiency level. The PBP is measured relative to the baseline equipment.
TSL 0 represents the baseline.

TABLE V.9— AVERAGE LCC SAVINGS RELATIVE TO THE NO-NEW-STANDARDS-CASE EFFICIENCY DISTRIBUTION FOR GAS-FIRED TANKLESS WATER HEATERS

TSL	Thermal efficiency (E_t) (percent)	Life-cycle cost savings		
		Percentage of commercial consumers that experience a net cost	Percentage of commercial consumers that experience a net benefit	Average life-cycle cost savings * (2020$)
0	80	0	0	0
1	84	0	17	42
2	94	9	8	40
3	96	12	25	63
4	96	12	25	63

* The calculation includes consumers with zero LCC savings (no impact).
Note: TSL 0 represents the baseline.

TABLE V.10—AVERAGE LCC AND PBP RESULTS BY EFFICIENCY LEVEL FOR GAS-FIRED CIRCULATING WATER HEATERS AND HOT WATER SUPPLY BOILERS

TSL *	Thermal efficiency (E_t) (percent)	Average costs (2020$)				Simple payback period (years)
		Installed cost	First year's operating cost	Lifetime operating cost	LCC	
0	80	7,714	4,449	80,795	88,509	.....
1	84	7,910	4,306	78,534	86,444	1.4
2	94	11,993	3,930	72,782	84,775	9.3
3	96	12,325	3,864	71,741	84,066	8.8
4	96	12,325	3,864	71,741	84,066	8.8

* The results for each TSL are calculated assuming that all consumers use equipment with that efficiency level. The PBP is measured relative to the baseline equipment.
Note: TSL 0 represents the baseline.

TABLE V.11—AVERAGE LCC SAVINGS RELATIVE TO THE NO-NEW-STANDARDS-CASE EFFICIENCY DISTRIBUTION FOR GAS-FIRED CIRCULATING WATER HEATERS AND HOT WATER SUPPLY BOILERS

TSL	Thermal efficiency (E_t) (percent)	Life-cycle cost savings		
		Percentage of commercial consumers that experience a net cost	Percentage of commercial consumers that experience a net benefit	Average life-cycle cost savings * (2020$)
0	80	0	0	0
1	84	2	15	172
2	94	11	22	702
3	96	13	36	1,047
4	96	13	36	1,047

* The calculation includes consumers with zero LCC savings (no impact).
Note: TSL 0 represents the baseline.

TABLE V.12—AVERAGE LCC AND PBP RESULTS BY EFFICIENCY LEVEL FOR GAS-FIRED INSTANTANEOUS WATER HEATERS AND HOT WATER SUPPLY BOILERS *

TSL *	Thermal efficiency (E_t) (percent)	Average costs (*2020$*)				Simple payback period (years)
		Installed cost	First year's operating cost	Lifetime operating cost	LCC	
0	80	5,512	2,696	47,826	53,338	.....
1	84	5,635	2,607	46,463	52,099	1.4
2	94	8,124	2,378	43,085	51,208	9.3
3	96	8,328	2,338	42,465	50,793	8.8
4	96	8,328	2,338	42,465	50,793	8.8

* This table shows results for the gas-fired instantaneous water heaters and hot water supply boilers equipment class (*i.e.,* both tankless water heaters and hot water supply boilers), and reflects a weighted average result of Tables V.8 and V.10 of this NOPR.
** The results for each TSL are calculated assuming that all consumers use equipment with that efficiency level. The PBP is measured relative to the baseline equipment.
Note: TSL 0 represents the baseline.

TABLE V.13—AVERAGE LCC SAVINGS RELATIVE TO THE NO-NEW-STANDARDS-CASE EFFICIENCY DISTRIBUTION FOR GAS-FIRED INSTANTANEOUS WATER HEATERS AND HOT WATER SUPPLY BOILERS*

TSL	Thermal efficiency (E_t) (percent)	Life-cycle cost savings		
		Percentage of commercial consumers that experience a net cost	Percentage of commercial consumers that experience a net benefit	Average life-cycle cost savings ** (2020$)
0	80	0	0	0
1	84	1	16	113
2	94	10	16	400
3	96	12	31	599
4	96	12	31	599

* This table shows results for the gas-fired instantaneous water heaters and hot water supply boilers equipment class (*i.e.,* both tankless water heaters and hot water supply boilers), and reflects a weighted average result of Tables V.9 and V.11 of this NOPR.
** The calculation includes consumers with zero LCC savings (no impact).
Note: TSL 0 represents the baseline.

b. Consumer Subgroup Analysis

In the consumer subgroup analysis, DOE estimated the impact of the considered TSLs on a low-income residential population (0–20 percentile gross annual household income) subgroup. Table V.14 through Table V.23 of this NOPR compare the average LCC savings and PBP at each efficiency level for the consumer subgroup, along with the average LCC savings for the entire consumer sample. In most cases, the average LCC savings and PBP for low-income residential consumers at the considered efficiency levels are either similar to or more favorable than the average for all consumers, due in part to greater levels of equipment usage in RECS apartment building sample identified as low-income observations when compared to the average consumer of CWH equipment. The exception is tankless water heaters in which low-income consumers' LCC savings are lower than the average of all consumers. Chapter 11 of the NOPR TSD presents the complete LCC and PBP results for the subgroup analysis.

TABLE V.14—COMPARISON OF IMPACTS FOR CONSUMER SUBGROUP WITH ALL CONSUMERS, COMMERCIAL GAS-FIRED STORAGE WATER HEATERS AND STORAGE-TYPE INSTANTANEOUS WATER HEATERS

TSL	Thermal efficiency (E_t) (percent)	Standby loss (SL) factor (percent)	LCC savings (2020$)		Simple payback period (years)	
			Residential low-income	All	Residential low-income	All
1	82	98	124	93	0.9	1.1
2	90	91	210	80	5.6	7.0
3	95	86	509	301	4.1	5.2
4	99	83	1,008	664	3.5	4.4

TABLE V.15—COMPARISON OF IMPACTED CONSUMERS FOR CONSUMER SUBGROUP AND ALL CONSUMERS, COMMERCIAL GAS-FIRED STORAGE WATER HEATERS AND STORAGE-TYPE INSTANTANEOUS WATER HEATERS

TSL	Thermal efficiency (E_t) (percent)	Standby loss (SL) factor (percent)	Percent of consumers that experience a net cost		Percent of consumers that experience a net benefit	
			Residential low-income	All	Residential low-income	All
1	82	98	0	1	34	33
2	90	91	11	14	26	22
3	95	86	7	12	42	38
4	99	83	6	13	93	86

TABLE V.16—COMPARISON OF IMPACTS FOR CONSUMER SUBGROUP WITH ALL CONSUMERS, RESIDENTIAL-DUTY GAS-FIRED STORAGE WATER HEATERS

TSL	UEF	LCC savings (2020$)		Simple payback period (years)	
		Residential low-income	All	Residential low-income	All
1	0.68	131	129	3.1	3.1
2	0.77	15	(20)	8.5	9.4
3	0.86	138	90	7.9	8.6
4	0.93	383	324	6.9	7.5

* Parentheses indicate negative values.

TABLE V.17—COMPARISON OF IMPACTED CONSUMERS FOR CONSUMER SUBGROUP AND ALL CONSUMERS, RESIDENTIAL-DUTY GAS-FIRED STORAGE WATER HEATERS

TSL	UEF	Percent of consumers that experience a net cost		Percent of consumers that experience a net benefit	
		Residential low-income	All	Residential low-income	All
1	0.68	1	2	29	28
2	0.77	15	17	22	20
3	0.86	22	26	47	44
4	0.93	14	18	81	77

TABLE V.18—COMPARISON OF IMPACTS FOR CONSUMER SUBGROUP WITH ALL CONSUMERS, GAS-FIRED TANKLESS WATER HEATERS

TSL	Thermal efficiency (E_t) (percent)	LCC savings (2020$)		Simple payback period (years)	
		Residential low-income	All	Residential low-income	All
1	84	25	42	2.8	1.6
2	94	11	40	13.2	9.4
3	96	21	63	12.7	8.9
4	96	21	63	12.7	8.9

TABLE V.19—COMPARISON OF IMPACTED CONSUMERS FOR CONSUMER SUBGROUP AND ALL CONSUMERS, GAS-FIRED TANKLESS WATER HEATERS

TSL	Thermal efficiency (E_t) (percent)	Percent of consumers that experience a net cost		Percent of consumers that experience a net benefit	
		Residential low-income	All	Residential low-income	All
1	84	0	0	17	17
2	94	11	9	6	8
3	96	16	12	22	25
4	96	16	12	22	25

TABLE V.20—COMPARISON OF IMPACTS FOR CONSUMER SUBGROUP WITH ALL CONSUMERS, GAS-FIRED CIRCULATING WATER HEATERS AND HOT WATER SUPPLY BOILERS

TSL	Thermal efficiency (E_t) (percent)	LCC savings (2020$)		Simple payback period (years)	
		Residential low-income	All	Residential low-income	All
1	84	265	172	1.1	1.4
2	94	2,029	702	6.7	9.3
3	96	2,754	1,047	6.3	8.8
4	96	2,754	1,047	6.3	8.8

TABLE V.21—COMPARISON OF IMPACTED CONSUMERS FOR CONSUMER SUBGROUP AND ALL CONSUMERS, GAS-FIRED CIRCULATING WATER HEATERS AND HOT WATER SUPPLY BOILERS

TSL	Thermal efficiency (E_t) (percent)	Percent of consumers that experience a net cost		Percent of consumers that experience a net benefit	
		Residential low-income	All	Residential low-income	All
1	84	1	2	15	15
2	94	6	11	28	22
3	96	6	13	43	36
4	96	6	13	43	36

TABLE V.22—COMPARISON OF IMPACTS FOR CONSUMER SUBGROUP WITH ALL CONSUMERS, GAS-FIRED INSTANTANEOUS WATER HEATERS AND HOT WATER SUPPLY BOILERS *

TSL	Thermal efficiency (E_t) (percent)	LCC savings (2020$)		Simple payback period (years)	
		Residential low-income	All	Residential low-income	All
1	84	156	113	1.2	1.4
2	94	1,111	400	7.0	9.3
3	96	1,511	599	6.5	8.8
4	96	1,511	599	6.5	8.8

* This table shows results for the gas-fired instantaneous water heaters and hot water supply boilers equipment class (*i.e.,* both tankless water heaters and hot water supply boilers), and reflects a weighted average result of Tables V.18 and V.20 of this NOPR.

TABLE V.23—COMPARISON OF IMPACTED CONSUMERS FOR CONSUMER SUBGROUP AND ALL CONSUMERS, GAS-FIRED INSTANTANEOUS WATER HEATERS AND HOT WATER SUPPLY BOILERS *

TSL	Thermal efficiency (E_t) (percent)	Percent of consumers that experience a net cost		Percent of consumers that experience a net benefit	
		Residential low-income	All	Residential low-income	All
1	84	1	1	16	16
2	94	8	10	18	16
3	96	10	12	33	31
4	96	10	12	33	31

* This table shows results for the gas-fired instantaneous water heaters and hot water supply boilers equipment class (*i.e.,* both tankless water heaters and hot water supply boilers), and reflects a weighted average result of Tables V.19 and V.21 of this NOPR.

c. Rebuttable Presumption Payback

As discussed in section I.A.2 of this document, EPCA establishes a rebuttable presumption that an energy conservation standard is economically justified if the increased purchase cost for a product that meets the standard is less than three times the value of the first-year energy savings resulting from the standard. In calculating a rebuttable presumption PBP for each of the considered TSLs, DOE used discrete values, and, as required by EPCA, based the energy use calculation on the DOE test procedure for CWH equipment. In contrast, the PBPs presented in section V.B.1.a were calculated using distributions that reflect the range of energy use in the field. Table V.24 presents rebuttable presumption payback period results. TSL 1 is the only level at which the rebuttable presumption payback periods are less than or equal to three. See chapter 8 of the NOPR TSD for more information on the rebuttable presumption payback analysis.

TABLE V.24—REBUTTABLE PRESUMPTION PAYBACK PERIODS

Equipment	Trial standard level (years)			
	1	2	3	4
Commercial Gas-Fired Storage and Storage-Type Instantaneous Water Heaters	1.1	6.8	4.9	4.3
Residential Duty Gas-Fired Storage	3.1	8.6	8.1	7.1
Gas-Fired Instantaneous Water Heaters and Hot Water Supply Boilers	1.4	8.2	7.9	7.9
Instantaneous, Gas-Fired Tankless	1.5	7.9	7.7	7.7
Instantaneous Water Heaters and Hot Water Supply Boilers	1.4	8.2	7.9	7.9

2. Economic Impacts on Manufacturers

DOE performed an MIA to estimate the impact of amended energy conservation standards on manufacturers of CWH equipment. The following section describes the expected impacts on manufacturers at each considered TSL. Chapter 12 of the NOPR TSD explains the analysis in further detail.

a. Industry Cash Flow Analysis Results

In this section, DOE provides GRIM results from the analysis, which examines changes in the industry that would result from a standard. Table V.25 through Table V.28 of this NOPR summarize the estimated financial impacts of potential amended energy conservation standards on manufacturers of CWH equipment, as well as the conversion costs that DOE estimates manufacturers of CWH equipment would incur at each TSL.

The impact of potential amended energy conservation standards was analyzed under two markup scenarios: (1) The preservation of gross margin percentage markup scenario and (2) the preservation of per-unit operating profit markup scenario, as discussed in section IV.J.2.d of this document. The preservation of gross margin percentage scenario provides the upper bound while the preservation of operating profits scenario results in the lower (or more severe) bound to impacts of potential amended standards on industry.

Each of the modeled scenarios results in a unique set of cash flows and corresponding INPV for each TSL. INPV is the sum of the discounted cash flows to the industry from the base year through the end of the analysis period (2020–2055). The ''change in INPV'' results refer to the difference in industry value between the no-new-standards case and standards case at each TSL. To provide perspective on the short-run cash flow impact, DOE includes a comparison of free cash flow between the no-new-standards case and the standards case at each TSL in the year before amended standards would take effect. This figure provides an understanding of the magnitude of the required conversion costs relative to the cash flow generated by the industry in the no-new-standards case.

Conversion costs are one-time investments for manufacturers to bring their manufacturing facilities and product designs into compliance with potential amended standards. As described in section IV.J.2.c of this document, conversion cost investments occur between the year of publication of the final rule and the year by which manufacturers must comply with the new standard. The conversion costs can have a significant impact on the short-term cash flow on the industry and generally result in lower free cash flow in the period between the publication of the final rule and the compliance date of potential amended standards. Conversion costs are independent of the manufacturer markup scenarios and are not presented as a range in this analysis.

The results in Table V.25 through Table V.28 of this NOPR show potential INPV impacts for CWH equipment manufacturers by equipment class. The

tables present the range of potential impacts reflecting both the less severe set of potential impacts (preservation of gross margin) and the more severe set of potential impacts (preservation of per-unit operating profit). In the following discussion, the INPV results refer to the difference in industry value between the no-new-standards case and each standards case that results from the sum of discounted cash flows from 2020 (the base year) through 2055 (the end of the analysis period).

To provide perspective on the near-term cash flow impact, DOE discusses the change in free cash flow between the no-new-standards case and the standards case at each TSL in the year before new standards take effect. These figures provide an understanding of the magnitude of the required conversion costs at each TSL relative to the cash flow generated by the industry in the no-new-standards case.

1. Industry Cash Flow for Commercial Gas-Fired Storage Water Heaters and Storage-Type Instantaneous Equipment

TABLE V.25—MANUFACTURING IMPACT ANALYSIS RESULTS FOR COMMERCIAL GAS-FIRED STORAGE WATER HEATERS AND STORAGE-TYPE INSTANTANEOUS WATER HEATERS

	Units	No-new-standards case	Trial standard level			
			1	2	3	4
INPV	2020$ millions	134.6	133.5–133.9	127.8–130.4	121.1–125.1	70.1–76.6
Change in INPV	2020$ millions		(1.1)–(0.7)	(6.8)–(4.2)	(13.5)–(9.5)	(64.5)–(58.0)
	%		(0.8)–(0.5)	(5.1)–(3.1)	(10.0)–(7.0)	(47.9)–(43.1)
Free Cash Flow (2025)	2020$ millions	10.9	10.2	6.6	2.6	31.8
Change in Free Cash Flow	2020$ millions		(0.7)	(4.3)	(8.3)	(42.7)
	%		(6.2)	(39.3)	(75.8)	(391.4)
Product Conversion Costs	*2020$ millions*		1.9	5.3	11.6	82.1
Capital Conversion Costs	*2020$ millions*		0.0	5.4	9.2	19.5
Total Conversion Costs	*2020$ millions*		1.9	10.6	20.8	101.5

At TSL 1, DOE estimates impacts on INPV for commercial gas-fired storage and storage-type instantaneous water heater equipment manufacturers to range from −0.8 percent to −0.5 percent, or a change of −$1.1 million to −$0.7 million. At this level, DOE estimates that industry free cash flow would decrease by approximately 6.2 percent to $10.2 million, compared to the no-new-standards-case value of $10.9 million in the year before compliance (2025).

DOE estimates 70 percent of commercial gas-fired storage water heater and storage-type instantaneous water heater basic models meet or exceed the thermal efficiency and standby loss standards at TSL 1. DOE does not expect the modest increases in thermal efficiency and standby loss requirements at this TSL to require major equipment redesigns or large capital investments. Overall, DOE estimates that manufacturers would incur $1.9 million in product conversion costs and $0.03 million in capital conversion costs to bring their equipment portfolios into compliance with a standard set to TSL 1. At TSL 1, conversion costs are a key driver of results. These upfront investments result in a lower INPV in both manufacturer markup scenarios.

At TSL 2, DOE estimates impacts on INPV for manufacturers of this equipment class to range from −5.1 percent to −3.1 percent, or a change in INPV of −$6.8 million to −$4.2 million. At this potential standard level, industry free cash flow would decrease by approximately 39.3 percent to $6.6 million, compared to the no-new-standards case value of $10.9 million in the year before compliance (2025).

DOE estimates 41 percent of commercial gas-fired storage water heater and storage-type instantaneous water heater basic models meet or exceed the thermal efficiency and standby loss standards at TSL 2. Product and capital conversion costs would increase at this TSL as manufacturers update designs and production equipment to meet a thermal efficiency standard that necessitates condensing technology. DOE notes that capital investment would vary by manufacturers due to differences in condensing heat exchanger designs and differences in existing production capacity. These capital conversion costs include, but are not limited to, investments in tube bending, press dies, machining, enameling, MIG welding, leak testing, quality assurance stations, and conveyer.

DOE estimates that manufacturers would incur $5.3 million in product conversion costs and $5.4 million in capital conversion costs to bring their offered commercial gas-fired storage water heaters and storage-type instantaneous water heaters into compliance with a standard set to TSL 2. At TSL 2, conversion costs are a key driver of results. These upfront investments result in a lower INPV in both manufacturer markup scenarios.

At TSL 3, DOE estimates impacts on INPV for commercial gas-fired storage water heater and storage-type instantaneous water heater manufacturers to range from −10.0 percent to −7.0 percent, or a change in INPV of −$13.5 million to −$9.5 million. At this potential standard level, DOE estimates industry free cash flow would decrease by approximately 75.8 percent to $2.6 million, compared to the no-new-standards-case value of $10.9 million in the year before compliance (2025).

DOE estimates that 34 percent of currently offered commercial gas-fired storage water heater and storage-type instantaneous water heater basic models meet or exceed the thermal efficiency and standby loss standards at TSL 3. At this level, DOE estimates that product conversion costs would increase, as manufacturers would have to redesign a larger percentage of their offerings to meet the higher thermal efficiency levels. Additionally, capital conversion costs would increase, as manufacturers upgrade their laboratories and test facilities to increase capacity for product development and safety testing for their commercial gas-fired storage water heater and storage-type instantaneous water heater offerings. Overall, DOE estimates that manufacturers would incur $11.6 million in product conversion costs and $9.2 million in capital conversion costs

to bring their commercial gas-fired storage water heater and storage-type instantaneous water heater portfolio into compliance with a standard set to TSL 3. At TSL 3, conversion costs are a key driver of results. These upfront investments result in a lower INPV in both manufacturer markup scenarios.

TSL 4 represents the max-tech thermal efficiency and standby loss levels. At TSL 4, DOE estimates impacts on INPV for commercial gas-fired storage water heater and storage-type instantaneous water heater manufacturers to range from −47.9 percent to −43.1 percent, or a change in INPV of −$64.5 million to −$58.0 million. At this TSL, DOE estimates industry free cash flow in the year before compliance (2025) would decrease by approximately 391 percent to −$31.8 million compared to the no-new-standards case value of $10.9 million.

The impacts on INPV at TSL 4 are significant. DOE estimates less than 1 percent of currently offered basic models meet or exceed the efficiency levels prescribed at TSL 4. DOE expects product conversion costs to be significant at TSL 4, as almost all equipment on the market would have to be redesigned. Furthermore, the redesign process would be more resources intensive and costly at TSL 4 than at other TSLs. Traditionally, manufacturers design their equipment platforms to support a range of models with varying input capacities and storage volumes, and the efficiency typically will vary slightly between models within a given platform. However, at TSL 4, manufacturers would be limited in their ability to maintain a platform approach to designing commercial gas-fired storage and storage-type instantaneous water heaters, because the 99 percent thermal efficiency level represents the maximum achievable efficiency and there would be no allowance for slight variations in efficiency between individual models. At TSL 4, manufacturers would be required to separately redesign each individual model to optimize performance for each specific input capacity and storage volume combination. In manufacturer interviews, some manufacturers raised concerns that they would not have sufficient engineering capacity to complete necessary redesigns within the 3-year conversion period. If manufacturers require more than 3 years to redesign all models, they would likely prioritize redesigns based on sales volume. Due to the increase in number of redesigns and engineering effort, DOE estimates that product conversion costs would increase to $82.1 million.

DOE estimates that manufacturers would also incur $19.5 million in capital conversion costs. In addition to upgrading production lines, DOE expects manufacturers would need to add laboratory space to develop and test products to meet amended standards at TSL 4 standards. These large upfront investments result in a lower INPV in both manufacturer markup scenarios.

At TSL 4, the large conversion costs result in a free cash flow dropping below zero in the years before the standard year. The negative free cash flow calculation indicates manufacturers may need to access cash reserves or outside capital to finance conversion efforts.

2. Industry Cash Flow for Residential-Duty Gas-Fired Storage Water Heaters

TABLE V.26—MANUFACTURING IMPACT ANALYSIS RESULTS FOR RESIDENTIAL DUTY GAS-FIRED STORAGE WATER HEATERS

	Units	No-new-standards case	Trial standard level			
			1	2	3	4
INPV	*2020$ millions*	10.1	9.8–10.1	9.2–9.9	8.4–10.6	5.7–8.1
Change in INPV	*2020$ millions*		(0.3)–0.0	(0.9)–(0.2)	(1.7)–0.5	(4.5)–(2.0)
	%		(3.0)–0.0	(8.7)–(2.4)	(16.5)–5.4	(44.0)–(19.7)
Free Cash Flow (2025)	*2020$ millions*	0.8	0.6	0.3	(0.02)	(1.9)
Change in Free Cash Flow	*2020$ millions*		(0.2)	(0.5)	(0.8)	(2.7)
	%		(21.4)	(59.7)	(102.7)	(335.2)
Product Conversion Costs	*2020$ millions*		0.5	0.7	1.2	4.6
Capital Conversion Costs	*2020$ millions*		0.0	0.5	0.9	1.9
Total Conversion Costs	*2020$ millions*		0.5	1.2	2.1	6.5

At TSL 1, DOE estimates impacts on INPV for residential-duty gas-fired storage equipment manufacturers to range from −3.0 percent to less than one percent, or a change of −$0.3 million to less than 0.1 million. At this level, DOE estimates that industry free cash flow would decrease by approximately 21.4 percent to $0.6 million, compared to the no-new-standards-case value of $0.8 million in the year before compliance (2025).

DOE estimates that 53 percent of currently offered residential-duty gas-fired storage water heater basic models already meet or exceed the UEF standards at TSL 1. DOE does not expect the modest increases in UEF requirements at this TSL to require major equipment redesigns or large capital investments. Overall, DOE estimates that manufacturers would incur $0.5 million in product conversion costs and $0.03 million in capital conversion costs to bring their residential-duty commercial gas-fired storage equipment portfolios into compliance with a standard set to TSL 1. At TSL 1, conversion costs are the primary driver of results. These upfront investments result in a lower INPV in both manufacturer markup scenarios.

At TSL 2, DOE estimates impacts on INPV for manufacturers of this equipment class to range from −8.7 percent to −2.4 percent, or a change in INPV of −$0.9 million to −$0.2 million. At this potential standard level, industry free cash flow would decrease by approximately 59.7 percent to $0.3 million, compared to the no-new-standards case value of $0.8 million in the year before compliance (2025).

DOE estimates that 38 percent of currently offered residential-duty gas-fired storage water heater basic models would already meet or exceed the UEF standards at TSL 2. DOE estimates that product and capital conversion costs would increase at this TSL. Manufacturers would meet the UEF levels for residential-duty commercial gas-fired storage equipment by shifting to condensing technology. DOE notes

that the capital investment would vary by manufacturers due to differences in condensing heat exchanger designs and differences in existing production capacity.

DOE estimates that manufacturers would incur $0.7 million in product conversion costs and $0.5 million in capital conversion costs to bring their residential-duty gas-fired storage water heaters into compliance with a standard set to TSL 2. At TSL 2, conversion costs continue to be the primary driver of results. These upfront investments result in a lower INPV in both manufacturer markup scenarios.

At TSL 3, DOE estimates impacts on INPV for residential-duty gas-fired manufacturers to range from −16.5 percent to 5.4 percent, or a change in INPV of −$1.7 million to $0.5 million. At this potential standard level, DOE estimates industry free cash flow would decrease by approximately 102.7 percent to −$0.02 million compared to the no-new-standards-case value of $0.8 million in the year before compliance (2025).

The impacts on INPV at TSL 3 are slightly more negative at the lower bound than at TSL 2. Unlike TSL 2, at the upper bound, INPV impacts are positive. DOE estimates that 22 percent of currently offered residential-duty commercial gas-fired storage water heater basic models would meet or exceed the UEF standards at TSL 3. At this level, DOE estimates that product conversion costs would increase, as manufacturers would have to redesign a larger percentage of their offerings to meet the higher UEF levels. Additionally, capital conversion costs would increase, as manufacturers increase production capacity for condensing equipment. Overall, DOE estimates that manufacturers would incur $1.2 million in product conversion costs and $0.9 million in capital conversion costs to bring their residential-duty commercial gas-fired storage water heater portfolio into compliance with a standard set to TSL 3. At TSL 3, conversion costs are a key driver of results.

TSL 4 represents the max-tech UEF levels. At TSL 4, DOE estimates impacts on INPV for residential-duty commercial gas-fired storage water heater manufacturers to range from −44.0 percent to −19.7 percent, or a change in INPV of −$4.5 million to −$2.0 million. At this TSL, DOE estimates industry free cash flow in the year before compliance (2025) would decrease by approximately 335.2 percent to −$1.9 million compared to the no-new-standards case value of $0.8 million.

The impacts on INPV at TSL 4 are significant. DOE estimates that less than 5 percent of currently offered residential-duty gas-fired water heater equipment meet or exceed the efficiency levels prescribed at TSL 4. DOE expects conversion costs to be significant at TSL 4, as most equipment currently on the market would have to be redesigned and new products would have to be developed to meet a wider range of storage volumes. DOE estimates that product conversion costs would increase to $4.6 million, as manufacturers would have to redesign a much larger percentage of their offerings to meet max-tech.

DOE estimates that manufacturers would also incur $1.9 million in capital conversion costs. In addition to upgrading production lines, DOE accounted for the costs to add laboratory space to develop and safety test products that meet max-tech efficiency levels. At TSL 4, conversion costs are high. These upfront investments result in a lower INPV in both manufacturer markup scenarios.

At TSL 4, the large conversion costs result in a free cash flow dropping below zero in the years before the standard year. The negative free cash flow calculation indicates manufacturers may need to access cash reserves or outside capital to finance conversion efforts.

3. Industry Cash Flow for Gas-Fired Instantaneous Tankless Water Heaters

TABLE V.27—MANUFACTURING IMPACT ANALYSIS RESULTS FOR GAS-FIRED INSTANTANEOUS TANKLESS WATER HEATERS

	Units	No-new-standards case	Trial standard level			
			1	2	3	4
INPV	*2020$ millions*	7.1	6.8–6.8	6.1–6.2	6.1–6.3	6.1–6.3
Change in INPV	*2020$ millions*		(0.3)–(0.3)	(1.0)–(0.9)	(1.1)–(0.8)	(1.1)–(0.8)
	%		(4.5)–(4.2)	(14.8)–(12.6)	(15.0)–(11.8)	(15.0)–(11.8)
Free Cash Flow (2025)	*2020$ millions*	0.5	0.3	(0.2)	(0.2)	(0.2)
Change in Free Cash Flow	*2020$ millions*		(0.2)	(0.7)	(0.7)	(0.7)
	%		(43.2)	(143.2)	(143.3)	(143.3)
Product Conversion Costs	*2020$ millions*		0.6	1.2	1.2	1.2
Capital Conversion Costs	*2020$ millions*		0.0	0.6	0.6	0.6
Total Conversion Costs	*2020$ millions*		0.6	1.8	1.8	1.8

At TSL 1, DOE estimates impacts on INPV for gas-fired instantaneous tankless water heaters manufacturers to range from −4.5 percent to −4.2 percent, or a change of approximately −$0.3 million. At this level, DOE estimates that industry free cash flow would decrease by approximately 43.2 percent to $0.3 million, compared to the no-new-standards-case value of $0.5 million in the year before compliance (2025).

DOE estimates that 84 percent of basic models of gas-fired instantaneous tankless water heaters already meet or exceed the thermal efficiency standards at TSL 1. At this level, DOE expects manufacturers of this equipment class to incur product conversion costs to redesign their equipment. DOE does not expect the modest increases in thermal efficiency requirements at this TSL to require capital investments. Overall, DOE estimates that manufacturers would incur $0.6 million in product conversion costs and no capital conversion costs to bring this equipment portfolio into compliance with a standard set to TSL 1. At TSL 1, product conversion costs are the key driver of results. These upfront investments result in a lower INPV in both manufacturer markup scenarios.

At TSL 2, DOE estimates impacts on INPV ranges from −14.8 percent to −12.6 percent, or a change in INPV of −$1.0 million to −$0.9 million. At this potential standard level, DOE estimates industry free cash flow to decrease by approximately 143.2 percent to −$0.21 million compared to the no-new-

standards-case value of $0.5 million in the year before compliance (2025).

DOE estimates that 84 percent of basic models of gas-fired instantaneous tankless water heaters already meet or exceed the thermal efficiency standards at TSL 2. DOE estimates that product and capital conversion costs would increase at this TSL. Manufacturers would meet the thermal efficiency levels by using condensing technology. DOE understands that tankless water heater manufacturers produce far more consumer products in significantly higher volumes than commercial offerings, and that these products are manufactured in the same facilities with shared production lines. DOE expects manufacturers would need to make incremental investments rather than setup new production lines. Overall, DOE estimates that manufacturers would incur $1.2 million in product conversion costs and $0.6 million in capital conversion costs to bring their instantaneous gas-fired tankless wat heater portfolio into compliance with a standard set to TSL 2.

As discussed in section IV.A of this document, TSL 3 and TSL 4 represent max-tech thermal efficiency levels for gas-fired instantaneous tankless water heaters. Therefore, DOE modeled identical impacts to manufacturers of this equipment for both TSL 3 and TSL 4. At these levels, DOE estimates impacts on INPV to range from −15.0 percent to −11.8 percent, or a change in INPV of −$1.1 million to −$0.8 million. At these levels, DOE estimates industry free cash flow in the year before compliance (2025) would decrease by approximately 143.3 percent to −$0.2 million compared to the no-new-standards case value of $0.5 million. DOE estimates that 53 percent of basic models of efficiency standards at TSL 3 and TSL 4.

DOE anticipates modest product conversion costs as manufacturers continue to increase their offerings at greater input capacities. Overall, DOE estimates that manufacturers would incur $1.2 million in product conversion costs and $0.6 million in capital conversion costs to bring their gas-fired instantaneous tankless portfolio into compliance with a standard set to TSL 3 and TSL 4.

4. Industry Cash Flow for Instantaneous Circulating Water Heaters and Hot Water Supply Boilers

TABLE V.28—MANUFACTURING IMPACT ANALYSIS RESULTS FOR CIRCULATING WATER HEATERS AND HOT WATER SUPPLY BOILERS

	Units	No-new-standards case	Trial standard level			
			1	2	3	4
INPV	*2020$ millions*	31.3	31.1–31.3	28.0–33.2	24.0–30.2	24.0–30.2
Change in INPV	*2020$ millions*		(0.2)–(0.0)	(3.3)–1.9	(7.3)–(1.1)	(7.3)–(1.1)
	%		(0.5)–(0.1)	(10.5)–5.9	(23.2)–(3.4)	(23.2)–(3.4)
Free Cash Flow (2025)	*2020$ millions*	2.1	2.0	0.6	(1.8)	(1.8)
Change in Free Cash Flow	*2020$ millions*		(0.1)	(1.5)	(3.9)	(3.9)
	%		(4.1)	(71.3)	(187.5)	(187.5)
Product Conversion Costs	*2020$ millions*		0.2	1.8	8.1	8.1
Capital Conversion Costs	*2020$ millions*		0.0	1.9	1.9	1.9
Total Conversion Costs	*2020$ millions*		0.2	3.6	10.0	10.0

At TSL 1, DOE estimates impacts on INPV for instantaneous circulating water heater and hot water supply boiler manufacturers to range from −0.5 percent to −0.1 percent, or a change of −$0.1 million to less than −0.1 million. At this level, DOE estimates that industry free cash flow would decrease by approximately 4.1 percent to $2.0 million, compared to the no-new-standards-case value of $2.1 million in the year before compliance (2025).

DOE estimates that 62 percent of basic models of this equipment class already meet or exceed the thermal efficiency standards at TSL 1. At this level, DOE expects manufacturers of this equipment class to incur product conversion costs to redesign their equipment. DOE does not expect the modest increases in thermal efficiency requirements at this TSL to require capital investments. Overall, DOE estimates that manufacturers would incur $0.2 million in product conversion costs and no capital conversion costs to bring this equipment portfolio into compliance with a standard set to TSL 1. At TSL 1, product conversion costs are the key driver of results. These upfront investments result in a slightly lower INPV in both manufacturer markup scenarios.

At TSL 2, DOE estimates impacts on INPV ranges from −10.5 percent to 5.9 percent, or a change in INPV of −$3.3 million to $1.9 million. At this potential standard level, DOE estimates industry free cash flow to decrease by approximately 71.3 percent to $0.6 million compared to the no-new-standards-case value of $2.1 million in the year before compliance (2025).

The impacts on INPV at TSL 2 remain similar to TSL 1. DOE estimates that 36 percent of basic models of this equipment class already meet or exceed the thermal efficiency standards at TSL 2. DOE estimates that product and capital conversion costs would increase at this TSL. Manufacturers would meet the thermal efficiency levels by using condensing technology. DOE anticipates that manufacturers will begin to incur some product conversion costs associated with design changes to reach condensing levels. Additionally, DOE anticipates manufacturers achieving condensing levels with additional purchased parts (*i.e.,* condensing heat exchanger, burner tube, blower, gas valve). DOE's capital conversion costs reflect the incremental warehouse space required to store these additional purchased parts.

Overall, DOE estimates that manufacturers would incur $1.8 million in product conversion costs and $1.9 million in capital conversion costs to bring their instantaneous circulating water heater and hot water supply boiler portfolio into compliance with a standard set to TSL 2.

As discussed in section IV.A of this document, TSL 3 and TSL 4 represent max-tech thermal efficiency levels for circulating water heater and hot water supply boiler equipment. Therefore, DOE modeled identical impacts to manufacturers of this equipment for both TSL 3 and TSL 4. At these levels, DOE estimates impacts on INPV to range from −23.2 percent to −3.4 percent, or

a change in INPV of −$7.3 million to −$1.1 million. DOE estimates industry free cash flow in the year before compliance (2025) would decrease by approximately 187.5 percent to −$1.8 million compared to the no-new-standards case value of $2.1 million. DOE estimates that 27 percent of basic models of this equipment class already meet or exceed the max-tech thermal efficiency standards at these TSLs.

b. Impacts on Direct Employment

To quantitatively assess the potential impacts of amended energy conservation standards on direct employment in the CWH equipment industry, DOE typically uses the GRIM to estimate the domestic labor expenditures and number of direct employees in the no-new-standards case and in each of the standards cases during the analysis period. This analysis includes both production and non-production employees employed by CWH equipment manufacturers. DOE used statistical data from the U.S. Census Bureau's 2018–2019 Annual Survey of Manufacturers [165] (ASM), the results of the engineering analysis, and interviews with manufacturers to determine the inputs necessary to calculate industry-wide labor expenditures and domestic employment levels. Labor expenditures related to manufacturing of the product are a function of the labor intensity of the product, the sales volume, and an assumption that wages remain fixed in real terms over time.

The total labor expenditures in the GRIM are converted to domestic production worker employment levels by dividing production labor expenditures by the average fully burden wage per production worker. DOE calculated the fully burdened wage by multiplying the industry production worker hourly blended wage (provided by the ASM) by the fully burdened wage ratio. The fully burdened wage ratio factors in paid leave, supplemental pay, insurance, retirement and savings, and legally required benefits. DOE determined the fully burdened ratio from the Bureau of Labor Statistic's employee compensation data.[166] The estimates of production workers in this section cover workers, including line-supervisors who are directly involved in fabricating and assembling a product within the manufacturing facility. Workers performing services that are closely associated with production operations, such as materials handling tasks using forklifts, are also included as production labor.

Non-production worker employment levels were determined by multiplying the industry ratio of production worker employment to non-production employment against the estimated production worker employment explained above. Estimates of non-production workers in this section cover above the line supervisors, sales, sales delivery, installation, office functions, legal, and technical employees.

The total direct employment impacts calculated in the GRIM are the sum of the changes in the number of domestic production and non-production workers resulting from the amended energy conservation standards for CWH equipment, as compared to the no-new-standards case. Typically, more efficient equipment is more complex and labor intensive to produce. Per-unit labor requirements and production time requirements trend higher with more stringent energy conservation standards.

DOE estimates that 93 percent of CWH equipment sold in the United States is currently manufactured domestically. In the absence of amended energy conservation standards, DOE estimates that there would be 217 domestic production workers in the CWH industry in 2026, the year of compliance.

DOE's analysis forecasts that the industry will employ 382 production and non-production workers in the CWH industry in 2026 in the absence of amended energy conservation standards. Table V.29 presents the range of potential impacts of amended energy conservation standards on U.S. production workers of CWH equipment.

TABLE V.29—CWH DIRECT EMPLOYMENT IN 2026 POTENTIAL CHANGES IN THE TOTAL NUMBER OF CWH EQUIPMENT PRODUCTION WORKERS IN DIRECT EMPLOYMENT IN 2026

	No-new-standards case	1	2	3	4
Number of Domestic Production Workers	217	218	214	219	223
Number of Domestic Non-Production Workers	165	166	163	167	170
Total Domestic Direct Employment **	382	384	377	386	393
Changes in Direct Employment		2	(5)	4	11

* Numbers in parentheses indicate negative numbers.

** This field presents impacts on domestic direct employment, which aggregates production and non-production workers. Based on ASM census data, DOE assumed the ratio of production to non-production employees stays consistent across all analyzed TSLs, which is 43 percent non-production workers.

In NOPR interviews conducted ahead of the 2016 NOPR notice, several manufacturers that produce high-efficiency CWH equipment stated that a standard that went to condensing levels could cause them to hire more employees to increase their production capacity. Others stated that a condensing standard would require additional engineers to redesign CWH equipment and production processes. Due different variations in manufacturing labor practices, actual direct employment could vary depending on manufacturers' preference for high capital or high labor practices in response to amended standards. DOE notes that the employment impacts discussed here are independent of the indirect employment impacts to the broader U.S. economy, which are documented in chapter 15 of the accompanying TSD.

c. Impacts on Manufacturing Capacity

At the time of manufacturer interviews (conducted ahead of the

[165] U.S. Census Bureau, 2018–2019 Annual Survey of Manufacturers: Statistics for Industry Groups and Industries (2019) (Available at *https://www.census.gov/data/tables/time-series/econ/asm/2018-2019-asm.html*).

[166] U.S. Bureau of Labor Statistics. Employer Costs for Employee Compensation. June 17, 2021. Available at: *www.bls.gov/news.release/pdf/ecec.pdf*.

withdrawn May 2016 CWH ECS NOPR), industry feedback indicated that the average CWH equipment manufacturer's current production was running at approximately 60-percent capacity. However, some manufacturers did express concerns about engineering and laboratory constraints if standards were set at condensing levels.

At TSL 4 (max-tech), this issue is exacerbated due to the proliferation of re-designs required. As discussed in further detail in section IV.J.2.c of this document, DOE anticipates manufacturers would incur significant product conversion costs for all gas-fired storage water heaters, gas-fired circulating water heaters, and hot water supply boilers. Because of the high conversion costs as this level, some manufacturers may not have the capacity to redesign the full range of equipment offerings in the 3-year conversion period. Instead, manufacturers would likely choose to offer a reduced selection of models to limit upfront investments.

Furthermore, none of the three largest manufacturers of commercial gas storage water heaters produces equipment that can meet the TE standard at TSL 4. Currently, only two models from a single manufacturer can meet the TE standard at TSL 4. This manufacturer is a small business and does not have the production capacity to meet the demand for the entire industry's shipments. Similarly, for residential-duty gas-fired storage water heaters, only one manufacturer offers models that can meet the UEF standard at TSL 4.

Issue 10: DOE seeks comment on whether manufacturers expect manufacturing capacity constraints would limit equipment availability to customers in the timeframe of the amended standard compliance date (2026).

d. Impacts on Subgroups of Manufacturers

Small manufacturers, niche equipment manufacturers, and manufacturers exhibiting a cost structure substantially different from the industry average could be affected disproportionately. Using average cost assumptions developed for an industry cash-flow estimate is inadequate to assess differential impacts among manufacturer subgroups.

For the CWH equipment industry, DOE identified and evaluated the impact of amended energy conservation standards on one subgroup—small manufacturers. The SBA defines a ''small business'' as having 1,000 employees or fewer for NAICS code 333318, ''Other Commercial and Service Industry Machinery Manufacturing.'' Based on this definition, DOE identified 3 small, domestic manufacturers of the covered equipment that would be subject to amended standards.

For a discussion of the impacts on the small manufacturer subgroup, see the regulatory flexibility analysis in section VI.B of this document and chapter 12 of the NOPR TSD.

e. Cumulative Regulatory Burden

One aspect of assessing manufacturer burden involves looking at the cumulative impact of multiple DOE standards and the product-specific regulatory actions of other Federal agencies that affect the manufacturers of a covered product or equipment. While any one regulation may not impose a significant burden on manufacturers, the combined effects of several existing or impending regulations may have serious consequences for some manufacturers, groups of manufacturers, or an entire industry. Assessing the impact of a single regulation may overlook this cumulative regulatory burden. In addition to energy conservation standards, other regulations can significantly affect manufacturers' financial operations. Multiple regulations affecting the same manufacturer can strain profits and lead companies to abandon product lines or markets with lower expected future returns than competing products. For these reasons, DOE conducts an analysis of cumulative regulatory burden as part of its rulemakings pertaining to appliance efficiency.

TABLE V.30—COMPLIANCE DATES AND EXPECTED CONVERSION EXPENSES OF FEDERAL ENERGY CONSERVATION STANDARDS AFFECTING COMMERCIAL WATER HEATER MANUFACTURERS

Federal energy conservation standard	Number of manufacturers *	Number of manufacturers potentially impacted by finalized rule **	Approx. standards year	Industry conversion costs millions ($)	Industry conversion costs/product revenue ***
Commercial Warm Air Furnaces; 81 FR 2420 (January 15, 2016)	14	2	2023	7.5–22.2 (2014$)	1.7%–5.1% †
Residential Central Air Conditioners and Heat Pumps; 82 FR 1786 (January 6, 2017)	30	3	2023	342.6 (2015$)	0.5%

* This column presents the total number of manufacturers identified in the energy conservation standard rule contributing to cumulative regulatory burden.

** This column presents the number of manufacturers producing CWH equipment that are also listed as manufacturers in the listed energy conservation standard contributing to cumulative regulatory burden.

*** This column presents industry conversion costs as a percentage of product revenue during the conversion period. Industry conversion costs are the upfront investments manufacturers must make to sell compliant products/equipment. The revenue used for this calculation is the revenue from just the covered product/equipment associated with each row. The conversion period is the time frame over which conversion costs are made and lasts from the announcement year of the final rule to the standards year of the final rule. The conversion period typically ranges from 3 to 5 years, depending on the energy conservation standard.

† Low and high conversion cost scenarios were analyzed as part of this Direct Final Rule. The range of estimated conversion expenses presented here reflects those two scenarios.

Issue 11: DOE requests information regarding the impact of cumulative regulatory burden on manufacturers of CWH equipment associated with multiple DOE standards or product-specific regulatory actions of other Federal agencies. Additionally, where industry-wide constraints exist as a result of other overlapping regulatory actions, DOE requests stakeholders help identify and quantify those constraints.

3. National Impact Analysis

This section presents DOE's estimates of the NES and the NPV of consumer benefits that would result from each of the TSLs considered as potential amended standards.

a. Significance of Energy Savings

To estimate the energy savings attributable to potential amended standards for CWH equipment, DOE compared their energy consumption

under the no-new-standards case to their anticipated energy consumption under each TSL. The savings are measured over the entire lifetime of equipment purchased in the 30-year period that begins in the year of anticipated compliance with amended standards (2026–2055). Table V.31 presents DOE's projections of the NES for each TSL considered for CWH equipment. The savings were calculated using the approach described in section IV.H of this document.

TABLE V.31—CUMULATIVE NATIONAL ENERGY SAVINGS FOR CWH EQUIPMENT; 30 YEARS OF SHIPMENTS

[2026–2055]

	Trial standard level (quads)			
	1	2	3	4
Primary Energy:				
Commercial gas-fired storage and storage-type instantaneous	0.04	0.19	0.30	0.51
Residential duty gas-fired storage	0.01	0.03	0.06	0.09
Instantaneous gas-fired tankless	0.00	0.01	0.02	0.02
Instantaneous circulating water heaters and hot water supply boilers	0.02	0.21	0.26	0.26
Total Primary Energy	0.08	0.44	0.64	0.87
FFC Energy:				
Commercial gas-fired storage and storage-type instantaneous	0.04	0.21	0.33	0.56
Residential duty gas-fired storage	0.02	0.03	0.07	0.10
Instantaneous gas-fired tankless	0.00	0.01	0.02	0.02
Instantaneous circulating water heaters and hot water supply boilers	0.03	0.23	0.29	0.29
Total FFC Energy	0.09	0.48	0.70	0.96

OMB Circular A–4 [167] requires agencies to present analytical results, including separate schedules of the monetized benefits and costs that show the type and timing of benefits and costs. Circular A–4 also directs agencies to consider the variability of key elements underlying the estimates of benefits and costs. For this NOPR, DOE undertook a sensitivity analysis using 9 years, rather than 30 years, of equipment shipments. The choice of a 9-year period is a proxy for the timeline in EPCA for the review of certain energy conservation standards and potential revision of and compliance with such revised standards.[168] The review timeframe established in EPCA is generally not synchronized with the equipment lifetime, equipment manufacturing cycles, or other factors specific to commercial water heaters. Thus, such results are presented for informational purposes only and are not indicative of any change in DOE's analytical methodology. The NES sensitivity analysis results based on a 9-year analytical period are presented in Table V.32 of this NOPR. The impacts are counted over the lifetime of commercial water heaters purchased in 2026–2034.

TABLE V.32—CUMULATIVE NATIONAL ENERGY SAVINGS FOR CWH EQUIPMENT; 9 YEARS OF SHIPMENTS

[2026–2034]

	Trial standard level (*quads*)			
	1	2	3	4
Primary Energy:				
Commercial gas-fired storage and storage-type instantaneous	0.01	0.06	0.10	0.16
Residential-duty gas-fired storage	0.00	0.01	0.02	0.03
Instantaneous gas-fired tankless	0.00	0.00	0.00	0.00
Instantaneous circulating water heaters and hot water supply boilers	0.01	0.05	0.06	0.06
Total Primary Energy	0.03	0.13	0.18	0.25
FFC Energy:				
Commercial gas-fired storage and storage-type instantaneous	0.01	0.07	0.11	0.17
Residential-duty gas-fired storage	0.01	0.01	0.02	0.03
Instantaneous gas-fired tankless	0.00	0.00	0.00	0.00
Instantaneous circulating water heaters and hot water supply boilers	0.01	0.06	0.07	0.07

[167] U.S. Office of Management and Budget. Circular A–4: Regulatory Analysis. September 17, 2003. Available at *www.whitehouse.gov/sites/whitehouse.gov/files/omb/circulars/A4/a-4.pdf* (last accessed July 7, 2021).

[168] Section 325(m) of EPCA requires DOE to review its standards at least once every 6 years, and requires, for certain products, a 3-year period after any new standard is promulgated before compliance is required, except that in no case may any new standards be required within 6 years of the compliance date of the previous standards. While adding a 6-year review to the 3-year compliance period adds up to 9 years, DOE notes that it may undertake reviews at any time within the 6-year period and that the 3-year compliance date may yield to the 6-year backstop. A 9-year analysis period may not be appropriate given the variability that occurs in the timing of standards reviews and the fact that for some products, the compliance period is 5 years rather than 3 years.

TABLE V.32—CUMULATIVE NATIONAL ENERGY SAVINGS FOR CWH EQUIPMENT; 9 YEARS OF SHIPMENTS—Continued
[2026–2034]

	Trial standard level (*quads*)			
	1	2	3	4
Total FFC Energy	0.03	0.14	0.20	0.28

b. Net Present Value of Consumer Costs and Benefits

DOE estimated the cumulative NPV of the total costs and savings for consumers that would result from the TSLs considered for CWH equipment. In accordance with OMB's guidelines on regulatory analysis,[169] DOE calculated NPV using both a 7-percent and a 3-percent real discount rate. Table V.33 shows the consumer NPV results with impacts counted over the lifetime of equipment purchased in 2026–2055.

TABLE V.33—CUMULATIVE NET PRESENT VALUE OF CONSUMER BENEFITS FOR CWH EQUIPMENT; 30 YEARS OF SHIPMENTS
[2026–2055]

Discount rate	Trial standard level (billion 2020$)			
	1	2	3	4
3 percent:				
Commercial gas-fired storage and storage-type instantaneous	0.16	0.51	0.93	1.73
Residential duty gas-fired storage	0.05	0.05	0.11	0.21
Instantaneous gas-fired tankless	0.01	0.03	0.04	0.04
Instantaneous circulating water heaters and hot water supply boilers	0.07	0.27	0.41	0.41
Total NPV at 3 percent	0.29	0.86	1.49	2.40
7 percent:				
Commercial gas-fired storage and storage-type instantaneous	0.08	0.18	0.37	0.72
Residential duty gas-fired storage	0.02	0.01	0.03	0.07
Instantaneous gas-fired tankless	0.01	0.01	0.01	0.01
Instantaneous circulating water heaters and hot water supply boilers	0.02	0.03	0.07	0.07
Total NPV at 7 percent	0.12	0.22	0.48	0.88

The NPV results based on the aforementioned 9-year analytical period are presented in Table V.34 of this NOPR. The impacts are counted over the lifetime of equipment purchased in 2026–2034. As mentioned previously, such results are presented for informational purposes only and are not indicative of any change in DOE's analytical methodology or decision criteria.

TABLE V.34—CUMULATIVE NET PRESENT VALUE OF CONSUMER BENEFITS CWH EQUIPMENT; 9 YEARS OF SHIPMENTS
[2026–2034]

Discount rate	Trial standard level * (billion 2020$)			
	1	2	3	4
3 percent:				
Commercial gas-fired storage and storage-type instantaneous	0.07	0.09	0.26	0.56
Residential duty gas-fired storage	0.02	0.00	0.02	0.06
Instantaneous gas-fired tankless	0.00	0.00	0.01	0.01
Instantaneous circulating water heaters and hot water supply boilers	0.02	0.08	0.12	0.12
Total NPV at 3 percent	0.11	0.18	0.41	0.75
7 percent:				
Commercial gas-fired storage and storage-type instantaneous	0.04	0.03	0.13	0.31
Residential duty gas-fired storage	0.01	(0.00)	0.00	0.03
Instantaneous gas-fired tankless	0.00	0.00	0.00	0.00
Instantaneous circulating water heaters and hot water supply boilers	0.01	0.01	0.03	0.03

[169] U.S. Office of Management and Budget. Circular A–4: Regulatory Analysis. September 17, 2003. Available at *www.whitehouse.gov/sites/whitehouse.gov/files/omb/circulars/A4/a-4.pdf* (last accessed July 7, 2021).

TABLE V.34—CUMULATIVE NET PRESENT VALUE OF CONSUMER BENEFITS CWH EQUIPMENT; 9 YEARS OF SHIPMENTS—Continued

[2026–2034]

Discount rate	Trial standard level * (billion 2020$)			
	1	2	3	4
Total NPV at 7 percent	0.06	0.03	0.16	0.36

* A value in parentheses is a negative number.

c. Indirect Impacts on Employment

It is estimated that that amended energy conservation standards for CWH equipment would reduce energy expenditures for consumers of those products, with the resulting net savings being redirected to other forms of economic activity. These expected shifts in spending and economic activity could affect the demand for labor. As described in section IV.N of this document, DOE used an input/output model of the U.S. economy to estimate indirect employment impacts of the TSLs that DOE considered. There are uncertainties involved in projecting employment impacts, especially changes in the later years of the analysis. Therefore, DOE generated results for near-term timeframes (2026–2030), where these uncertainties are reduced.

The results suggest that the proposed standards would be likely to have a negligible impact on the net demand for labor in the economy. The net change in jobs is so small that it would be imperceptible in national labor statistics and might be offset by other, unanticipated effects on employment. Chapter 16 of the NOPR TSD presents detailed results regarding anticipated indirect employment impacts.

4. Impact on Utility or Performance of Products

As discussed in section III.E.1.d of this document, DOE has tentatively concluded that the standards proposed in this NOPR would not lessen the utility or performance of the CWH equipment under consideration in this rulemaking. Manufacturers of these products currently offer units that meet or exceed the proposed standards.

5. Impact of Any Lessening of Competition

DOE considered any lessening of competition that would be likely to result from new or amended standards. As discussed in section III.E.1.e of this NOPR, the Attorney General determines the impact, if any, of any lessening of competition likely to result from a proposed standard, and transmits such determination in writing to the Secretary, together with an analysis of the nature and extent of such impact. To assist the Attorney General in making this determination, DOE has provided DOJ with copies of this NOPR and the accompanying TSD for review. DOE will consider DOJ's comments on the proposed rule in determining whether to proceed to a final rule. DOE will publish and respond to DOJ's comments in that document. DOE invites comment from the public regarding the competitive impacts that are likely to result from this proposed rule. In addition, stakeholders may also provide comments separately to DOJ regarding these potential impacts. See the **ADDRESSES** section for information to send comments to DOJ.

6. Need of the Nation To Conserve Energy

Enhanced energy efficiency, where economically justified, improves the Nation's energy security, strengthens the economy, and reduces the environmental impacts (costs) of energy production. Chapter 15 in the NOPR TSD presents the estimated impacts on electricity generating capacity, relative to the no-new-standards case, for the TSLs that DOE considered in this proposed rulemaking.

Energy conservation resulting from potential energy conservation standards for CWH equipment is expected to yield environmental benefits in the form of reduced emissions of certain air pollutants and greenhouse gases. Table V.35 provides DOE's estimate of cumulative emissions reductions expected to result from the TSLs considered in this proposed rulemaking. The emissions were calculated using the multipliers discussed in section IV.K of this document. DOE reports annual emissions reductions for each TSL in chapter 13 of the NOPR TSD. Table V.36 presents cumulative FFC emissions by equipment class.

TABLE V.35—CUMULATIVE EMISSIONS REDUCTION FOR CWH EQUIPMENT SHIPPED IN 2026–2055

	Trial standard level			
	1	2	3	4
Power Sector Emissions				
CO_2 (*million metric tons*)	5	24	34	47
SO_2 (*thousand tons*)	(0.05)	(0.12)	(0.04)	0.06
NO_X (*thousand tons*)	4	21	30	41
Hg (*tons*)	(0.0005)	(0.0015)	(0.0014)	(0.0012)
CH_4 (*thousand tons*)	0.08	0.46	0.68	0.95
N_2O (*thousand tons*)	0.01	0.04	0.07	0.09
Upstream Emissions				
CO_2 (*million metric tons*)	0.56	2.91	4.20	5.73
SO_2 (*thousand tons*)	0.00	0.01	0.02	0.02
NO_X (*thousand tons*)	8.60	44.68	64.44	88.04

TABLE V.35—CUMULATIVE EMISSIONS REDUCTION FOR CWH EQUIPMENT SHIPPED IN 2026–2055—Continued

	Trial standard level			
	1	2	3	4
Hg (*tons*)	(0.00)	(0.00)	(0.00)	(0.00)
CH_4 (*thousand tons*)	62.79	325.91	469.86	641.78
N_2O (*thousand tons*)	0.00	0.00	0.01	0.01
Total FFC Emissions				
CO_2 (*million metric tons*)	5	26	38	52
SO_2 (*thousand tons*)	(0.05)	(0.11)	(0.02)	0.08
NO_X (*thousand tons*)	13	66	95	129
Hg (*tons*)	(0.0005)	(0.0016)	(0.0014)	(0.0012)
CH_4 (*thousand tons*)	63	326	471	643
N_2O (*thousand tons*)	0.01	0.05	0.07	0.10

Negative values refer to an increase in emissions.

TABLE V.36—CUMULATIVE FFC EMISSIONS REDUCTION FOR CWH EQUIPMENT SHIPPED IN 2026–2055, BY EQUIPMENT CLASS

Total FFC Emissions, Commercial Gas Storage and Storage-Type Instantaneous				
CO_2 (*million metric tons*)	2.4	11.5	18.0	30.6
SO_2 (*thousand tons*)	0.01	(0.10)	(0.05)	0.04
NO_X (*thousand tons*)	5.9	28.7	44.6	75.5
Hg (*tons*)	0.0000	(0.0010)	(0.0009)	(0.0008)
CH_4 (*thousand tons*)	29.3	142.5	221.6	375.4
N_2O (*thousand tons*)	0.005	0.020	0.034	0.060
Total FFC Emissions, Residential-Duty Gas-Fired Storage				
CO_2 (*million metric tons*)	0.9	1.8	3.7	5.2
SO_2 (*thousand tons*)	(0.01)	(0.03)	(0.02)	0.00
NO_X (*thousand tons*)	2.2	4.6	9.1	12.9
Hg (*tons*)	(0.0001)	(0.0003)	(0.0002)	(0.0002)
CH_4 (*thousand tons*)	11.0	23.1	45.5	63.9
N_2O (*thousand tons*)	0.00	0.00	0.01	0.01
Total FFC Emissions, Instantaneous Gas-Fired Tankless				
CO_2 (*million metric tons*)	0.3	0.8	1.0	1.0
SO_2 (*thousand tons*)	0.00	0.01	0.01	0.01
NO_X (*thousand tons*)	0.6	2.0	2.5	2.5
Hg (*tons*)	0.0000	0.0000	0.0000	0.0000
CH_4 (*thousand tons*)	3.1	9.7	12.5	12.5
N_2O (*thousand tons*)	0.00	0.00	0.00	0.00
Total FFC Emissions, Instantaneous Circulating Water Heaters and Hot Water Supply Boilers				
CO_2 (*million metric tons*)	1.5	12.3	15.6	15.6
SO_2 (*thousand tons*)	(0.06)	0.01	0.04	0.04
NO_X (*thousand tons*)	3.9	30.4	38.4	38.4
Hg (*tons*)	(0.0004)	(0.0003)	(0.0003)	(0.0003)
CH_4 (*thousand tons*)	19.5	150.8	190.6	190.6
N_2O (*thousand tons*)	0.00	0.02	0.03	0.03

Negative values refer to an increase in emissions.

As part of the analysis for this proposed rulemaking, DOE estimated monetary benefits likely to result from the reduced emissions of CO_2 that DOE estimated for each of the considered TSLs for CWH equipment. Section IV.L of this document discusses the SC–CO_2 values that DOE used. Table V.37 presents the value of CO_2 emissions reduction at each TSL.

TABLE V.37—PRESENT VALUE OF CO_2 EMISSIONS REDUCTION FOR CWH EQUIPMENT SHIPPED IN 2026–2055

TSL	SC–CO_2 case, discount rate and statistics (million 2020$)			
	5%	3%	2.5%	3%
	(Average)	(Average)	(Average)	(95th percentile)
1	42.72	188.75	297.10	572.26
2	216.02	965.28	1,524.73	2,925.16
3	315.92	1,406.42	2,218.97	4,262.76
4	441.12	1,950.37	3,070.51	5,913.66

As discussed in section IV.L.1 of this document, DOE estimated monetary benefits likely to result from the reduced emissions of methane and N_2O that DOE estimated for each of the considered TSLs for CWH equipment. Table V.38 presents the value of the CH_4 emissions reduction at each TSL, and Table V.39 presents the value of the N_2O emissions reduction at each TSL.

TABLE V.38—PRESENT VALUE OF METHANE EMISSIONS REDUCTION FOR CWH EQUIPMENT SHIPPED IN 2026–2055

TSL	SC–CH_4 case			
	Discount rate and statistics (million 2020$)			
	5%	3%	2.5%	3%
	Average	Average	Average	95th percentile
1	24.18	74.88	105.36	198.50
2	122.53	385.00	543.61	1,022.35
3	178.13	556.88	785.40	1,477.79
4	247.24	765.51	1,077.28	2,028.76

TABLE V.39—PRESENT VALUE OF NITROUS OXIDE EMISSIONS REDUCTION FOR CWH EQUIPMENT SHIPPED IN 2026–2055

TSL	SC–N_2O case			
	Discount rate and statistics (million 2020$)			
	5%	3%	2.5%	3%
	Average	Average	Average	95th percentile
1	0.03	0.12	0.18	0.31
2	0.15	0.62	0.99	1.67
3	0.23	0.95	1.49	2.54
4	0.32	1.34	2.11	3.59

DOE is well aware that scientific and economic knowledge about the contribution of CO_2 and other GHG emissions to changes in the future global climate and the potential resulting damages to the global and U.S. economy continues to evolve rapidly. DOE, together with other Federal agencies, will continue to review methodologies for estimating the monetary value of reductions in CO_2 and other GHG emissions. This ongoing review will consider the comments on this subject that are part of the public record for this and other rulemakings, as well as other methodological assumptions and issues. DOE notes that the proposed standards would be economically justified even without inclusion of monetized benefits of reduced GHG emissions.

DOE also estimated the monetary value of the economic benefits associated with NO_X and SO_2 emissions reductions anticipated to result from the considered TSLs for CWH equipment. The dollar-per-ton values that DOE used are discussed in section IV.L of this document. Table V.40 presents the present value for NO_X emissions reduction for each TSL calculated using 7-percent and 3-percent discount rates, and Table V.41 presents similar results for SO_2 emissions reductions. The results in these tables reflect application of the low dollar-per-ton values, which DOE used to be conservative. Results that reflect high dollar-per-ton values are presented in chapter 14 of the NOPR TSD.

TABLE V.40—PRESENT VALUE OF NO_X EMISSIONS REDUCTION FOR CWH EQUIPMENT SHIPPED IN 2026–2055

TSL	Million 2020$	
	3% discount rate	7% discount rate
1	356	137
2	1,800	671
3	2,627	990
4	3,663	1,406

TABLE V.41—PRESENT VALUE OF SO_2 EMISSIONS REDUCTION FOR CWH EQUIPMENT SHIPPED IN 2026–2055

TSL	Million 2020$	
	3% discount rate	7% discount rate
1	(2.84)	(0.89)
2	(10.36)	(4.17)
3	(7.23)	(2.85)
4	(3.17)	(1.11)

The benefits of reduced CO_2, CH_4, and N_2O emissions are collectively referred to as climate benefits. The benefits of reduced SO_2 and NO_X emissions are collectively referred to as health benefits. For the time series of estimated monetary values of reduced emissions, see chapter 14 of the NOPR TSD.

7. Other Factors

The Secretary of Energy, in determining whether a standard is economically justified, may consider any other factors that the Secretary deems to be relevant. (42 U.S.C. 6295(o)(2)(B)(i)(VII)) No other factors were considered in this analysis.

8. Summary of National Economic Impacts

Table V.42 presents the NPV values that result from adding the estimates of the potential climate and health benefits resulting from reduced GHG, SO_2, and NO_X emissions to the NPV of consumer benefits for each TSL considered in this rulemaking. The consumer benefits are domestic U.S. monetary savings that occur as a result of purchasing the covered commercial water heaters, and are measured for the lifetime of products shipped in 2026–2055. The climate benefits associated with reduced GHG emissions resulting from the adopted standards are global benefits, and are also calculated based on the lifetime of commercial water heaters shipped in 2026–2055. The climate benefits associated with four SC–GHG estimates are shown. DOE does not have a single central SC–GHG point estimate and it emphasizes the importance and value of considering the benefits calculated using all four SC–GHG estimates.

TABLE V.42—NPV OF CONSUMER BENEFITS COMBINED WITH CLIMATE AND HEALTH BENEFITS FROM EMISSIONS REDUCTIONS

Category	TSL 1	TSL 2	TSL 3	TSL 4
3% discount rate for NPV of Consumer and Health Benefits (billion 2020$)				
5% d.r., Average SC–GHG case	0.71	2.99	4.61	6.75
3% d.r., Average SC–GHG case	0.91	4.00	6.08	8.78
2.5% d.r., Average SC–GHG case	1.05	4.72	7.12	10.21
3% d.r., 95th percentile SC–GHG case	1.42	6.60	9.85	14.01
7% discount rate for NPV of Consumer and Health Benefits (billion 2020$)				
5% d.r., Average SC–GHG case	0.33	1.23	1.96	2.97
3% d.r., Average SC–GHG case	0.52	2.24	3.43	5.00
2.5% d.r., Average SC–GHG case	0.66	2.96	4.47	6.43
3% d.r., 95th percentile SC–GHG case	1.03	4.84	7.21	10.23

The national operating cost savings are domestic U.S. monetary savings that occur as a result of purchasing CWH equipment, and are measured for the lifetime of products shipped in 2026–2055. The benefits associated with reduced GHG emissions achieved as a result of the adopted standards are also calculated based on the lifetime of CWH equipment shipped in 2026–2055.

C. Conclusion

When considering new or amended energy conservation standards, the standards that DOE adopts for any type (or class) of covered product must be designed to achieve the maximum improvement in energy efficiency that the Secretary determines is technologically feasible and economically justified. (42 U.S.C. 6313(a)(6)(A)(ii) and (C)(i)) In determining whether a standard is economically justified, the Secretary must determine whether the benefits of the standard exceed its burdens by, to the greatest extent practicable, considering the seven statutory factors discussed previously. (42 U.S.C. 6313(a)(6)(B)(ii)(I)–(VII) and 42 U.S.C. 6313(a)(6)(C)(i))

For this NOPR, DOE considered the impacts of amended standards for CWH equipment at each TSL, beginning with the maximum technologically feasible level, to determine whether that level was economically justified. Where the max-tech level was not justified, DOE then considered the next most efficient level and undertook the same evaluation until it reached the highest efficiency level that is both technologically feasible and economically justified and saves a significant amount of energy.

To aid the reader as DOE discusses the benefits and/or burdens of each TSL, tables in this section present a summary of the results of DOE's quantitative analysis for each TSL. In addition to the quantitative results presented in the tables, DOE also considers other burdens and benefits that affect economic justification. These include the impacts on identifiable subgroups of consumers who may be disproportionately affected by a national standard and impacts on employment.

DOE also notes that the economics literature provides a wide-ranging discussion of how consumers trade off upfront costs and energy savings in the absence of government intervention. Much of this literature attempts to explain why consumers appear to undervalue energy efficiency improvements. There is evidence that consumers undervalue future energy savings as a result of (1) a lack of information, (2) a lack of sufficient salience of the long-term or aggregate benefits, (3) a lack of sufficient savings to warrant delaying or altering purchases, (4) excessive focus on the short term, in the form of inconsistent weighting of future energy cost savings relative to available returns on other investments, (5) computational or other difficulties associated with the evaluation of relevant tradeoffs, and (6) a divergence in incentives (for example, between renters and owners, or builders and purchasers). Having less than perfect foresight and a high degree of uncertainty about the future, consumers may trade off these types of investments at a higher than expected rate between

current consumption and uncertain future energy cost savings.

1. Benefits and Burdens of TSLs Considered for CWH Equipment Standards

Table V.43 and Table V.44 summarize the quantitative impacts estimated for each TSL for CWH equipment. The national impacts are measured over the lifetime of each class of CWH equipment purchased in the 30-year period that begins in the anticipated year of compliance with amended standards (2026–2055). The energy savings, emissions reductions, and value of emissions reductions refer to full-fuel-cycle results. DOE exercises its own judgment in presenting monetized climate benefits as recommended in applicable Executive Orders and DOE would reach the same conclusion presented in this notice in the absence of the social cost of greenhouse gases, including the February 2021 Interim Estimates presented by the Interagency Working Group on the Social Cost of Greenhouse Gases. The efficiency levels contained in each TSL are described in section V.A of this document.

TABLE V.43—SUMMARY OF ANALYTICAL RESULTS FOR CWH EQUIPMENT TSLS: NATIONAL IMPACTS

Category	TSL 1	TSL 2	TSL 3	TSL 4
Cumulative FFC National Energy Savings (quads)				
Commercial gas-fired storage and storage-type instantaneous	0.04	0.21	0.33	0.56
Residential duty gas-fired storage	0.02	0.03	0.07	0.10
Instantaneous gas-fired tankless	0.00	0.01	0.02	0.02
Instantaneous circulating water heaters and hot water supply boilers	0.03	0.23	0.29	0.29
Total Quads	0.09	0.48	0.70	0.96
NPV of Consumer Costs and Benefits (billion 2020$)				
NPV at 3% discount rate:				
Commercial gas-fired storage and storage-type instantaneous	0.16	0.51	0.93	1.73
Residential duty gas-fired storage	0.05	0.05	0.11	0.21
Instantaneous gas-fired tankless	0.01	0.03	0.04	0.04
Instantaneous circulating water heaters and hot water supply boilers	0.07	0.27	0.41	0.41
Total NPV at 3% (billion 2020$)	0.29	0.86	1.49	2.40
NPV at 7% discount rate:				
Commercial gas-fired storage and storage-type instantaneous	0.08	0.18	0.37	0.72
Residential duty gas-fired storage	0.02	0.01	0.03	0.07
Instantaneous gas-fired tankless	0.01	0.01	0.01	0.01
Instantaneous circulating water heaters and hot water supply boilers	0.02	0.03	0.07	0.07
Total NPV at 7% (billion 2020$)	0.12	0.22	0.48	0.87
Cumulative FFC Emissions Reduction (Total FFC Emissions)				
CO_2 (million metric tons)	5	26	38	52
SO_2 (thousand tons)	(0.05)	(0.11)	(0.02)	0.08
NO_X (thousand tons)	13	66	95	129
Hg (tons)	(0.000)	(0.002)	(0.001)	(0.001)
CH_4 (thousand tons)	63	326	471	643
N_2O (thousand tons)	0.01	0.05	0.07	0.10
Present Value of Benefits and Costs (3% discount rate, billion 2020$)				
Consumer Operating Cost Savings	0.34	1.63	2.44	3.51
Climate Benefits *	0.26	1.35	1.96	2.72
Health Benefits **	0.35	1.79	2.62	3.66
Total Benefits †	0.96	4.77	7.03	9.89
Consumer Incremental Product Costs ‡	0.05	0.77	0.95	1.11
Consumer Net Benefits	0.29	0.86	1.49	2.40
Total Net Benefits	0.91	4.00	6.08	8.78
Present Value of Benefits and Costs (7% discount rate, billion 2020$)				
Consumer Operating Cost Savings	0.15	0.68	1.04	1.52
Climate Benefits *	0.26	1.35	1.96	2.72
Health Benefits **	0.14	0.67	0.99	1.40
Total Benefits †	0.55	2.70	3.99	5.64
Consumer Incremental Product Costs ‡	0.03	0.46	0.56	0.65
Consumer Net Benefits	0.12	0.22	0.48	0.87
Total Net Benefits	0.52	2.24	3.43	5.00

Note: This table presents the costs and benefits associated with commercial water heaters shipped in 2026–2055. These results include benefits to consumers which accrue after 2055 from the products shipped in 2026–2055.

* Climate benefits are calculated using four different estimates of the social cost of carbon ($SC–CO_2$), methane ($SC–CH_4$), and nitrous oxide ($SC–N_2O$) (model average at 2.5 percent, 3 percent, and 5 percent discount rates; 95th percentile at 3 percent discount rate), as shown in Table V.37 through Table V.39. Together these represent the global social cost of greenhouse gases (SC–GHG). For presentational purposes of this table, the climate benefits associated with the average SC–GHG at a 3 percent discount rate are shown, but the Department does not have a single central SC–GHG point estimate. See section IV.L of this document for more details.

** Health benefits are calculated using benefit-per-ton values for NO_X and SO_2. DOE is currently only monetizing $PM_{2.5}$ and (for NO_X) ozone precursor health benefits, but will continue to assess the ability to monetize other effects such as health benefits from reductions in direct $PM_{2.5}$ emissions. The health benefits are presented at real discount rates of 3 and 7 percent. See section IV.L of this document for more details.

† Total and net benefits include consumer, climate, and health benefits. For presentation purposes, total and net benefits for both the 3-percent and 7-percent cases are presented using the average SC–GHG with 3-percent discount rate, but the Department does not have a single central SC–GHG point estimate. DOE emphasizes the importance and value of considering the benefits calculated using all four SC–GHG estimates. See Table V.42 for net benefits using all four SC–GHG estimates. On March 16, 2022, the Fifth Circuit Court of Appeals (No. 22–30087) granted the federal government's emergency motion for stay pending appeal of the February 11, 2022, preliminary injunction issued in *Louisiana* v. *Biden,* No. 21–cv–1074–JDC–KK (W.D. La.). As a result of the Fifth Circuit's order, the preliminary injunction is no longer in effect, pending resolution of the federal government's appeal of that injunction or a further court order. Among other things, the preliminary injunction enjoined the defendants in that case from ''adopting, employing, treating as binding, or relying upon'' the interim estimates of the social cost of greenhouse gases—which were issued by the Interagency Working Group on the Social Cost of Greenhouse Gases on February 26, 2021—to monetize the benefits of reducing greenhouse gas emissions. In the absence of further intervening court orders, DOE will revert to its approach prior to the injunction and present monetized benefits where appropriate and permissible under law.

‡ Costs include incremental equipment costs as well as installation costs.

TABLE V.44—SUMMARY OF ANALYTICAL RESULTS FOR CWH EQUIPMENT TSLS: MANUFACTURER AND CONSUMER IMPACTS

Category	TSL 1*	TSL 2*	TSL 3*	TSL 4*
Manufacturer Impacts: INPV (million 2020$)				
Commercial gas-fired storage and storage-type instantaneous (No-new-standards case INPV=134.6)	133.5–133.9	127.8–130.4	121.1–125.1	70.1–76.6
Residential-duty gas-fired storage (No-new-standards case INPV=10.1)	9.8–10.1	9.2–9.9	8.4–10.6	5.7–8.1
Instantaneous gas-fired tankless (No-new-standards case INPV=7.1)	6.8–6.8	6.1–6.2	6.1–6.3	6.1–6.3
Instantaneous circulating water heaters and hot water supply boilers (No-new-standards case INPV = 31.3)	31.1–31.3	28.0–33.2	24.0–30.2	24.0–30.2
Total INPV ($) (No-new-standards case INPV = 183.1)	181.3–182.1	171.1–179.6	159.7–172.4	106.1–121.6
Manufacturer Impacts: Change in INPV (million 2020$)				
Total Change in INPV ($)	(1.85)–(1.03)	(12.03)–(3.50)	(23.39)–(10.75)	(77.00)–(61.53)
Manufacturer Impacts: Industry NPV (% Change)				
Commercial gas-fired storage and storage-type instantaneous	(0.8)–(0.5)	(5.1)–(3.1)	(10.0)–(7.0)	(47.9)–(43.1)
Residential-duty gas-fired storage	(3.0)–0.0	(8.7)–(2.4)	(16.5)–5.4	(44.0)–(19.7)
Instantaneous gas-fired tankless	(4.5)–(4.2)	(14.8)–(12.6)	(15.0)–(11.8)	(15.0)–(11.8)
Instantaneous circulating water heaters and hot water supply boilers	(0.5)–(0.1)	(10.5)–5.9	(23.2)–(3.4)	(23.2)–(3.4)
Total INPV (*% change*)	(1.0)–(0.6)	(6.6)–(1.9)	(12.8)–(5.9)	(42.0)–(33.6)
Consumer Average LCC Savings (2020$)				
Commercial Gas-Fired Storage and Storage-type Instantaneous Water Heaters	93	80	301	664
Residential-Duty Gas-Fired Storage	129	(20)	90	324
Gas-Fired Instantaneous Water Heaters and Hot Water Supply Boilers	113	400	599	599
—Instantaneous, Gas-Fired Tankless	42	40	63	63
—Instantaneous Water Heaters and Hot Water Supply Boilers	172	702	1,047	1,047
Shipment-Weighted Average*	101	120	322	605
Consumer Simple PBP (years)				
Commercial Gas-Fired Storage and Storage-type Instantaneous Water Heaters	1	7	5	4
Residential-Duty Gas-Fired Storage	3	9	9	7
Gas-Fired Instantaneous Water Heaters and Hot Water Supply Boilers	1	9	9	9
—Instantaneous, Gas-Fired Tankless	2	9	9	9
—Instantaneous Water Heaters and Hot Water Supply Boilers	1	9	9	9
Shipment-Weighted Average*	1	8	6	6

TABLE V.44—SUMMARY OF ANALYTICAL RESULTS FOR CWH EQUIPMENT TSLS: MANUFACTURER AND CONSUMER IMPACTS—Continued

Category	TSL 1 *	TSL 2 *	TSL 3 *	TSL 4 *
Percent of Consumers that Experience a Net Cost				
Commercial Gas-Fired Storage and Storage-type Instantaneous Water Heaters	1%	14%	12%	13%
Residential-Duty Gas-Fired Storage	2%	17%	26%	18%
Gas-Fired Instantaneous Water Heaters and Hot Water Supply Boilers	1%	10%	12%	12%
—Instantaneous, Gas-Fired Tankless	0%	9%	12%	12%
—Instantaneous Water Heaters and Hot Water Supply Boilers	2%	11%	13%	13%
Shipment-Weighted Average *	1%	14%	14%	13%

Parentheses indicate negative (−) values.
* Weighted by shares of each equipment class in total projected shipments in 2026.

DOE first considered TSL 4, which represents the max-tech efficiency levels. At this TSL, the Secretary has tentatively determined that the benefits are outweighed by the burdens, as discussed in detail in the following paragraphs.

TSL 4 would save an estimated 0.96 quads of energy, an amount DOE considers significant. Commercial gas-fired storage water heaters and storage-type instantaneous water heaters save an estimated 0.56 quads while Residential-Duty Gas-Fired Storage equipment save 0.10 quads of energy. Instantaneous gas-fired tankless water heaters are estimated to save 0.02 quads of energy, while instantaneous circulating water heaters and hot water supply boilers save an estimated 0.29 quads.

Under TSL 4, the NPV of consumer benefit would be $0.87 billion using a discount rate of 7 percent, and $2.40 billion using a discount rate of 3 percent. Much of the consumer benefit is provided by the commercial gas-fired storage water heaters and storage-type instantaneous water heaters totaling an estimated $0.72 billion using a 7 percent discount rate, and $1.73 billion using a 3 percent discount rate. The consumer benefit for residential-duty gas-fired storage water heaters is estimated to be $0.07 billion at a 7 percent discount rate and $0.21 billion at a 3 percent discount rate. The consumer benefit for instantaneous gas-fired tankless water heaters is estimated to be $0.01 billion at a 7 percent discount rate and $0.04 at a 3 percent discount rate, and the consumer benefit for instantaneous circulating water heaters and hot water supply boilers is estimated to be $0.07 billion at a 7 percent discount rate and $0.41 billion at a 3 percent discount rate.

The cumulative emissions reductions at TSL 4 are 52 Mt of CO_2, 0.08 thousand tons of SO_2, 129 thousand tons of NO_X, −0.0012 ton of Hg, 643 thousand tons of CH_4, and 0.10 thousand tons of N_2O. The estimated monetary value of the climate benefits from reduced GHG emissions (associated with the average SC–GHG at a 3-percent discount rate) at TSL 4 is $2.72 billion. The estimated monetary value of the health benefits from reduced NO_X and SO_2 emissions at TSL 4 is $3.66 billion using a 7-percent discount rate and $1.40 billion using a 3-percent discount rate.

Using a 7-percent discount rate for consumer benefits and costs, health benefits from reduced SO_2 and NO_X emissions, and the 3-percent discount rate case for climate benefits from reduced GHG emissions, the estimated total NPV at TSL 4 is $5.00 billion. Using a 3-percent discount rate for all benefits and costs, the estimated total NPV at TSL 4 is $8.76 billion. The estimated total NPV is provided for additional information, however DOE primarily relies upon the NPV of consumer benefits when determining whether a proposed standard level is economically justified.

At TSL 4, the average LCC impact is a savings of $664 for commercial gas-fired storage and storage-type instantaneous water heaters, $324 for residential-duty gas-fired storage water heaters, $63 for instantaneous gas-fired instantaneous water heaters, and $1,047 for instantaneous circulating water heaters and hot water supply boilers. The simple PBP is 4 years for commercial gas-fired storage water heaters, 7 years for residential-duty gas-fired storage water heaters, and 9 years for both the instantaneous gas-fired tankless water heaters and the instantaneous circulating water heaters and hot water supply boilers. The fraction of consumers experiencing a net LCC cost is 13 percent for commercial gas-fired storage water heaters and storage-type instantaneous water heaters, 18 percent for residential-duty gas-fired storage water heaters, 12 percent for instantaneous gas-fired tankless water heaters, and 13 percent for instantaneous circulating water heaters and hot water supply boilers.

At TSL 4, the projected change in manufacturer INPV ranges from a decrease of $77.0 million to a decrease of $61.5 million, which correspond to decreases of 42.0 percent and 33.6 percent, respectively. Conversion costs total $119.8 million.

Commercial gas-fired storage water heaters and storage type instantaneous equipment account for over 70 percent of unit shipments in the CWH industry. The projected change in manufacturer INPV for commercial gas-fired storage water heaters and storage type instantaneous equipment ranges from a decrease of $64.5 million to a decrease of $58.0 million, which correspond to decreases of 47.9 percent and 43.1 percent, respectively. The potentially large negative impacts on INPV are largely driven by industry conversion costs. In particular, there are substantial increases in product conversion costs at TSL 4 for commercial gas-fired storage water heaters and storage type instantaneous equipment manufacturers. There are several factors that lead to high product conversion costs for this equipment.

Currently, only two models of this equipment type from a single manufacturer can meet a 99 percent thermal efficiency standard, which represents less than 1 percent of the commercial gas-fired storage water heaters and storage type instantaneous equipment models currently offered on the market. The two models both have an input capacity of 300,000 Btu/h and share a similar design. The manufacturer of these models is a small business with less than 1 percent market share in the commercial gas storage water heater market. The company's

ability to ramp-up production capacity at 99% thermal efficiency to serve a significantly larger portion of the market is unclear.

Nearly all existing models would need to be redesigned to meet a 99 percent thermal efficiency standard. Traditionally, manufacturers design their equipment platforms to support a range of models with varying input capacities and storage volumes, and the efficiency typically will vary slightly between models within a given platform. However, at TSL 4, manufacturers would not be able to maintain a platform approach to designing commercial gas-fired storage water heaters because the 99 percent thermal efficiency level represents the maximum achievable efficiency and there would be no allowance for slight variations in efficiency between individual models. At TSL 4, manufacturers would be required to individually redesign each model to optimize performance for one specific input capacity and storage volume combination. As a result, the industry's level of engineering effort and investment would grow significantly. In manufacturer interviews, some manufacturers raised concerns that they would not have sufficient engineering capacity to complete necessary redesigns within the 3-year conversion period. If manufacturers require more than 3 years to redesign all models, they would likely prioritize redesigns based on sales volume. There is risk that some models become unavailable, either temporarily or permanently.

Product conversion costs for commercial gas-fired storage water heaters and storage type instantaneous equipment are expected to reach $82.1 million over the three-year conversion period. These investment levels are six times greater than typical R&D spending on this equipment class over a three-year period. Compliance with DOE standards could limit other engineering and innovation efforts, such as developing heat pump water heaters for the commercial market, during the conversion period beyond compliance with amended energy conservation standards.

Residential-duty gas-fired storage water heaters account for approximately 14 percent of unit shipments in the CWH industry. At TSL 4, the projected change in INPV for residential-duty gas-fired storage water heaters ranges from a decrease of $4.5 million to a decrease of $2.0 million, which correspond to decreases of 44.0 percent and 19.7 percent, respectively. Conversion costs total $6.5 million.

The drivers of negative impacts on INPV for residential-duty gas-fired storage water heaters are largely identical to those identified for the commercial gas-fired storage water heaters. At TSL 4, there is only one manufacturer with a compliant model at this standard level. This represents less than 5 percent of models currently offered in the market. Product conversion costs are expected to reach $4.6 million over the conversion period as manufacturers have to optimize designs for each specific input capacity and storage volume combination.

Instantaneous gas-fired tankless water heaters account for 6 percent of unit shipments in the CWH industry. At TSL 4, the projected change in manufacturer INPV for instantaneous gas-fired tankless water heaters ranges from a decrease of $1.1 million to a decrease of $0.8 million, which correspond to decreases of 15.0 percent and 11.8 percent, respectively. Conversion costs total $1.8 million.

At TSL 4, approximately half of currently offered instantaneous gas-fired tankless water heaters models would meet TSL 4 today. While most manufacturers have some compliant models, manufacturers would likely develop cost-optimized models to compete in a market where energy efficiency provides less product differentiation. Product conversion cost are expected to reach $1.2 million.

Instantaneous circulating water heaters and hot water supply boilers account for over 7 percent of unit shipments in the CWH industry. At TSL 4, the projected change in manufacturer INPV for instantaneous circulating water heaters and hot water supply boilers ranges from a decrease of $7.3 million to a decrease of $1.1 million, which correspond to decreases of 23.2 percent and 3.4 percent, respectively. Conversion cost total $10.0 million.

At TSL 4, approximately 27 percent of instantaneous circulating water heaters and hot water supply boilers models would meet TSL 4 today. DOE notes that industry offers a large number of models to fit a wide range of installation requirements despite relatively low shipment volumes. Product conversion cost are expected to reach $8.1 million.

The Secretary tentatively concludes that at TSL 4 for CWH equipment, the benefits of energy savings, positive NPV of consumer benefits, emission reductions, and the estimated monetary value of the emissions reductions would be outweighed by the economic burden on some consumers, and the impacts on manufacturers, including the potentials for large conversion costs, reduced equipment availability, delayed technology innovation, and substantial reductions in INPV. As noted previously, only one small manufacturer currently produces commercial gas-fired storage water heaters at that level. Similarly, only one manufacturer currently produces residential-duty gas-fired water heaters at that level. In light of substantial conversion costs, it is unclear whether a sufficient quantity of other manufacturers would undertake the conversions necessary to offer a competitive range of products across the range of sizes and applications required for gas-fired storage water heaters. Consequently, the Secretary has tentatively concluded that the current record does not provide a clear and convincing basis to conclude that TSL 4 is economically justified.

DOE then considered TSL 3, which would save an estimated 0.70 quads of energy, an amount DOE also considers significant. Commercial gas-fired storage and storage-type instantaneous water heaters are estimated to save 0.33 quads while residential-duty gas-fired storage water heaters are estimated to save 0.07 quads of energy. Instantaneous gas-fired tankless water heaters are estimated to save 0.02 quads. Instantaneous circulating gas-fired water heaters and hot water supply boilers are estimated to save 0.29 quads of energy.

Under TSL 3, the NPV of consumer benefit would be $0.48 billion using a discount rate of 7 percent, and $1.49 billion using a discount rate of 3 percent. Benefits to consumers of commercial gas-fired storage and storage type instantaneous equipment are estimated to be $0.37 billion using a discount rate of 7 percent, and $0.93 billion using a discount rate of 3 percent. Consumer benefits for residential-duty gas-fired storage equipment are estimated to be $0.03 billion dollars at a 7 percent discount rate and $0.11 billion at a 3 percent discount rate. Benefits to consumers of instantaneous gas-fired tankless water heaters are estimated to be $0.01 billion at a 7 percent discount rate and $0.04 billion at a 3 percent discount rate, and consumer benefits for instantaneous circulating gas-fired water heaters and hot water supply boilers are estimated to be $0.07 billion at a 7 percent discount rate and 0.41 billion at a 3 percent discount rate.

The cumulative emissions reductions at TSL 3 are 38 Mt of CO_2, −0.02 thousand tons of SO_2, 95 thousand tons of NO_X, −0.0014 tons of Hg, 471 thousand tons of CH_4, and 0.07 thousand tons of N_2O. The estimated monetary value of the climate benefits from reduced GHG emissions reduction (associated with the average SC–GHG at

a 3-percent discount rate) at TSL 3 is $1.96 billion. The estimated monetary value of the health benefits from reduced NO_X and SO_2 emissions at TSL 3 is $0.99 billion using a 7-percent discount rate and $2.62 billion using a 3-percent discount rate.

Using a 7-percent discount rate for consumer benefits and costs, health benefits from reduced SO_2 and NO_X emissions, and the 3-percent discount rate case for climate benefits from reduced GHG emissions, the estimated total NPV at TSL 3 is $3.43 billion. Using a 3-percent discount rate for all benefits and costs, the estimated total NPV at TSL 3 is $6.08 billion. The estimated total NPV is provided for additional information, however DOE primarily relies upon the NPV of consumer benefits when determining whether a proposed standard level is economically justified.

At TSL 3, the average LCC impact is a savings of $301 for commercial gas-fired storage and storage-type instantaneous water heaters, $90 for residential-duty gas-fired storage water heaters, $63 for instantaneous gas-fired tankless water heaters, and $1,047 for instantaneous circulating water heaters and hot water supply boilers. The simple PBP is 5 years for commercial gas-fired storage water heaters, 9 years for residential-duty gas-fired storage water heaters, and 9 years for both instantaneous gas-fired tankless water heaters and instantaneous circulating water heaters and hot water supply boilers. The fraction of consumers experiencing a net LCC cost is 12 percent for commercial gas-fired storage water heaters, 26 percent for residential-duty gas-fired storage water heaters, 12 percent for instantaneous gas-fired tankless water heaters, and 13 percent for instantaneous circulating water heaters and hot water supply boilers.

At TSL 3, the projected change in manufacturer INPV ranges from a decrease of $23.4 million to a decrease of $10.8 million, which correspond to decreases of 12.8 percent and 5.9 percent, respectively. At this level, industry free cash flow is estimated to drop by 95% in the year before the standards year. Conversion costs total $34.6 million.

At TSL 3, nearly all commercial gas-fired storage water heaters and storage type instantaneous equipment manufacturers have models at a range of input capacities and storage volumes that can meet 95 percent thermal efficiency. Approximately 34 percent of commercial gas-fired storage water heaters and storage type instantaneous models currently offered would meet TSL 3 today. Additionally, an amended standard at TSL 3 would allow manufacturers to design equipment platforms that support a range of models with varying input capacities and storage volumes, rather than having to optimize designs for each individual input capacity and storage volume combinations.

The change in INPV for commercial gas-fired storage water heaters and storage type instantaneous equipment ranges from a decrease of $13.5 million to a decrease of $9.5 million, which correspond to decreases of 10.0 percent and 7.0 percent, respectively. Product conversion costs are $11.6 million and capital conversion costs are $9.2 million, for a total of approximately $20.8 million. At this level, product conversion costs are typical of R&D spending over the conversion period.

At TSL 3, multiple residential-duty gas-fired storage water heater manufacturers offer models at a range of input capacities and storage volumes that can meet a UEF standard at this level today. Approximately 22 percent of current residential-duty gas-fired storage water heater models would meet TSL 3. An amended standard at TSL 3 would allow manufacturers to design equipment platforms that support a range of models with varying input capacities and storage volumes, rather than having to optimize designs for each individual input capacity and storage volume combination.

The projected change in INPV for residential-duty gas-fired storage water heaters ranges from a decrease of $1.7 million to an increase of $0.5 million, which correspond to a decrease of 16.5 percent and an increase of 5.4 percent, respectively. DOE expects conversion costs for this equipment class to reach $2.1 million.

At TSL 3, approximately half of instantaneous gas-fired tankless water heaters models would meet TSL 3 today. The projected change in manufacturer INPV for instantaneous gas-fired tankless water heaters ranges from a decrease of $1.1 million to a decrease of $0.8 million, which correspond to decreases of 15.0 percent and 11.8 percent, respectively. Conversion costs total $1.8 million.

At TSL 3, approximately 27 percent of instantaneous circulating water heaters and hot water supply boilers models would meet TSL 3 today. The projected change in manufacturer INPV for instantaneous circulating water heaters and hot water supply boilers ranges from a decrease of $7.3 million to a decrease of $1.1 million, which correspond to decreases of 23.2 percent and 3.4 percent, respectively. Conversion cost total $10.0 million.

After considering the analysis and weighing the benefits and burdens, the Secretary has tentatively concluded that a standard set at TSL 3 for CWH equipment would be economically justified. Notably, the benefits to consumers vastly outweigh the cost to manufacturers. At TSL 3, the NPV of consumer benefits, even measured at the more conservative discount rate of 7 percent, is over 2200 percent higher than the maximum of manufacturers' loss in INPV. The positive average LCC savings—a different way of quantifying consumer benefits—reinforces this conclusion. The economic justification for TSL 3 is clear and convincing even without weighing the estimated monetary value of emissions reductions. When those emissions reductions are included—representing $1.96 billion in climate benefits (associated with the average SC–GHG at a 3-percent discount rate), and $0.30 billion (using a 3-percent discount rate) or $0.12 billion (using a 7-percent discount rate) in health benefits—the rationale becomes stronger still.

As stated, DOE conducts a ''walk-down'' analysis to determine the TSL that represents the maximum improvement in energy efficiency that is technologically feasible and economically justified as required under EPCA. The walk-down is not a comparative analysis, as a comparative analysis would result in the maximization of net benefits instead of energy savings that are technologically feasible and economically justified, which would be contrary to the statute. 86 FR 70892, 70908. Although DOE has not conducted a comparative analysis to select the proposed energy conservation standards, DOE notes at TSL 3 the conversion cost impacts for commercial gas storage and residential-duty gas-fired storage water heaters are less severe than TSL 4. For commercial gas storage water heaters, nearly all manufacturers have equipment that can meet TSL 3 across a range of input capacities and storage volumes. Similarly, for residential-duty commercial gas water heaters, multiple manufacturers currently produce equipment meeting TSL 3. The concerns of manufacturers being unable to offer a competitive range of equipment across the range of input capacities and storage volumes currently offered would be mitigated at TSL 3.

Although DOE considered proposed amended standard levels for CWH equipment by grouping the efficiency levels for each equipment category into TSLs, DOE evaluates all analyzed efficiency levels in its analysis. For commercial gas instantaneous water

heaters (including tankless and circulating/hot water supply boilers) TSL 3 (*i.e.,* the proposed TSL) includes the max-tech efficiency levels, which is the maximum level determined to be technologically feasible. For commercial gas-fired storage water heaters and residential-duty gas-fired storage water heaters, TSL 3 includes efficiency levels that are one level below the max-tech efficiency level. As discussed previously, at the max-tech efficiency levels for gas-fired storage water heaters and residential-duty gas-fired storage water heaters there is a substantial risk of manufacturers being unable to offer a competitive range of equipment across the range of input capacities and storage volumes currently available. Setting standards at max-tech for these classes could limit other engineering and innovation efforts, such as developing heat pump water heaters for the commercial market, during the conversion period beyond compliance with amended energy conservation standards. The benefits of max-tech efficiency levels for commercial gas-fired storage water heaters and residential-duty gas-fired storage water heaters do not outweigh the negative impacts to consumers and manufacturers. Therefore, DOE has tentatively concluded that the max-tech efficiency levels are not justified.

Therefore, based on the previous considerations, DOE proposes to adopt the energy conservation standards for CWH equipment at TSL 3. The proposed amended energy conservation standards for CWH equipment, which are expressed as thermal efficiency and standby loss for commercial gas-fired storage and commercial gas-fired instantaneous water heaters and hot water supply boilers, and as UEF for residential-duty gas-storage water heaters, are shown in Table V.45 and Table V.46.

TABLE V.45—PROPOSED AMENDED ENERGY CONSERVATION STANDARDS FOR COMMERCIAL WATER HEATING EQUIPMENT EXCEPT FOR RESIDENTIAL-DUTY COMMERCIAL WATER HEATERS

Equipment	Size	Energy conservation standards *	
		Minimum thermal efficiency (%)	Maximum standby loss †
Gas-fired storage water heaters and storage-type instantaneous water heaters.	All	95	$0.86 \times [Q/800 + 110(V_r)^{1/2}]$ (Btu/h)
Electric instantaneous water heaters ‡	<10 gal	80	N/A
	≥10 gal	77	$2.30 + 67/V_m$ (%/h)
Gas-fired instantaneous water heaters and hot water supply boilers	<10 gal	96	N/A
	≥10 gal	96	$Q/800 + 110(V_r)^{1/2}$ (Btu/h)

* V_m is the measured storage volume, and V_r is the rated volume, both in gallons. Q is the nameplate input rate in Btu/h.

† Water heaters and hot water supply boilers having more than 140 gallons of storage capacity need not meet the standby loss requirement if: (1) The tank surface area is thermally insulated to R–12.5 or more, (2) a standing pilot light is not used, and (3) for gas or oil-fired storage water heaters, they have a fire damper or fan-assisted combustion.

‡ Energy conservation standards for electric instantaneous water heaters are included in EPCA. (42 U.S.C. 6313(a)(5)(D)–(E)) The compliance date for these energy conservation standards is January 1, 1994. In this NOPR, DOE proposes to codify these standards for electric instantaneous water heaters in its regulations at 10 CFR 431.110. Further discussion of standards for electric instantaneous water heaters is included in section III.B.4 of this NOPR.

TABLE V.46—PROPOSED AMENDED ENERGY CONSERVATION STANDARDS FOR RESIDENTIAL-DUTY GAS-FIRED COMMERCIAL WATER HEATERS

Equipment	Specification *	Draw pattern **	Uniform energy factor
Gas-fired Storage	>75 kBtu/h and	Very Small	$0.5374 - (0.0009 \times V_r)$
	≤105 kBtu/h and	Low	$0.8062 - (0.0012 \times V_r)$
	≤120 gal and	Medium	$0.8702 - (0.0011 \times V_r)$
	≤180 °F	High	$0.9297 - (0.0009 \times V_r)$

* Additionally, to be classified as a residential-duty water heater, a commercial water heater must meet the following conditions: (1) If requiring electricity, use single-phase external power supply; and (2) the water heater must not be designed to heat water at temperatures greater than 180 °F.

** Draw pattern is a classification of hot water use of a consumer water heater or residential-duty commercial water heater, based upon the first-hour rating. The draw pattern is determined using the *Uniform Test Method for Measuring the Energy Consumption of Water Heaters* in appendix E to subpart B of 10 CFR part 430.

2. Annualized Benefits and Costs of the Proposed Standards

The benefits and costs of the proposed standards can also be expressed in terms of annualized values. The annualized net benefit is (1) the annualized national economic value (expressed in 2020$) of the benefits from operating products that meet the proposed standards (consisting primarily of operating cost savings from using less energy, minus increases in product purchase costs, and (2) the annualized monetary value of the benefits of GHG and NO_X emission reductions.

Table V.47 shows the annualized values for CWH equipment under TSL 3, expressed in 2020$. The results under the primary estimate are as follows.

Using a 7-percent discount rate for consumer benefits and costs and health benefits from reduced NO_X and SO_2 emissions, and a 3-percent discount rate case for climate benefits from reduced GHG emissions, the estimated cost of the proposed standards for CWH equipment is $59 million per year in increased equipment costs, while the estimated annual benefits are $110 million in reduced equipment operating costs, $113 million in climate benefits, and $104 million in health benefits. In this case, the net benefit amounts to $267 million per year.

Using a 3-percent discount rate for all benefits and costs, the estimated cost of

the proposed standards for CWH equipment is $55 million per year in increased equipment costs, while the estimated annual benefits are $140 million in reduced operating costs, $113 million in climate benefits, and $150 million in health benefits. In this case, the net benefit would amount to $349 million per year.

TABLE V.47—ANNUALIZED BENEFITS AND COSTS OF PROPOSED ENERGY CONSERVATION STANDARDS FOR CWH EQUIPMENT

[TSL 3]

Category	Million 2020$/year		
	Primary estimate	Low-net-benefits estimate	High-net-benefits estimate
3% discount rate			
Consumer Operating Cost Savings	140.3	130.3	151.7
Climate Benefits*	112.8	107.2	117.8
Health Benefits**	150.4	143.5	170.0
Total Benefits†	404	381	439
Consumer Incremental Product Costs‡	54.7	52.6	56.6
Net Benefits	349	328	383
7% discount rate			
Consumer Operating Cost Savings	109.6	103.4	116.7
Climate Benefits* (3% discount rate)	112.8	107.2	117.8
Health Benefits**	104.3	100.4	117.2
Total Benefits†	327	311	352
Consumer Incremental Product Costs‡	59.2	57.5	60.9
Net Benefits	267	253	291

Note: This table presents the costs and benefits associated with consumer pool heaters shipped in 2026–2055. These results include benefits to consumers which accrue after 2055 from the products shipped in 2026–2055. Numbers may not add due to rounding.

* Climate benefits are calculated using four different estimates of the social cost of carbon (SC–CO_2), methane (SC–CH_4), and nitrous oxide (SC–N_2O) (model average at 2.5 percent, 3 percent, and 5 percent discount rates; 95th percentile at 3 percent discount rate). Together these represent the global social cost of greenhouse gases (SC–GHG). For presentational purposes of this table, the climate benefits associated with the average SC–GHG at a 3 percent discount rate are shown, but the Department does not have a single central SC–GHG point estimate, and it emphasizes the importance and value of considering the benefits calculated using all four SC–GHG estimates. See section IV.L of this document for more details.

** Health benefits are calculated using benefit-per-ton values for NO_X and SO_2. DOE is currently only monetizing $PM_{2.5}$ and (for NO_X) ozone precursor health benefits, but will continue to assess the ability to monetize other effects such as health benefits from reductions in direct $PM_{2.5}$ emissions. The health benefits are presented at real discount rates of 3 and 7 percent. See section IV.L of this document for more details.

† Total and net benefits include consumer, climate, and health benefits. For presentation purposes, total and net benefits for both the 3-percent and 7-percent cases are presented using the average SC–GHG with 3-percent discount rate, but the Department does not have a single central SC–GHG point estimate. DOE emphasizes the importance and value of considering the benefits calculated using all four SC–GHG estimates. On March 16, 2022, the Fifth Circuit Court of Appeals (No. 22–30087) granted the federal government's emergency motion for stay pending appeal of the February 11, 2022, preliminary injunction issued in *Louisiana* v. *Biden,* No. 21–cv–1074–JDC–KK (W.D. La.). As a result of the Fifth Circuit's order, the preliminary injunction is no longer in effect, pending resolution of the federal government's appeal of that injunction or a further court order. Among other things, the preliminary injunction enjoined the defendants in that case from ''adopting, employing, treating as binding, or relying upon'' the interim estimates of the social cost of greenhouse gases—which were issued by the Interagency Working Group on the Social Cost of Greenhouse Gases on February 26, 2021—to monetize the benefits of reducing greenhouse gas emissions. In the absence of further intervening court orders, DOE will revert to its approach prior to the injunction and present monetized benefits where appropriate and permissible under law.

‡ Costs include incremental equipment costs as well as installation costs.

VI. Procedural Issues and Regulatory Review

A. Review Under Executive Orders 12866 and 13563

Section 1(b)(1) of Executive Order (''E.O.'') 12866, ''Regulatory Planning and Review,'' 58 FR 51735 (Oct. 4, 1993), requires each agency to identify the problem that it intends to address, including, where applicable, the failures of private markets or public institutions that warrant new agency action, as well as to assess the significance of that problem. The problems that the proposed standards set forth in this NOPR are intended to address are as follows:

(1) Insufficient information and the high costs of gathering and analyzing relevant information leads some consumers to miss opportunities to make cost-effective investments in energy efficiency.

(2) In some cases, the benefits of more-efficient equipment are not realized due to misaligned incentives between purchasers and users. An example of such a case is when the equipment purchase decision is made by a building contractor or building owner who does not pay the energy costs.

(3) There are external benefits resulting from improved energy efficiency of appliances and equipment that are not captured by the users of such products. These benefits include externalities related to public health, environmental protection, and national energy security that are not reflected in energy prices, such as reduced emissions of air pollutants and greenhouse gases that impact human health and global warming. DOE attempts to quantify some of the

external benefits through use of social cost of carbon values.

The Administrator of the Office of Information and Regulatory Affairs (''OIRA'') in the OMB has determined that the proposed regulatory action is a significant regulatory action under section (3)(f) of Executive Order 12866. Accordingly, pursuant to section 6(a)(3)(B) of the Order, DOE has provided to OIRA:

(i) The text of the draft regulatory action, together with a reasonably detailed description of the need for the regulatory action and an explanation of how the regulatory action will meet that need; and

(ii) An assessment of the potential costs and benefits of the regulatory action, including an explanation of the manner in which the regulatory action is consistent with a statutory mandate. DOE has included these documents in the rulemaking record. A summary of the potential costs and benefits of the regulatory action is presented in Table VI.1.

TABLE VI.1—ANNUALIZED BENEFITS, COSTS, AND NET BENEFITS OF PROPOSED STANDARDS

Category	Million 2020$/year	
	3% Discount rate	7% Discount rate
Consumer Operating Cost Savings	140.3	109.6
Climate Benefits *	112.8	112.8
Health Benefits **	17.3	12.3
Total Benefits †	270	235
Costs ‡	54.7	59.2
Net Benefits	216	175

Note: This table presents the costs and benefits associated with commercial water heaters shipped in 2026–2055. These results include benefits to consumers which accrue after 2055 from the products shipped in 2026–2055.

* Climate benefits are calculated using four different estimates of the global SC–CO_2, SC–CH_4, and SC–N_2O (see section IV.L of this proposed rule). Together these represent the global social cost of greenhouse gases (SC–GHG). For presentational purposes of this table, the climate benefits associated with the average SC–GHG at a 3 percent discount rate are shown, but the Department does not have a single central SC–GHG point estimate, and it emphasizes the importance and value of considering the benefits calculated using all four SC–GHG estimates.

** Health benefits are calculated using benefit-per-ton values for NO_X and SO_2. The benefits are based on the low estimates of the monetized value. DOE is currently only monetizing $PM_{2.5}$ and (for NO_X) ozone precursor health benefits, but will continue to assess the ability to monetize other effects such as health benefits from reductions in direct $PM_{2.5}$ emissions. See section IV.L of this document for more details.

† Total benefits include consumer, climate, and health benefits. Total benefits for both the 3-percent and 7-percent cases are presented using the average SC–GHG with 3-percent discount rate, but the Department does not have a single central SC–GHG point estimate. On March 16, 2022, the Fifth Circuit Court of Appeals (No. 22–30087) granted the federal government's emergency motion for stay pending appeal of the February 11, 2022, preliminary injunction issued in *Louisiana* v. *Biden,* No. 21–cv–1074–JDC–KK (W.D. La.). As a result of the Fifth Circuit's order, the preliminary injunction is no longer in effect, pending resolution of the federal government's appeal of that injunction or a further court order. Among other things, the preliminary injunction enjoined the defendants in that case from ''adopting, employing, treating as binding, or relying upon'' the interim estimates of the social cost of greenhouse gases—which were issued by the Interagency Working Group on the Social Cost of Greenhouse Gases on February 26, 2021—to monetize the benefits of reducing greenhouse gas emissions. In the absence of further intervening court orders, DOE will revert to its approach prior to the injunction and present monetized benefits where appropriate and permissible under law.

‡ Costs include incremental equipment costs as well as installation costs.

In addition, the Administrator of OIRA has determined that the proposed regulatory action is an ''economically'' significant regulatory action under section (3)(f)(1) of E.O. 12866. Accordingly, pursuant to section 6(a)(3)(C) of the Order, DOE has provided to OIRA an assessment, including the underlying analysis, of benefits and costs anticipated from the regulatory action, together with, to the extent feasible, a quantification of those costs; and an assessment, including the underlying analysis, of costs and benefits of potentially effective and reasonably feasible alternatives to the planned regulation, and an explanation why the planned regulatory action is preferable to the identified potential alternatives. These assessments can be found in the technical support document for this proposed rulemaking.

DOE has also reviewed this regulation pursuant to E.O. 13563, issued on January 18, 2011. 76 FR 3281 (Jan. 21, 2011). E.O. 13563 is supplemental to and explicitly reaffirms the principles, structures, and definitions governing regulatory review established in E.O. 12866. To the extent permitted by law, agencies are required by E.O. 13563 to (1) propose or adopt a regulation only upon a reasoned determination that its benefits justify its costs (recognizing that some benefits and costs are difficult to quantify); (2) tailor regulations to impose the least burden on society, consistent with obtaining regulatory objectives, taking into account, among other things, and to the extent practicable, the costs of cumulative regulations; (3) select, in choosing among alternative regulatory approaches, those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity); (4) to the extent feasible, specify performance objectives, rather than specifying the behavior or manner of compliance that regulated entities must adopt; and (5) identify and assess available alternatives to direct regulation, including providing economic incentives to encourage the desired behavior, such as user fees or marketable permits, or providing information upon which choices can be made by the public.

DOE emphasizes as well that E.O. 13563 requires agencies to use the best available techniques to quantify anticipated present and future benefits and costs as accurately as possible. In its guidance, OIRA has emphasized that such techniques may include identifying changing future compliance costs that might result from technological innovation or anticipated behavioral changes. For the reasons stated in the preamble, this NOPR is consistent with these principles, including the requirement that, to the extent permitted by law, benefits justify costs and that net benefits are maximized.

B. Review Under the Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires preparation

of an initial regulatory flexibility analysis (IRFA) and a final regulatory flexibility analysis (FRFA) for any rule that by law must be proposed for public comment, unless the agency certifies that the rule, if promulgated, will not have a significant economic impact on a substantial number of small entities. As required by Executive Order 13272, ''Proper Consideration of Small Entities in Agency Rulemaking,'' 67 FR 53461 (August 16, 2002), DOE published procedures and policies on February 19, 2003, to ensure that the potential impacts of its rules on small entities are properly considered during the rulemaking process. 68 FR 7990. DOE has made its procedures and policies available on the Office of the General Counsel's website (*www.energy.gov/gc/office-general-counsel*). The following sections detail DOE's IRFA for this energy conversation standards proposed rulemaking.

1. Description of Reasons Why Action Is Being Considered

DOE is proposing to amend energy conservation standards for CWH equipment. Pursuant to EPCA, DOE is to consider amending the energy efficiency standards for certain types of commercial and industrial equipment, including the equipment at issue in this document, whenever the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (''ASHRAE'') amends the standard levels or design requirements prescribed in ASHRAE Standard 90.1, ''Energy Standard for Buildings Except Low-Rise Residential Buildings,'' (''ASHRAE Standard 90.1''), and at a minimum, every six 6 years. DOE must adopt more stringent efficiency standards, unless DOE determines, supported by clear and convincing evidence, that adoption of a more stringent level would produce significant additional conservation of energy would be technologically feasible and economically justified. (42 U.S.C. 6313(a)(6)(A)–(C))

2. Objectives of, and Legal Basis for, Rule

Under EPCA, DOE must review energy efficiency standards for CWH equipment every six years and either: (1) Issue a notice of determination that the standards do not need to be amended as adoption of a more stringent level is not supported by clear and convincing evidence; or (2) issue a notice of proposed rulemaking including new proposed standards based on certain criteria and procedures in subparagraph (B) of 42 U.S.C. 6313(a)(6). (42 U.S.C. 6313(a)(6)(C))

Under EPCA, DOE's energy conservation program consists essentially of four parts: (1) Testing, (2) labeling, (3) Federal energy conservation standards, and (4) certification and enforcement procedures. For covered equipment, relevant provisions of the Act include definitions (42 U.S.C. 6311), energy conservation standards (42 U.S.C. 6313), test procedures (42 U.S.C. 6314), labeling provisions (42 U.S.C. 6315), and the authority to require information and reports from manufacturers (42 U.S.C. 6316). DOE requires the manufacturer of any covered product or covered equipment to establish, maintain, and retain the records of certification reports, of the underlying test data for all certification testing, and of any other testing conducted to satisfy the requirements of 10 CFR part 429, 10 CFR part 430, and/or 10 CFR part 431. Certification reports provide DOE and consumers with comprehensive, up-to date efficiency information and support effective enforcement.

3. Description on Estimated Number of Small Entities Regulated

For manufacturers of CWH equipment, the Small Business Administration (''SBA'') has set a size threshold, which defines those entities classified as ''small businesses'' for the purposes of the statute. DOE used the SBA's small business size standards to determine whether any small entities would be subject to the requirements of the rule. *See* 13 CFR part 121. The equipment covered by this proposed rule are classified under North American Industry Classification System (''NAICS'') code 333318,[170] ''Other Commercial and Service Industry Machinery Manufacturing.'' In 13 CFR 121.201, the SBA sets a threshold of 1,000 employees or fewer for an entity to be considered as a small business for this category. DOE's analysis relied on publicly available databases to identify potential small businesses that manufacture equipment covered in this rulemaking. DOE utilized the California Energy Commission's Modernized Appliance Efficiency Database System (''MAEDbS''),[171] the DOE's Energy Star Database,[172] and the DOE's Certification Compliance Database (''CCD'') [173] in identifying manufacturers. For the purpose of this NOPR, two analyses are being performed regarding impacts to small businesses: (1) Impact of the amended standards and (2) impact of the codification of requirements for electric instantaneous water heater manufacturers.

Regarding manufacturers impacted by the amended standards, DOE identified fifteen original equipment manufacturers (''OEM''). DOE screened out companies that do not meet the definition of a ''small business'' or are foreign-owned and operated. DOE used subscription-based business information tools to determine headcount and revenue of the small businesses. Of these fourteen OEMs, DOE identified three companies that are small, domestic OEMs.

Regarding models impacted by the codification of requirements for electric instantaneous water heaters, DOE's research identified 9 OEMs of commercial electric instantaneous water heaters being sold in the U.S. market. Of these nine companies, DOE has identified three as domestic, small businesses. The small businesses do not currently certify any other CWH equipment to DOE's CCMS.

Issue 12: DOE seeks comment on the number of small manufacturers producing covered CWH equipment.

4. Description and Estimate of Compliance Requirements

This NOPR proposes to adopt amended standards for gas-fired storage water heaters, gas-fired instantaneous water heaters and hot water supply boilers, and residential-duty gas-fired storage water heaters. Additionally, this NOPR seeks to codify energy conservation standards for electric instantaneous water heaters from EPCA into the CFR.

To determine the impact on the small OEMs, product conversion costs and capital conversion costs were estimated. Product conversion costs are investments in research, development, testing, marketing, and other non-capitalized costs necessary to make product designs comply with amended energy conservation standards. Capital conversion costs are one-time investments in plant, property, and

[170] The business size standards are listed by NAICS code and industry description and are available at *www.sba.gov/document/support--table-size-standards* (Last accessed July 26th, 2021).

[171] MAEDbS can be accessed at *www.cacertappliances.energy.ca.gov/Pages/Search/AdvancedSearch.aspx* (Last accessed July 15th, 2021).

[172] Energy Star certified product can be found in the Energy Star database accessed at *www.energystar.gov/productfinder/product/certified-commercial-water-heaters/results* (Last accessed July 15th, 2021).

[173] Certified equipment in the CCD are listed by product class and can be accessed at *www.regulations.doe.gov/certification-data/#q=Product_Group_s%3A** (Last accessed July 15th, 2021).

equipment made in response to new and/or amended standards.

In reviewing all commercially available models in DOE's Compliance Certification Database, the three small manufacturers account for approximately 4 percent of industry model offerings. Of the three small manufacturers, the first manufacturer exclusively manufactures gas-fired instantaneous tankless water heaters and will remain unimpacted by the proposed standards as 100 percent of models meet TSL 3 or higher. There are no anticipated capital conversion costs or production conversion costs required to meet proposed standards.

The second manufacturer exclusively manufacturers hot water supply boilers and 67 percent of its models are unimpacted by the proposed standards. DOE estimates that this manufacturer will incur approximately $16,700 in capital conversion costs and $15,650 in product conversion costs to meet proposed standards. The combined conversion costs represent less than one percent of the firm's anticipated revenue during the conversion period.

The third manufacturer primarily manufactures gas-fired storage water heaters and residential-duty gas fired storage water heaters. For this manufacturer, 53 percent of their models are unimpacted by the proposed standards. DOE estimates that this manufacturer will incur approximately $178,000 in capital conversion costs and $226,000 in product conversion costs to meet proposed standards. The combined conversion costs represent 2% of the firm's anticipated revenue during the conversion period.

In addition to proposing amended standards, this rulemaking, DOE is proposing to codify standards for electric instantaneous CWH equipment from EPCA into the CFR.

EPCA prescribes energy conservation standards for several classes of CWH equipment manufactured on or after January 1, 1994. (42 U.S.C. 6313(a)(5)) DOE codified these standards in its regulations for CWH equipment at 10 CFR 431.110. However, when codifying these standards from EPCA, DOE inadvertently omitted the standards put in place by EPCA for electric instantaneous water heaters. In the NOPR, DOE is proposing to codify these standards in its regulations at 10 CFR 431.110. This NOPR does not propose certification requirements for electric instantaneous water heaters. Thus, DOE estimates no additional paperwork costs on manufacturers of electric instantaneous water heater equipment as result of the NOPR.

Issue 13: DOE seeks comment on types of costs and magnitude of costs small manufacturers would incur as result of the amended standards proposed for CWH equipment and the codification of standards for commercial electric instantaneous water heaters.

5. Duplication, Overlap, and Conflict With Other Rules and Regulations

DOE is not aware of any rules or regulations that duplicate, overlap, or conflict with the proposed rule being considered in this action.

6. Significant Alternatives to the Rule

The discussion in the previous section analyzes impacts on small businesses that would result from DOE's proposed rule, represented by TSL 3. In reviewing alternatives to the proposed rule, DOE examined a range of different efficiency levels and their respective impacts to both manufacturers and consumers. DOE first considered TSL 4. TSL 4 would save 0.96 quads of energy with a projected change in manufacturer INPV of −42.0 percent to −33.6 percent. TSL 4 has energy savings that are 37 percent higher than TSL 3.

DOE also considered TSL 2 and TSL 1. TSL 2 would save 0.48 quads of energy with the projected change in manufacturer INPV ranging from −6.6 percent to −1.9 percent. TSL 2 has energy savings that are 31 percent lower than TSL 3. TSL 1 would save 0.09 quads of energy with the projected change in manufacturer INPV ranging from −1.0 percent to −0.6 percent. TSL 1 has energy savings that are 87 percent lower than TSL 3.

Based on the presented discussion, DOE believes that TSL 3 would deliver the highest energy savings while mitigating the potential burdens placed on CWH equipment manufacturers, including small business manufacturers. Accordingly, DOE does not propose one of the other TSLs considered in the analysis, or the other policy alternatives as part of the regulatory impact analysis and included in chapter 17 of the NOPR TSD.

Additional compliance flexibilities may be available through other means. Manufacturers subject to DOE's energy efficiency standards may apply to DOE's Office of Hearings and Appeals for exception relief under certain circumstances. Manufacturers should refer to 10 CFR part 1003 for additional details.

C. Review Under the Paperwork Reduction Act

Manufacturers of CWH equipment must certify to DOE that their equipment complies with any applicable energy conservation standards. In certifying compliance, manufacturers must test their equipment according to the applicable DOE test procedures for CWH equipment, including any amendments adopted for those test procedures on the date that compliance is required. DOE has established regulations for the certification and recordkeeping requirements for all covered commercial consumer products and commercial equipment, including CWH equipment. (*See generally* 10 CFR part 429). The collection-of-information requirement for the certification and recordkeeping is subject to review and approval by OMB under the Paperwork Reduction Act (''PRA''). DOE's current reporting requirements have been approved by OMB under OMB control number 1910–1400. Public reporting burden for the certification is estimated to average 35 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, certifying compliance, and completing and reviewing the collection of information.

Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the PRA, unless that collection of information displays a currently valid OMB Control Number.

D. Review Under the National Environmental Policy Act of 1969

DOE is analyzing this proposed regulation in accordance with the National Environmental Policy Act of 1969 (''NEPA'') and DOE's NEPA implementing regulations (10 CFR part 1021). DOE's regulations include a categorical exclusion for rulemakings that establish energy conservation standards for consumer products or industrial equipment. 10 CFR part 1021, subpart D, appendix B5.1. DOE anticipates that this rulemaking qualifies for categorical exclusion B5.1 because it is an interpretive rulemaking that that establishes energy conservation standards for consumer products or industrial equipment, none of the exceptions identified in CX B5.1(b) apply, no extraordinary circumstances exist that require further environmental analysis, and it otherwise meets the requirements for application of a categorical exclusion. *See* 10 CFR 1021.410. DOE will complete its NEPA review before issuing the final rule.

E. Review Under Executive Order 13132

Executive Order 13132, ''Federalism,'' 64 FR 43255 (August 10, 1999), imposes

certain requirements on Federal agencies formulating and implementing policies or regulations that preempt State law or that have federalism implications. The Executive order requires agencies to examine the constitutional and statutory authority supporting any action that would limit the policymaking discretion of the States and to carefully assess the necessity for such actions. The Executive order also requires agencies to have an accountable process to ensure meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications. On March 14, 2000, DOE published a statement of policy describing the intergovernmental consultation process that it will follow in the development of such regulations. 65 FR 13735. DOE has examined this NOPR and has tentatively determined that it would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. EPCA governs and prescribes Federal preemption of State regulations as to energy conservation for the equipment that is the subject of this NOPR. States can petition DOE for exemption from such preemption to the extent, and based on criteria, set forth in EPCA (*See* 42 U.S.C. 6316(a) and (b); 42 U.S.C. 6297). Therefore, no further action is required by Executive Order 13132.

F. Review Under Executive Order 12988

With respect to the review of existing regulations and the promulgation of new regulations, section 3(a) of Executive Order 12988, ''Civil Justice Reform,'' imposes on Federal agencies the general duty to adhere to the following requirements: (1) Eliminate drafting errors and ambiguity, (2) write regulations to minimize litigation, (3) provide a clear legal standard for affected conduct rather than a general standard, and (4) promote simplification and burden reduction. 61 FR 4729 (Feb. 7, 1996). Regarding the review required by section 3(a), section 3(b) of Executive Order 12988 specifically requires that Executive agencies make every reasonable effort to ensure that the regulation (1) clearly specifies the preemptive effect, if any; (2) clearly specifies any effect on existing Federal law or regulation; (3) provides a clear legal standard for affected conduct while promoting simplification and burden reduction; (4) specifies the retroactive effect, if any; (5) adequately defines key terms; and (6) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. Section 3(c) of Executive Order 12988 requires executive agencies to review regulations in light of applicable standards in section 3(a) and section 3(b) to determine whether they are met or it is unreasonable to meet one or more of them. DOE has completed the required review and determined that, to the extent permitted by law, this NOPR meets the relevant standards of Executive Order 12988.

G. Review Under the Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA) requires each Federal agency to assess the effects of Federal regulatory actions on State, local, and Tribal governments and the private sector. Public Law 104–4, sec. 201 (codified at 2 U.S.C. 1531). For a proposed regulatory action likely to result in a rule that may cause the expenditure by State, local, and Tribal governments, in the aggregate, or by the private sector, of $100 million or more in any one year (adjusted annually for inflation), section 202 of UMRA requires a Federal agency to publish a written statement that estimates the resulting costs, benefits, and other effects on the national economy. (2 U.S.C. 1532(a), (b)) The UMRA also requires a Federal agency to develop an effective process to permit timely input by elected officers of State, local, and Tribal governments on a ''significant intergovernmental mandate,'' and requires an agency plan for giving notice and opportunity for timely input to potentially affected small governments before establishing any requirements that might significantly or uniquely affect them. On March 18, 1997, DOE published a statement of policy on its process for intergovernmental consultation under UMRA. 62 FR 12820. DOE's policy statement is also available at *www.energy.gov/gc/office-general-counsel.*

This NOPR does not contain a Federal intergovernmental mandate, nor is it expected to require expenditures of $100 million or more in any one year by the private sector. As a result, the analytical requirements of UMRA do not apply.

H. Review Under the Treasury and General Government Appropriations Act, 1999

Section 654 of the Treasury and General Government Appropriations Act, 1999 (Pub. L. 105–277) requires Federal agencies to issue a Family Policymaking Assessment for any rule that may affect family well-being. This NOPR would not have any impact on the autonomy or integrity of the family as an institution. Accordingly, DOE has concluded that it is not necessary to prepare a Family Policymaking Assessment.

I. Review Under Executive Order 12630

Pursuant to Executive Order 12630, ''Governmental Actions and Interference with Constitutionally Protected Property Rights,'' 53 FR 8859 (March 15, 1988), DOE has determined that this NOPR would not result in any takings that might require compensation under the Fifth Amendment to the U.S. Constitution.

J. Review Under the Treasury and General Government Appropriations Act, 2001

Section 515 of the Treasury and General Government Appropriations Act, 2001 (44 U.S.C. 3516 note) provides for Federal agencies to review most disseminations of information to the public under information quality guidelines established by each agency pursuant to general guidelines issued by OMB. OMB's guidelines were published at 67 FR 8452 (Feb. 22, 2002), and DOE's guidelines were published at 67 FR 62446 (Oct. 7, 2002). Pursuant to OMB Memorandum M–19–15, Improving Implementation of the Information Quality Act (April 24, 2019), DOE published updated guidelines which are available at *www.energy.gov/sites/prod/files/2019/12/f70/DOE%20Final%20Updated%20IQA%20Guidelines%20Dec%202019.pdf.* DOE has reviewed this NOPR under the OMB and DOE guidelines and has concluded that it is consistent with applicable policies in those guidelines.

K. Review Under Executive Order 13211

E.O. 13211, ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use,'' 66 FR 28355 (May 22, 2001), requires Federal agencies to prepare and submit to OIRA at OMB, a Statement of Energy Effects for any proposed significant energy action. A ''significant energy action'' is defined as any action by an agency that promulgates or is expected to lead to promulgation of a final rule, and that (1) is a significant regulatory action under Executive Order 12866, or any successor order; and (2) is likely to have a significant adverse effect on the supply, distribution, or use of energy, or (3) is designated by the Administrator of OIRA as a significant energy action. For any significant energy action, the agency must give a detailed statement of any

adverse effects on energy supply, distribution, or use should the proposal be implemented, and of reasonable alternatives to the action and their expected benefits on energy supply, distribution, and use.

DOE has tentatively concluded that this regulatory action, which proposes amended energy conservation standards for CWH equipment, is not a significant energy action because the proposed standards are not likely to have a significant adverse effect on the supply, distribution, or use of energy, nor has it been designated as such by the Administrator at OIRA. Accordingly, DOE has not prepared a Statement of Energy Effects on this proposed rule.

L. Information Quality

On December 16, 2004, OMB, in consultation with the Office of Science and Technology Policy (''OSTP''), issued its Final Information Quality Bulletin for Peer Review (''the Bulletin''). 70 FR 2664 (Jan. 14, 2005). The Bulletin establishes that certain scientific information shall be peer reviewed by qualified specialists before it is disseminated by the Federal Government, including influential scientific information related to agency regulatory actions. The purpose of the bulletin is to enhance the quality and credibility of the Government's scientific information. Under the Bulletin, the energy conservation standards rulemaking analyses are ''influential scientific information,'' which the Bulletin defines as ''scientific information the agency reasonably can determine will have or does have a clear and substantial impact on important public policies or private sector decisions.'' *Id.* at 70 FR 2667.

In response to OMB's Bulletin, DOE conducted formal peer reviews of the energy conservation standards development process and the analyses that are typically used and has prepared a report describing that peer review.[174] Generation of this report involved a rigorous, formal, and documented evaluation using objective criteria and qualified and independent reviewers to make a judgment as to the technical/scientific/business merit, the actual or anticipated results, and the productivity and management effectiveness of programs and/or projects. DOE has determined that the peer-reviewed analytical process continues to reflect current practice, and the Department followed that process for developing energy conservation standards in the case of the present SNOPR.

M. Materials Incorporated by Reference

In this NOPR, DOE proposes to incorporate by reference the following test standards:

(1) ASTM C177–13, ''Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus''; and

(2) ASTM C518–15, ''Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.''

ASTM C177–13 is an industry-accepted test procedure for determining the R-value of a sample using a guarded-hot-plate apparatus. ASTM C177–13 is available on ASTM's website at *www.astm.org/c0177-13.html.*

ASTM C518–15 is an industry-accepted test procedure for determining the R-value of a sample using a heat flow meter apparatus. ASTM C518–15 is available on ASTM's website at *https://www.astm.org/c0518-15.html.*

VII. Public Participation

A. Participation in the Webinar

The time and date of the webinar are listed in the **DATES** section at the beginning of this document. If no participants register for the webinar then it will be cancelled. Webinar registration information, participant instructions, and information about the capabilities available to webinar participants will be published on DOE's website: *www1.eere.energy.gov/buildings/appliance_standards/standards.aspx?productid=36.* Participants are responsible for ensuring their systems are compatible with the webinar software.

B. Procedure for Submitting Prepared General Statements for Distribution

Any person who has an interest in the topics addressed in this proposed rule, or who is representative of a group or class of persons that has an interest in these issues, may request an opportunity to make an oral presentation at the webinar. Such persons may submit to *ApplianceStandardsQuestions@ee.doe.gov.* Persons who wish to speak should include with their request a computer file in WordPerfect, Microsoft Word, PDF, or text (ASCII) file format that briefly describes the nature of their interest in this rulemaking and the topics they wish to discuss. Such persons should also provide a daytime telephone number where they can be reached.

Persons requesting to speak should briefly describe the nature of their interest in this rulemaking and provide a telephone number for contact. DOE requests persons selected to make an oral presentation to submit an advance copy of their statements at least two weeks before the webinar. At its discretion, DOE may permit persons who cannot supply an advance copy of their statement to participate, if those persons have made advance alternative arrangements with the Building Technologies Office. As necessary, requests to give an oral presentation should ask for such alternative arrangements.

C. Conduct of the Webinar

DOE will designate a DOE official to preside at the webinar/public meeting and may also use a professional facilitator to aid discussion. The meeting will not be a judicial or evidentiary-type public hearing, but DOE will conduct it in accordance with section 336 of EPCA (42 U.S.C. 6306). A court reporter will be present to record the proceedings and prepare a transcript. DOE reserves the right to schedule the order of presentations and to establish the procedures governing the conduct of the webinar/public meeting. There shall not be discussion of proprietary information, costs or prices, market share, or other commercial matters regulated by U.S. anti-trust laws. After the webinar/public meeting and until the end of the comment period, interested parties may submit further comments on the proceedings and any aspect of the rulemaking.

The webinar/public meeting will be conducted in an informal, conference style. DOE will present summaries of comments received before the webinar/public meeting, allow time for prepared general statements by participants, and encourage all interested parties to share their views on issues affecting this rulemaking. Each participant will be allowed to make a general statement (within time limits determined by DOE), before the discussion of specific topics. DOE will permit, as time permits, other participants to comment briefly on any general statements.

At the end of all prepared statements on a topic, DOE will permit participants to clarify their statements briefly. Participants should be prepared to answer questions by DOE and by other participants concerning these issues. DOE representatives may also ask questions of participants concerning other matters relevant to this rulemaking. The official conducting the webinar/public meeting will accept

[174] The 2007 ''Energy Conservation Standards Rulemaking Peer Review Report'' is available at the following website: *energy.gov/eere/buildings/downloads/energy-conservation-standards-rulemaking-peer-review-report-0* (last accessed August 25, 2021).

additional comments or questions from those attending, as time permits. The presiding official will announce any further procedural rules or modification of the above procedures that may be needed for the proper conduct of the webinar/public meeting.

A transcript of the webinar/public meeting will be included in the docket, which can be viewed as described in the *Docket* section at the beginning of this proposed rule. In addition, any person may buy a copy of the transcript from the transcribing reporter.

D. Submission of Comments

DOE will accept comments, data, and information regarding this proposed rule no later than the date provided in the **DATES** section at the beginning of this proposed rule. Interested parties may submit comments, data, and other information using any of the methods described in the **ADDRESSES** section at the beginning of this document.

Submitting comments via www.regulations.gov. The *www.regulations.gov* web page will require you to provide your name and contact information. Your contact information will be viewable to DOE Building Technologies staff only. Your contact information will not be publicly viewable except for your first and last names, organization name (if any), and submitter representative name (if any). If your comment is not processed properly because of technical difficulties, DOE will use this information to contact you. If DOE cannot read your comment due to technical difficulties and cannot contact you for clarification, DOE may not be able to consider your comment.

However, your contact information will be publicly viewable if you include it in the comment itself or in any documents attached to your comment. Any information that you do not want to be publicly viewable should not be included in your comment, nor in any document attached to your comment. Otherwise, persons viewing comments will see only first and last names, organization names, correspondence containing comments, and any documents submitted with the comments.

Do not submit to *www.regulations.gov* information for which disclosure is restricted by statute, such as trade secrets and commercial or financial information (hereinafter referred to as Confidential Business Information (''CBI''). Comments submitted through *www.regulations.gov* cannot be claimed as CBI. Comments received through the website will waive any CBI claims for the information submitted. For information on submitting CBI, see the Confidential Business Information section.

DOE processes submissions made through *www.regulations.gov* before posting. Normally, comments will be posted within a few days of being submitted. However, if large volumes of comments are being processed simultaneously, your comment may not be viewable for up to several weeks. Please keep the comment tracking number that *www.regulations.gov* provides after you have successfully uploaded your comment.

Submitting comments via email. Comments and documents submitted via email, hand delivery/courier, or postal mail also will be posted to *www.regulations.gov.* If you do not want your personal contact information to be publicly viewable, do not include it in your comment or any accompanying documents. Instead, provide your contact information in a cover letter. Include your first and last names, email address, telephone number, and optional mailing address. The cover letter will not be publicly viewable as long as it does not include any comments.

Include contact information each time you submit comments, data, documents, and other information to DOE. No faxes will be accepted.

Comments, data, and other information submitted to DOE electronically should be provided in PDF (preferred), Microsoft Word or Excel, WordPerfect, or text (ASCII) file format. Provide documents that are not secured, that are written in English, and that are free of any defects or viruses. Documents should not contain special characters or any form of encryption and, if possible, they should carry the electronic signature of the author.

Campaign form letters. Please submit campaign form letters by the originating organization in batches of between 50 to 500 form letters per PDF or as one form letter with a list of supporters' names compiled into one or more PDFs. This reduces comment processing and posting time.

Confidential Business Information. Pursuant to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit via email, postal mail, or hand delivery/courier two well-marked copies: One copy of the document marked ''confidential'' including all the information believed to be confidential, and one copy of the document marked ''non-confidential'' with the information believed to be confidential deleted. DOE will make its own determination about the confidential status of the information and treat it according to its determination.

It is DOE's policy that all comments may be included in the public docket, without change and as received, including any personal information provided in the comments (except information deemed to be exempt from public disclosure).

E. Issues on Which DOE Seeks Comment

Although DOE welcomes comments on any aspect of this proposal, DOE is particularly interested in receiving comments and views of interested parties concerning the following issues:

Issue 1: DOE requests comment on its assumption that the proposed test procedure amendments for residential-duty commercial water heaters are not expected to impact the efficiency ratings.

Issue 2: DOE requests comment and information on whether integrated heat pump water heaters are capable of meeting the same hot water loads as commercial electric storage water heaters that use electric resistance elements.

Issue 3: DOE requests comment on its proposed revisions to notes to the table of energy conservation standards in 10 CFR 431.110.

Issue 4: DOE seeks comments on the extraordinary venting cost adder. Specifically, DOE seeks data to estimate the fraction of consumers that might incur extraordinary costs, and the level of such extraordinary costs.

Issue 5: DOE seeks input on actual historical shipments for residential-duty gas-fired storage water heaters, gas-fired storage-type instantaneous water heaters, and for hot water supply boilers.

Issue 6: DOE seeks additional actual historical shipment information for commercial gas-fired instantaneous tankless water heaters covering the period between 2015 and 2020 to supplement the data provided in response to the withdrawn NOPR.

Issue 7: DOE seeks historical shipments data dividing shipments between condensing and non-condensing efficiencies, for all product types that comprise the subject of this rulemaking.

Issue 8: DOE seeks comment on the availability of systems that can be built by plumbing multiple individual water heaters together to achieve the same level of hot water delivery capacity.

Issue 9: DOE seeks input on the production facility and manufacturing process changes required as a result of potential amended standards for each equipment category. DOE also requests

input on the costs associated with those facility and manufacturing changes.

Issue 10: DOE seeks comment on whether manufacturers expect manufacturing capacity constraints would limit equipment availability to customers in the timeframe of the amended standard compliance date (2026).

Issue 11: DOE requests information regarding the impact of cumulative regulatory burden on manufacturers of CWH equipment associated with multiple DOE standards or product-specific regulatory actions of other Federal agencies. Additionally, where industry-wide constraints exist as a result of other overlapping regulatory actions, DOE requests stakeholders help identify and quantify those constraints.

Issue 12: DOE seeks comment on the number of small manufacturers producing covered CWH equipment.

Issue 13: DOE seeks comment on types of costs and magnitude of costs small manufacturers would incur as result of the amended standards proposed for CWH equipment and the codification of standards for commercial electric instantaneous water heaters.

VIII. Approval of the Office of the Secretary

The Secretary of Energy has approved publication of this notice of proposed rulemaking and announcement of public meeting.

List of Subjects in 10 CFR Part 431

Administrative practice and procedure, Confidential business information, Incorporation by reference, Test procedures, Reporting and recordkeeping requirements.

Signing Authority

This document of the Department of Energy was signed on May 4, 2022, by Kelly J. Speakes-Backman, Principal Deputy Assistant Secretary for Energy Efficiency and Renewable Energy, pursuant to delegated authority from the Secretary of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE Federal Register Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of the Department of Energy. This administrative process in no way alters the legal effect of this document upon publication in the **Federal Register**.

Signed in Washington, DC, on May 5, 2022.

Treena V. Garrett,

Federal Register Liaison Officer, U.S. Department of Energy.

For the reasons set forth in the preamble, DOE is proposing to amend part 431 of chapter II, subchapter D of title 10, Code of Federal Regulations, as set forth below:

PART 431—ENERGY EFFICIENCY PROGRAM FOR CERTAIN COMMERCIAL AND INDUSTRIAL EQUIPMENT

■ 1. The authority citation for part 431 continues to read as follows:

Authority: 42 U.S.C. 6291–6317; 28 U.S.C. 2461 note.

■ 2. Amend § 431.105 by:
■ a. Revising paragraph (a);
■ b. In paragraph (c)(1), removing ''§ 431.102'' and adding in its place, ''§§ 431.102; 431.110''; and
■ c. In paragraph (c)(2), removing ''§ 431.102t'' and adding in its place, ''§§ 431.102; 431.110''.

The revision reads as follows:

§ 431.105 Materials incorporated by reference.

(a) Certain material is incorporated by reference into this subpart with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, DOE must publish a document in the **Federal Register** and the material must be available to the public. All incorporation by reference (IBR) approved material is available for inspection at DOE, and at the National Archives and Records Administration (NARA). Contact DOE at: The U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, Sixth Floor, 950 L'Enfant Plaza SW, Washington, DC 20024, (202) 586–9127, *Buildings@ee.doe.gov, www.energy.gov/eere/buildings/building-technologies-office.* For information on the availability of this material at NARA, email: *fr.inspection@nara.gov,* or go to: *www.archives.gov/federal-register/cfr/ibr-locations.html.* The material may be obtained from the sources in the following paragraphs of this section.

* * * * *

■ 3. Revise § 431.110 to read as follows:

§ 431.110 Energy conservation standards and their effective dates.

(a) (1) Each commercial storage water heater, instantaneous water heater, and hot water supply boiler (excluding residential-duty commercial water heaters) must meet the applicable energy conservation standard level(s) as specified in table 1 to this paragraph. Any packaged boiler that provides service water that meets the definition of ''commercial packaged boiler'' in subpart E of this part, but does not meet the definition of ''hot water supply boiler'' in this subpart, must meet the requirements that apply to it under subpart E of this part.

(2) Water heaters and hot water supply boilers with a rated storage volume greater than 140 gallons described in table 1 to this paragraph need not meet the standby loss requirement if:

(i) The tank surface area is thermally insulated to R–12.5 or more, as determined using ASTM C177–13 or C518–15 (both incorporated by reference; see § 431.105)

(ii) A standing pilot light is not used; and

(iii) For gas-fired or oil-fired storage water heaters, they have a flue damper or fan-assisted combustion.

TABLE 1 TO § 431.110(a)—COMMERCIAL WATER HEATER ENERGY CONSERVATION STANDARDS

Equipment	Size	Energy conservation standards [a]			
		Minimum thermal efficiency (equipment manufactured on and after October 9, 2015)	Minimum thermal efficiency (equipment manufactured on and after [Compliance date of amended standards])	Maximum standby loss (equipment manufactured on and after October 29, 2003)	Maximum standby loss (equipment manufactured on and after [compliance date of amended standards])
Electric storage water heaters	All	N/A	N/A	$0.30 + 27/V_m$ (%/h)	$0.30 + 27/V_m$ (%/h)
Gas-fired storage water heaters and storage-type instantaneous water heaters.	All	80%	95%	$Q/800 + 110(V_r)^{1/2}$ (Btu/h)	$0.86 \times [Q/800 + 110(V_r)^{1/2}]$ (Btu/h)
Oil-fired storage water heaters	All	80%	80%	$Q/800 + 110(V_r)^{1/2}$ (Btu/h)	$Q/800 + 110(V_r)^{1/2}$ (Btu/h)
Electric instantaneous water heaters [b]	<10 gal	80%	80%	N/A	N/A
	≥10 gal	77%	77%	$2.30 + 67/V_m$ (%/h)	$2.30 + 67/V_m$ (%/h)

TABLE 1 TO § 431.110(a)—COMMERCIAL WATER HEATER ENERGY CONSERVATION STANDARDS—Continued

Equipment	Size	Energy conservation standards [a]			
		Minimum thermal efficiency (equipment manufactured on and after October 9, 2015)	Minimum thermal efficiency (equipment manufactured on and after [Compliance date of amended standards])	Maximum standby loss (equipment manufactured on and after October 29, 2003)	Maximum standby loss (equipment manufactured on and after [compliance date of amended standards])
Gas-fired instantaneous water heaters and hot water supply boilers.	<10 gal	80%	96%	N/A	N/A
	≥10 gal	80%	96%	Q/800 + 110(V_r)½ (Btu/h)	Q/800 + 110(V_r)½ (Btu/h)
Oil-fired instantaneous water heater and hot water supply boilers.	<10 gal	80%	80%	N/A	N/A
	≥10 gal	78%	78%	Q/800 + 110(V_r)½ (Btu/h)	Q/800 + 110(V_r)½ (Btu/h)

[a] V_m is the measured storage volume, and V_r is the rated storage volume, both in gallons. Q is the rated input in Btu/h, as determined pursuant to 10 CFR 429.44.n
[b] The compliance date for energy conservation standards for electric instantaneous water heaters is January 1, 1994.

(b) Each unfired hot water storage tank manufactured on and after October 29, 2003, must have a minimum thermal insulation of R–12.5.

(c) Each residential-duty commercial water heater must meet the applicable energy conservation standard level(s) in table 2 to this paragraph. Additionally, to be classified as a residential-duty commercial water heater, a commercial water heater must meet the following conditions:

(1) If the water heater requires electricity, it must use a single-phase external power supply; and

(2) The water heater must not be designed to heat water to temperatures greater than 180 °F

TABLE 2 TO § 431.110(c)—RESIDENTIAL-DUTY COMMERCIAL WATER HEATER ENERGY CONSERVATION STANDARDS

Equipment	Specifications	Draw pattern	Uniform energy factor [a]	
			Equipment manufactured before [compliance date of amended standards])	Equipment manufactured after [compliance date of amended standards]
Gas-fired storage	>75 kBtu/hr and ≤105 kBtu/hr and ≤120 gal	Very Small	$0.2674 - (0.0009 \times V_r)$	$0.5374 - (0.0009 \times V_r)$
		Low	$0.5362 - (0.0012 \times V_r)$	$0.8062 - (0.0012 \times V_r)$
		Medium	$0.6002 - (0.0011 \times V_r)$	$0.8702 - (0.0011 \times V_r)$
		High	$0.6597 - (0.0009 \times V_r)$	$0.9297 - (0.0009 \times V_r)$
Oil-fired storage	>105 kBtu/hr and ≤140 kBtu/hr and ≤120 gal ..	Very Small	$0.2932 - (0.0015 \times V_r)$	$0.2932 - (0.0015 \times V_r)$
		Low	$0.5596 - (0.0018 \times V_r)$	$0.5596 - (0.0018 \times V_r)$
		Medium	$0.6194 - (0.0016 \times V_r)$	$0.6194 - (0.0016 \times V_r)$
		High	$0.6470 - (0.0013 \times V_r)$	$0.6470 - (0.0013 \times V_r)$
Electric instantaneous	>12 kW and ≤58.6 kW and ≤2 gal	Very Small	0.80	0.80
		Low	0.80	0.80
		Medium	0.80	0.80
		High	0.80	0.80

[a] V_r is the rated storage volume (in gallons), as determined pursuant to 10 CFR 429.44.

[FR Doc. 2022–10011 Filed 5–18–22; 8:45 am]

BILLING CODE 6450–01–P

FEDERAL REGISTER

Vol. 87 Thursday,
No. 97 May 19, 2022

Part IV

Department of Commerce

National Oceanic and Atmospheric Administration

50 CFR Parts 600 and 622
Fisheries of the Caribbean, Gulf of Mexico, and South Atlantic; Comprehensive Fishery Management Plans for Puerto Rico, St. Croix, and St. Thomas and St. John; Proposed Rule

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Parts 600 and 622

[Docket No. 220428–0108]

RIN 0648–BD32

Fisheries of the Caribbean, Gulf of Mexico, and South Atlantic; Comprehensive Fishery Management Plans for Puerto Rico, St. Croix, and St. Thomas and St. John

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Proposed rule; request for comments.

SUMMARY: NMFS proposes to implement management measures in three new fishery management plans (FMPs), as prepared and submitted by the Caribbean Fishery Management Council (Council). If finalized, this proposed rule would replace regulations implementing the U.S. Caribbean region-wide FMPs with regulations implementing the approved island-based FMPs. The purpose of the island-based FMPs is to update management of Federal fisheries in the U.S. Caribbean. NMFS expects these management measures would better account for differences among the U.S. Caribbean islands with respect to culture, markets, fishing gear used, seafood preferences, and ecological impacts.

DATES: Written comments on the proposed rule must be received by June 21, 2022.

ADDRESSES: You may submit comments on this proposed rule, identified by ''NOAA–NMFS–2019–0155,'' by either of the following methods:

- *Electronic submission:* Submit all electronic comments via the Federal e-Rulemaking Portal. Go to *https://www.regulations.gov* and enter ''NOAA–NMFS–2019–0155'' in the Search box. Click on the ''Comment'' icon, complete the required fields, and enter or attach your comments.
- *Mail:* Submit written comments to María del Mar López-Mercer, NMFS Southeast Regional Office, 263 13th Avenue South, St. Petersburg, FL 33701.

Instructions: Comments sent by any other method, to any other address or individual, or received after the end of the comment period may not be considered by NMFS. All comments received are a part of the public record and will generally be posted for public viewing on *www.regulations.gov* without change. All personal identifying information (*e.g.,* name, address), confidential business information, or otherwise sensitive information submitted voluntarily by the sender will be publicly accessible. NMFS will accept anonymous comments. Enter ''N/A'' in required fields if you wish to remain anonymous.

Electronic copies of the island-based FMPs may be obtained from *www.regulations.gov* or the Southeast Regional Office website at *https://www.fisheries.noaa.gov/action/caribbean-island-based-fishery-management-plans.* Each island-based FMP includes an environmental assessment (EA), regulatory impact review, and fishery impact statement. A Regulatory Flexibility Act (RFA) analysis for each island-based FMP has also been prepared and is available at the Southeast Regional Office website.

FOR FURTHER INFORMATION CONTACT: María del Mar López-Mercer, NMFS Southeast Regional Office, telephone: 727–824–5305, or email: *maria.lopez@noaa.gov.*

SUPPLEMENTARY INFORMATION: The Council and NMFS manage fishery resources in the U.S. Caribbean exclusive economic zone (EEZ) around Puerto Rico, St. Croix, and St. Thomas and St. John through FMPs prepared by the Council and NMFS, and through implementing regulations promulgated by NMFS at 50 CFR part 622 under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).

Background

The Council and NMFS manage fisheries under its authority under four U.S. Caribbean-wide FMPs for Puerto Rico and the U.S. Virgin Islands (USVI), which is composed of St. Croix, and St. Thomas and St. John. These are the FMPs for the Reef Fish Fishery of Puerto Rico and the USVI (Reef Fish FMP), the FMP for the Spiny Lobster Fishery of Puerto Rico and the USVI (Spiny Lobster FMP), the FMP for the Queen Conch Resources of Puerto Rico and the USVI (Queen Conch FMP), and the FMP for the Corals and Reef Associated Plants and Invertebrates of Puerto Rico and the USVI (Coral FMP). On September 22, 2020, the Secretary of Commerce approved the island-based FMPs under section 304(a)(3) of the Magnuson-Stevens Act. The island-based FMPs, once implemented, would replace the U.S. Caribbean-wide FMPs.

NMFS finalized regulations to implement the Spiny Lobster FMP in 1984 (49 FR 50049; December 26, 1984), the Reef Fish FMP in 1985 (50 FR 34850; August 28, 1985), the Coral FMP in 1995 (60 FR 58221; November 27, 1995), and the Queen Conch FMP in 1996 (61 FR 65481; December 13, 1996). Each FMP was amended on several occasions. Under these FMPs and implementing regulations, the Council and NMFS manage fisheries in the U.S. Caribbean Exclusive Economic Zone (EEZ). However, the Council established certain management measures that apply separately within Federal waters off Puerto Rico, St. Croix, and St. Thomas and St. John, based on the availability of island-specific data. For example, Amendment 5 to the Reef Fish FMP and Amendment 2 to the Queen Conch FMP (2010 Caribbean Annual Catch Limit Amendment; 76 FR 82404; December 30, 2011), defined the fishery management boundaries of the U.S. Caribbean EEZ around Puerto Rico, St. Croix, and St. Thomas and St. John. Those FMP amendments, and later amendments, established separate, island-specific annual catch limits (ACLs) and accountability measures (AMs) for almost all species under management.

In 2012, the Council initiated public discussion of an island-based approach to the management of fisheries in the U.S. Caribbean EEZ to address requests from fishermen, fishing community representatives, and the governments of Puerto Rico and the USVI that the Council consider the differences among the islands when addressing fisheries management in the U.S. Caribbean. These entities highlighted the unique characteristics of the fishery resources within each island or island group, and the communities that are dependent on those resources. For example, there are different species that are economically or ecologically important in Federal waters around each island or island group, and the island-based approach provides a better mechanism to identify those species and to establish related management measures for those species (*e.g.,* bag limits, trip limits, closed areas, and closed seasons). NMFS and the Council expected that the island-based FMPs would better account for differences among the U.S. Caribbean islands with respect to culture, markets, fishing gear used, seafood preferences, and the ecological impacts.

The Council responded to these public requests by deciding to shift from a U.S. Caribbean-wide management approach to an island-based management approach, and began developing FMPs for Puerto Rico, St. Croix, and St. Thomas and St. John, respectively. The Council's initial decision to pursue an island-based management approach was supported

by an EA completed in 2014, which analyzed transitioning from U.S. Caribbean-wide to island-based management. The EA evaluated the impact of incorporating the management measures in effect at that time under the U.S. Caribbean-wide FMPs into FMPs for different island management areas. For example, the Council evaluated subdividing the island management zones into a two, three, or four island-group approach. The EA provided the public with the potential impacts of such a shift in Federal fisheries management in the U.S. Caribbean. Based on the 2014 EA, the Council proceeded with developing FMPs for three island areas. The island-based FMPs are the Comprehensive FMP for the Puerto Rico EEZ (Puerto Rico FMP), the Comprehensive FMP for the St. Croix EEZ (St. Croix FMP), and the Comprehensive FMP for the St. Thomas and St. John EEZ (St. Thomas and St. John FMP). Each of these FMPs is evaluated in three additional, separate EAs, which were finalized in 2020.

On June 26, 2020, NMFS published in the **Federal Register** a notice of availability for the three island-based FMPs and requested public comment (85 FR 38350). NMFS received five comments. On September 22, 2020, the Secretary of Commerce approved the three island-based FMPs under section 304(a)(3) of the Magnuson-Stevens Act. NMFS will respond to any relevant comments from the notice of availability and this proposed rule in any final rule for this action.

If implemented via this rulemaking, the management measures contained in the Puerto Rico FMP, the St. Croix FMP, and the St. Thomas and St. John FMP, in combination, would replace management measures in the U.S. Caribbean-wide FMPs. The U.S. Caribbean EEZ, also referred to as Federal waters, begins 9 nautical miles (nmi) from shore off Puerto Rico and 3 nmi from shore off the USVI, and the U.S. Caribbean EEZ extends up to 200 nmi from shore, except where the principle of equidistance is applied for conformance to the maritime boundaries of neighboring nations. Federal waters around Puerto Rico, St. Croix, and St. Thomas and St. John are defined as the respective island management areas under the island-based FMPs. Each of the island-based FMPs retain most of the management measures established under the U.S. Caribbean-wide FMPs that apply to the respective island management area, including seasonal and area closures, minimum size limits, and recreational bag limits. The island-based FMPs revise certain management measures, such as the species included for Federal management, and ACLs and AMs. If finalized, this rule would establish regulations specifically applicable to each island management area under three separate subparts to 50 CFR part 622, and fisheries management would be adapted to the individual characteristics of Puerto Rico, St. Croix, and St. Thomas and St. John.

Management Measures Contained in This Proposed Rule

The island-based FMPs incorporate fishery management measures included in the U.S. Caribbean-wide Spiny Lobster, Reef Fish, Queen Conch, and Coral FMPs that are applicable to the EEZ around each of the island management areas. This proposed rule would reorganize the current regulations into island-specific subparts. For example, each island-based FMP would retain the aggregate recreational bag limit established in the Reef Fish FMP for groupers, snappers, and parrotfish, and the regulations would restate the bag limit in each of the island-specific subparts, though some species may have been added to or removed from management. Restrictions established under the Reef Fish FMP that only applied to a particular management area, such as the minimum size limits for parrotfish off St. Croix, would be included in the St. Croix subpart only. The island-based FMPs revise the list of species managed and modify the stock or stock complexes under which those species are managed; revise and specify ACLs; establish annual catch targets (ACTs) for pelagic stocks; revise AMs; and update the FMP framework procedures. These measures would be implemented in regulations specific to each island management area. Certain management reference points, such as stock and stock complex status determination criteria (SDC), are not codified and therefore are not included in this proposed rule. Those measures are contained in the island-based FMPs.

The management measures under each island-based FMP that would be implemented by this proposed rule are described in the following sections. For each type of management action, information applicable to all three island management areas is described first, followed by island area-specific modifications, where applicable.

Island-Based Management

The proposed rule would restructure the regulations at 50 CFR part 622 from four subparts corresponding to the U.S. Caribbean-wide FMPs (Reef Fish, Spiny Lobster, Corals and Reef Associated Plants and Invertebrates, and Queen Conch) to three subparts corresponding to island-based FMPs (Puerto Rico, St. Croix, and St. Thomas and St. John) and would incorporate U.S. Caribbean-wide management measures, as appropriate, into the appropriate island-specific subpart. Some of the existing management measures that would continue under this proposed rule, in the appropriate island-specific subpart, include gear identification requirements; areas in the EEZ closed to all fishing or closed to fishing for certain species, and during certain times of the year; recreational bag limits; restrictions on the sale or purchase of some live species for the aquarium trade; size limits for certain species; and prohibitions on the harvesting of certain species of parrotfish. In addition, this proposed rule would implement other management measures in the approved island-based FMPs, as discussed further in this proposed rule.

Selection of Species To Be Managed

The Reef Fish, Spiny Lobster, Queen Conch, and Coral FMPs and the regulations implementing those FMPs include 81 species of reef fish, 58 species of aquarium trade fish, spiny lobster, queen conch, 94 genera or species of corals, and 63 genera or species of aquarium trade invertebrates (see current Table 1 to appendix A of 50 CFR part 622). Each island-based FMP replaces those FMPs within the particular island management area and includes a unique list of managed species based on the specific characteristics of each island management area. The proposed rule would specify the managed species in each island management area under the respective island-based FMP. The Council's Scientific and Statistical Committee (SSC) and the District Advisory Panel from each island management area provided recommendations on the criteria used for the Council to select the species for each island-based FMP. Species for management were determined using five sequential criteria, beginning with the criterion to include species in greatest need of conservation and management (*e.g.,* overfished, prohibited harvest, *etc.*). After including the species in greatest need of conservation and management, the remaining species considered for management were those species for which the NMFS Southeast Fisheries Science Center's (SEFSC) data indicated that the species had been landed in the particular island area.

Puerto Rico Species for Management

Spiny lobster, queen conch, 63 species of fish, and all species of corals,

sea urchins, and sea cucumbers that occur within the Puerto Rico management area are included for management in the Puerto Rico FMP and in this proposed rule. Of the 63 species of fish included for management, 18 species in the EEZ around Puerto Rico would be new to management.

St. Croix Species for Management

Spiny lobster, queen conch, 43 species of fish, and all species of corals, sea urchins, and sea cucumbers that occur within the St. Croix management area are included for management in the St. Croix FMP and in this proposed rule. Of those 43 species of fish, 2 species in the EEZ around St. Croix would be new to management.

St. Thomas and St. John Species for Management

Spiny lobster, queen conch, 47 species of fish, and all species of corals, sea urchins, and sea cucumbers that occur within the St. Thomas and St. John management area are included for management in the St. Thomas and St. John FMP and in this proposed rule. Of the 47 species of fish, 3 species in the EEZ around St. Thomas and St. John would be new to management.

Stock Complex Organization and Selection of Indicator Stocks

After establishing the list of species for management under each island-based FMP, the Council determined whether to manage those species as individual stocks or in stock complexes. For those managed in stock complexes, the Council determined if one or more indicator stocks should be assigned to the species groups. An indicator stock is a stock with measurable and objective SDC that can be used to help manage and evaluate more poorly known stocks that are in a stock complex (50 CFR 600.310(d)(2)(ii)(A)). In the island-based FMPs, this action resulted in a different organization of stocks than under the U.S. Caribbean-wide FMPs. Thus, under the island-based FMPs and this proposed rule, a new number of stocks and stock complexes would be managed relative to the U.S. Caribbean-wide FMPs.

Puerto Rico Stock Organization

The Puerto Rico FMP and this proposed rule would manage species as 18 individual stocks and 19 stock complexes and would include 7 indicator stocks.

St. Croix Stock Organization

The St. Croix FMP and this proposed rule would manage species as 13 individual stocks and 13 stock complexes and would include 6 indicator stocks.

St. Thomas and St. John Stock Organization

The St. Thomas and St. John FMP and this proposed rule would manage species as 12 individual stocks and 14 stock complexes and would include 9 indicator stocks.

Status Determination Criteria and Other Management Reference Points

The Magnuson-Stevens Act requires that FMPs specify a number of reference points for managed fish stocks, including maximum sustainable yield (MSY) or MSY proxy, as well as stock SDC including overfished and overfishing thresholds and acceptable biological catch (ABC). These SDC and other reference points provide the means to measure the status and performance of fisheries relative to established goals.

The SDC and other management reference points for stocks managed under the four U.S. Caribbean-wide FMPs were established by the 2005 Caribbean Sustainable Fisheries Act Amendment and implementing regulations (70 FR 62073; October 28, 2005), and the ABC control rules included in the 2010 Caribbean ACL Amendment and Amendment 6 to the Reef Fish FMP, Amendment 5 to the Spiny Lobster FMP, Amendment 3 to the Queen Conch FMP, and Amendment 3 to the Coral FMP (76 FR 82414; December 30, 2011) (2011 Caribbean ACL Amendment).

The ABC control rule contained in each island-based FMP replaces the ABC control rules included in the 2010 Caribbean ACL Amendment and 2011 Caribbean ACL Amendment, as applicable. The island-based FMPs establish SDC and other management reference points for all stocks and stock complexes to be included for island-based management. SDC and other management reference points were defined following a 3-step process.

Step 1 adopts and applies a 4-tiered ABC control rule to specify MSY, SDC, and ABC depending on differing levels of data availability. Step 2 establishes a proxy to use when the fishing mortality that would produce MSY (F_{MSY}) cannot be determined. Step 3 applies a reduction factor, reflecting the Council's estimate of management uncertainty, to the ABC for each stock or stock complex to specify the ACL for the stock or stock complex. The optimum yield (OY) would be set equal to the ACL for each stock or stock complex.

Under the ABC control rule in each island-based FMP, Tier 1 applies to stocks with the most data available, while each subsequent tier operates with less available data than the preceding tier. Tier 4, the final tier, is the most data limited and applies when no accepted quantitative assessment is available. The tiered approached to the ABC control rule positions the Council to take advantage of future improvements in data and analytical methodologies. The higher tiers of the ABC control rule (*i.e.,* 1, 2, or 3) require inputs from a quantitative stock assessment, which in turn require additional data than was available at the time the island-based FMPs were under development. Establishing those tiers now, in anticipation of improvements in data, allows the Council to act more quickly when those data become available than if the Council adopts an ABC control rule that encompasses the Tier 4 process alone.

In Tier 4, the most data-limited of the options, an MSY proxy and maximum fishing mortality threshold (MFMT), are defined with respect to assumptions made in Step 2 about fishing mortality rate, but cannot be quantified due to data limitations. In addition, Tier 4 introduces a new reference point, the sustainable yield level (SYL), which is determined under one of two sub-tiers, Tier 4a and Tier 4b, based on the SSC's understanding of the stock's vulnerability to fishing pressure. Tier 4a is less conservative and is applicable when the stock has a relatively low or moderate vulnerability to fishing pressure. Tier 4b is more conservative and is applicable when the stock has relatively high vulnerability to fishing pressure. The SYL is a quantitative estimate of the level of landings that can be sustained over the long term. SYL is intended to be used when quantitative information with which to set MSY or an MSY proxy based on fishing mortality rate is not available. The SYL serves as a proxy for the OFL and a minimum estimate of MSY where MSY is greater than or equal to SYL. Thus, SYL also is an MSY proxy. The ABC is reduced from the SYL depending on the SSC's determination of scientific uncertainty.

The Council applied this 3-step process to determine SDC and other management reference points for all stocks and stock complexes proposed for management. When the island-based FMPs were under development, all stocks and stock complexes fell under Tier 4 of the ABC control rule (Step 1). Under the definitions in Tier 4, the MSY proxy is equal to the long-term yield F_{MSY} proxy, the MFMT is equal to F_{MSY}

proxy, and the minimum stock size threshold (MSST) is equal to 75 percent of the spawning stock biomass at MFMT. Under Step 2, for all stocks and stock complexes across all island-areas, the Council established a F_{MSY} proxy equal to 30 percent of the maximum spawning potential of a stock under conditions of no fishing mortality ($F_{30\%SPR}$).

Applying Tier 4 of the ABC control rule (Step 1), the SSC derived SYLs from a period of stable and sustainable landings, and recommended ABCs based on those SYLs, with certain exceptions discussed in the island-specific sections later in this preamble. Revising or establishing the SDC and other reference points under Tier 4 ensures, based on the best scientific information available, that the SDC and reference points prevent overfishing and achieve OY.

Finally, under Step 3, the Council applied a management uncertainty buffer to the ABCs to specify the ACLs, where the ACL for the stock or stock complex equals OY, as discussed in the island-specific ACL sections later in this preamble.

NMFS notes that except for ACLs, SDC and other management reference points are not codified in this proposed rule, but are described in each island-based FMP.

Puerto Rico Stock Evaluation

For the Puerto Rico FMP, landings data for Council-managed reef fish, pelagic fish, and rays were available for the commercial and recreational fishing sectors operating in state and federal waters around Puerto Rico. The Council's SSC relied on landings data to determine an SYL, as a proxy for MSY and OFL, and ABC for most fish stocks and stock complexes, with ACLs set by sector. For spiny lobster, only commercial landings data are collected. Because recreational landings data are not available, the SYL, ABC, and ACL for spiny lobster are based on commercial landings. The SSC determined that some species proposed for management under the Puerto Rico FMP were more vulnerable to overfishing and recommended that the ABC be set at zero. Stocks with an ABC of zero pounds would include queen conch, Nassau grouper (Grouper 1), goliath grouper (Grouper 2), giant manta ray (Rays 1), spotted eagle ray (Rays 2), and southern stingray (Rays 3). Stock complexes with an ABC of zero pounds include Parrotfish 1 (blue parrotfish, midnight parrotfish, and rainbow parrotfish), Sea Cucumbers, Sea Urchins, and Corals. ACLs are codified in regulations, and the description of the process for determining the ACLs is discussed below.

St. Croix Stock Evaluation

For the St. Croix FMP, recreational landings data were not available, thus SYL, as proxy for both MSY and OFL, ABC, and ACL for most stocks and stock complexes proposed for management were derived using commercial landings. The SSC determined that some species included for management under the St. Croix FMP were more vulnerable to overfishing and recommended that the ABC be set at zero. Stocks with an ABC of zero pounds include Nassau grouper (Grouper 1) and goliath grouper (Grouper 2). Stock complexes with an ABC of zero pounds include Parrotfish 1 (blue parrotfish, midnight parrotfish, and rainbow parrotfish), Sea Cucumbers, Sea Urchins, and Corals. The SSC deviated from the ABC Control Rule and recommended an ad hoc SYL for queen conch at 107,720 lb (kg 48,861 kg) and recommended an ad hoc ABC of 50,000 lb (22,680 kg) in the portion of the EEZ around St. Croix from which harvest is allowed. Given difficulties interpreting queen conch catch data, the SSC recommended retaining the OFL (now SYL) and ABC specified under the Queen Conch FMP. The SSC confirmed these measures are still protective of queen conch stock status. The SSC noted that the seasonal closure for queen conch in state waters is 5 months each year, and that there is an area closed to harvest year-round. At Council meetings, including the August 2018 meeting, the Council and SSC discussed that these measures and others, including the availability of in-season conch landings data, sufficiently address the management certainty associated with the recommended ABC. ACLs are codified in regulations, and the description of the process for determining the ACLs is discussed later in the preamble to this proposed rule.

St. Thomas and St. John Stock Evaluation

For the St. Thomas and St. John FMP, recreational landings data were not available, thus SDC and other management reference points (*e.g.,* SYL, as a proxy for both MSY and OFL, ABC, and ACL) for the stocks and stock complexes proposed for management were derived using commercial landings. The SSC determined that some species proposed for management under the St. Thomas and St. John FMP were more vulnerable to overfishing and recommended that the ABC be set at zero pounds. Stocks with an ABC of zero pounds include queen conch, Nassau grouper (Grouper 1), and goliath grouper (Grouper 2). Stock complexes with an ABC of zero pounds include Parrotfish 1 (blue parrotfish, midnight parrotfish, and rainbow parrotfish), Sea Cucumbers, Sea Urchins, and Corals. ACLs are codified in regulations, and the description of the process for determining the ACLs is discussed below.

Annual Catch Limits

This proposed rule would specify ACLs for all stocks and stock complexes in each island-based FMP. The island-based FMPs establish management reference points (*i.e.,* SYL and ABC) from which the ACLs are derived. This proposed rule also would establish ACTs for pelagic stocks and stock complexes managed under each island-based FMP.

Puerto Rico ACLs

For the Puerto Rico FMP, landings data for reef fish, pelagic fish, and rays were available for the commercial and recreational fishing sectors operating in state and federal waters around Puerto Rico. As described previously, the Council relied on landings data to determine ACLs by sector for managed stocks or stock complexes. For spiny lobster and queen conch, only commercial landings data are collected and available. Because recreational landings data are not available for invertebrates, the spiny lobster ACL and the queen conch ACL are based on commercial landings and each ACL applies to all harvest for the stock, whether commercial or recreational.

To determine the ACL, the ABC for each stock or stock complex, including stocks or stock complexes with an ABC of zero, was multiplied by the Council's management uncertainty buffer. For all stocks and stock complexes, except for the angelfish, parrotfish, and surgeonfish stock complexes, the Council adopted a management uncertainty buffer of 0.95, based on their assumption that the buffer from SYL to ABC accounted for much of the limitations in landings information. For this reason, they believed a smaller buffer from ABC to ACL would be adequate to constrain catch to the ACL. For the angelfish, parrotfish, and surgeonfish stock complexes, which perform an essential ecological function in the coral reef ecosystem, the Council adopted a management uncertainty buffer of 0.85 to provide additional protection to the stock complexes.

In the event that landings for one sector are not available for comparison to the sector-specific ACL, the sectors would not be separately managed; the

ACL for the sector with available data would be the applicable ACL for the entire stock or stock complex. Recreational data collection in Puerto Rico ceased following the 2017 hurricane season. Efforts are underway to resume the recreational data collection, but NMFS does not expect that those data will be available when this rule, if finalized, takes effect. If recreational landings are unavailable, the ACL for the commercial sector will be the ACL for the stock or stock complex.

St. Croix ACLs

For the St. Croix FMP, recreational landings data are not available, thus the Council relied on commercial landings data to determine ACLs for stocks and stock complexes. These ACLs would apply to all harvest of St. Croix stocks and stock complexes, whether commercial or recreational.

To determine the ACL, the ABC for each stock or stock complex, including stocks or stock complexes with an ABC of zero, was multiplied by the Council's management uncertainty buffer. For all stocks and stock complexes, except for queen conch and the angelfish, parrotfish, and surgeonfish stock complexes, the Council adopted a management uncertainty buffer of 0.95, based on their assumption that the buffer from SYL to ABC accounted for much of the limitations in landings information. For this reason, the Council believed a smaller buffer from ABC to ACL would be adequate to constrain catch to the ACL. For the angelfish, parrotfish, and surgeonfish stock complexes, which perform an essential ecological function in the coral reef ecosystem, the Council adopted a management uncertainty buffer of 0.85 to provide additional protection to the stock complexes. For queen conch, the Council did not apply a management uncertainty buffer, as this stock is managed with in-season data and additional regulations, such as a commercial and recreational daily quota and bag limit and the 5-month seasonal closure, which the Council considered sufficient to constrain landings to the ACL.

St. Thomas and St. John ACLs

For the St. Thomas and St. John FMP, recreational landings data are not available, thus commercial landings data were used to set ACLs for stocks and stock complexes. These ACLs would apply to all harvest of St. Thomas and St. John stocks and stock complexes, whether commercial or recreational.

To determine the ACL, the ABC for each stock or stock complex, including stocks or stock complexes with an ABC of zero, was multiplied by the Council's management uncertainty buffer. For all stocks and stock complexes, except for the angelfish, parrotfish, and surgeonfish stock complexes, the Council adopted a management uncertainty buffer of 0.95, based on their assumption that the buffer from SYL to ABC accounted for much of the limitations in landings information. For this reason, the Council believed a smaller buffer from ABC to ACL would be adequate to constrain catch to the ACL. For the angelfish, parrotfish, and surgeonfish stock complexes, which perform an essential ecological function in the coral reef ecosystem, the Council adopted a management uncertainty buffer of 0.85 to provide additional protection to these stock complexes.

Accountability Measures

The proposed rule would implement the AMs specified in the island-based FMPs, and replace the AMs implementing the U.S. Caribbean-wide FMPs. For the AMs specified in the U.S. Caribbean-wide Reef Fish and Spiny Lobster FMPs, reef fish and spiny lobster landings data for each island management area are evaluated relative to the applicable ACL based on a moving 3-year average of landings, using the most recent, complete 3 years of landings data available. For reef fish stocks or stock complexes in the EEZ around Puerto Rico, ACLs are specified by sector and an AM is triggered if both the sector-specific ACL and total ACL (commercial plus recreational) are exceeded, unless NMFS determines that either the sector-specific ACL or the total ACL exceedance resulted from enhanced data collection and monitoring efforts. For reef fish stocks or stock complexes in the EEZ around the USVI and for spiny lobster in all management areas, an AM is triggered if commercial landings exceed the ACL for the stock or stock complex, unless NMFS determines that the ACL was exceeded because of enhanced data collection and monitoring efforts.

Under the U.S. Caribbean-wide Reef Fish and Spiny Lobster FMPs, if NMFS determines that the ACL exceedance resulted from increased catch rather than enhanced data collection and monitoring efforts, NMFS will reduce the length of the fishing season for that stock or stock complex, by sector where applicable, by the amount necessary to ensure that landings would not exceed the applicable ACL in the following fishing year. Under the Caribbean-wide Reef Fish and Spiny Lobster FMPs NMFS applies any fishing season reduction starting from September 30 and moving earlier toward the beginning of the fishing year (January 1). If the length of the required fishing season reduction exceeds the time period of January 1 through September 30, any additional fishing season reduction necessary is applied in the same fishing year from October 1 and moving later toward the end of the fishing year (December 31). The Council adopted this approach in Amendment 8 to their Reef Fish FMP, and Amendment 7 to their Spiny Lobster FMP, to minimize adverse socioeconomic effects from the implementation of AMs, while still helping to ensure that AM-based closures constrain harvest to the ACL and prevent overfishing. (82 FR 21475; May 9, 2017).

For the AMs under the Reef Fish FMP for the prohibited reef fish species (*e.g.,* Nassau grouper), under the Coral FMP for the prohibited coral species, and under the Queen Conch FMP for queen conch in Puerto Rico and St. Thomas and St. John, where harvest of queen conch is prohibited, those harvest prohibitions serve as the AM. The AM specified for St. Croix in the Queen Conch FMP provides that when the ACL is reached or projected to be reached prior to the end of the fishing season, the Regional Administrator closes the area east of 64°34′ W in the EEZ off St. Croix to the harvest and possession of queen conch. All other Federal waters off St. Croix are closed year-round to queen conch harvest.

This proposed rule would replace the AMs established under the U.S. Caribbean-wide FMPs, and specify AMs for all managed stocks and stock complexes in each island management area, as detailed in the following island-specific sections.

Puerto Rico AMs

The proposed AM for spiny lobster under the Puerto Rico FMP is the same as the AM for spiny lobster under the U.S. Caribbean-wide Spiny Lobster FMP, with minor changes to the years of landings evaluated as the AM trigger. In addition, NMFS is proposing language to implement the AM to reflect and clarify that the AM trigger evaluation occurs at or near the beginning of the fishing year when necessary data is available. This change is consistent with the Council's intent, which is to establish an AM that relies on the best available data to prevent ACL exceedances.

Under the Puerto Rico FMP, the AM for spiny lobster provides that at or near the beginning of the fishing year, available landings of spiny lobster (*i.e.,*

commercial landings) would be evaluated relative to the spiny lobster ACL based on a moving multi-year average of landings, as described below in the *AM Trigger and ACL Monitoring* section. If the ACL is exceeded, and NMFS determines that the ACL overage resulted from improved data collection or monitoring rather than from increased catch, the AM would not be triggered and NMFS would not reduce the length of the fishing season for spiny lobster. If, however, NMFS determines that the ACL overage resulted from increased catch rather than from improved data collection or monitoring, the AM would be triggered and NMFS would reduce the length of the fishing season for spiny lobster by the amount necessary to prevent landings from exceeding the ACL.

The AM under the Puerto Rico FMP contains the same exception from the AM trigger as the AM under the Spiny Lobster FMP for ACL exceedances based on improved data collection and monitoring. The proposed implementing regulations clarify that the AM trigger evaluation (*i.e.,* the comparison of landings to the ACL) is made at or near the beginning of the fishing year, not necessarily at the end of the prior year. This change is necessary because complete data on landings often are not available by the end of the fishing year, but rather are available early in the subsequent year, or later. Often there is a 1 to 2 year data lag as well, which is discussed later in the section on the AM trigger and ACL monitoring. Therefore, NMFS clarifies that it would make the AM trigger determination as soon as landings data are available, *i.e.,* at or near the beginning of the fishing year, and that any required fishing season reduction would occur as soon as possible thereafter.

Under the U.S. Caribbean-wide Spiny Lobster FMP, any required fishing season reduction would be applied starting from September 30 and moving earlier toward the beginning of the fishing year (January 1). If the length of the required fishing season reduction exceeds the time period of January 1 through September 30, any additional fishing season reduction necessary would be applied in the same fishing year, starting from October 1 and moving later toward the end of the fishing year (December 31).

The Puerto Rico FMP provides for management of reef fish stocks and stock complexes by sector when data are available to set an ACL by sector, and the corresponding AM operates in the same manner as the AM under the U.S. Caribbean-wide Reef Fish FMP, with minor changes. The changes reflect the transition to management with indicator stocks, an update to the years of landings used as the AM trigger, and clarification of when the AM trigger evaluation occurs.

For reef fish stocks and stock complexes managed under the Puerto Rico FMP, commercial and recreational landings of the stock, stock complex, or indicator stock would be evaluated relative to the corresponding commercial, recreational, or total ACLs for the stock or stock complex, as applicable, based on a moving multi-year average of landings as described below. For those stock complexes managed with an indicator stock, the ACLs (commercial, recreational, and total) for the stock complex are based on landings of the indicator stock. Therefore the AM trigger evaluation compares indicator stock landings to the ACL. An AM would be triggered for a stock or stock complex if a sector's landings exceeded the sector-specific ACL and if the total (commercial plus recreational) landings exceeded the total (commercial plus recreational) ACL. An AM would not be triggered if NMFS determines that either ACL overage (sector-specific ACL or total ACL) resulted from improved data collection or monitoring rather than from increased catch increased. Once triggered, the AM would be applied only for the sector that exceeded its ACL.

Unlike the U.S. Caribbean-wide Reef Fish FMP, the Puerto Rico FMP provides that if landings for one sector are not available for evaluation to the sector-specific ACL, then the sectors would not be separately managed. The ACL for the sector with available data would be the ACL for that stock or stock complex. If NMFS estimates that available landings for the stock, stock complex, or indicator stock exceeded the ACL for the stock or stock complex, and if the exceedance was not due to improvements in data collection or monitoring, the AM would be triggered. Any required fishing season reduction would apply to all harvest of the stock or stock complex, whether commercial or recreational. The Puerto Rico FMP and this proposed rule add this authority.

As with the AM for spiny lobster under the Puerto Rico FMP, the proposed regulatory text clarifies that the AM trigger evaluation for managed reef fish stocks and stock complexes occurs at or near the beginning of the fishing year, when landings from prior fishing years are available, and that any required fishing season reduction occurs as soon as possible thereafter. Any required fishing season reduction would be applied starting with September 30 and moving earlier towards the beginning of the fishing year (January 1), adding additional time, as necessary, from October 1, toward the end of the fishing year (December 31).

Pelagic stocks and stock complexes are not managed under the U.S. Caribbean-wide FMPs, but are managed under the Puerto Rico FMP by sector where sector-specific data is available. The Puerto Rico FMP establishes an AM for these stocks or stock complexes. For each pelagic stock and stock complex, the proposed rule would codify an ACT as 90 percent of the ACL that would serve as the AM trigger.

Commercial and recreational landings of the pelagic stock, stock complex, or indicator stock would be evaluated relative to the commercial and recreational ACTs based on a moving multi-year average of landings as described below. The AM would be applied on a sector basis, and would be triggered when a sector's landings exceeds its ACT. The Puerto Rico FMP and these proposed regulations provide for the unavailability of sector-specific landings. When landings for one sector are not available for comparison to that sector's ACT, the ACT for the sector with available landings would be the ACT for the stock or stock complex. Available landings would be evaluated relative to the ACT for the stock or stock complex. If NMFS estimates that available landings for the stock, stock complex, or indicator stock exceeded the ACT for the stock or stock complex, the AM would apply to all harvest of the stock or stock complex, whether commercial or recreational. If an AM is triggered, NMFS in consultation with the Council would determine appropriate corrective action, including whether corrective action is needed. Corrective action could include actions such as fishing season reductions or modifications to the ACL and would depend on many factors, including an evaluation of the cause of the exceedance and the best way to protect against future ACL exceedances.

Recreational data collection in Puerto Rico was disrupted in 2017, following Hurricanes Irma and Maria, and has not resumed. Since 2018, recreational landings for the reef fish and pelagic stocks, stock complexes, and indicator stocks are not available for comparison to the recreational ACLs and ACTs proposed for each stock and stock complex. Thus, as described in the Puerto Rico FMP and in this proposed rule, the commercial ACLs and ACTs for the reef fish and pelagic stocks and stock complexes would function as the

ACLs and ACTs for the stocks and stock complexes until sufficient recreational landings become available.

For stocks (queen conch, Nassau grouper, goliath grouper, giant manta ray, spotted eagle ray, and southern stingray) and stock complexes (Parrotfish 1 (blue parrotfish, midnight parrotfish, and rainbow parrotfish), Sea Cucumbers, Sea Urchins, and Corals) with harvest prohibitions in Puerto Rico, those prohibitions would serve as the AMs under the proposed rule. This is the same approach to management for queen conch, Nassau grouper, goliath grouper, the species in the Parrotfish 1 stock complex, and the coral species that are managed under the U.S. Caribbean-wide FMPs. The Puerto Rico FMP adopts this AM for the rays, which are new to management, and for the Sea Urchins and Sea Cucumbers stock complexes.

St. Croix AMs

The proposed AMs for reef fish stocks and stock complexes and for spiny lobster under the St. Croix FMP are the same as the AMs for reef fish and spiny lobster under the U.S. Caribbean-wide Reef Fish and Spiny Lobster FMPs, with minor changes to the years of landings evaluated as the AM trigger. In addition, NMFS is proposing language to implement the AM to reflect and clarify that the AM trigger evaluation occurs at or near the beginning of the fishing year when necessary data are available. This change is consistent with the Council's intent, which is to establish an AM that relies on the best available data to prevent ACL exceedances.

Under the St. Croix FMP for reef fish stocks and stock complexes and for spiny lobster, at or near the beginning of the fishing year, landings for each stock, stock complex, or indicator stock(s) would be evaluated relative to the ACL for the stock or stock complex based on a moving multi-year average of landings, as described below. If the ACL is exceeded, and NMFS determines that the ACL overage resulted from improved data collection or monitoring rather than from increased catch, the AM would not be triggered and NMFS would not reduce the length of the fishing season for the applicable stock or stock complex. If, however, NMFS determines that the ACL overage resulted from increased catch rather than from improved data collection or monitoring, the AM would be triggered and NMFS would reduce the length of the fishing season for the applicable stock or stock complex by the amount necessary to prevent landings from exceeding the ACL.

The AMs for reef fish stocks and stock complexes and spiny lobster under the St. Croix FMP contain the same exception from the AM trigger for ACL exceedances based on improved data collection and monitoring as the AMs under the U.S. Caribbean-wide Reef Fish and Spiny Lobster FMPs. The proposed implementing regulations clarify that the AM trigger evaluation (*i.e.,* the comparison of landings to the ACL) is made at or near the beginning of the fishing year to better reflect when landings data are available.

As under the U.S. Caribbean-wide Reef Fish and Spiny Lobster FMPs, any required fishing season reduction would be applied starting from September 30 and moving earlier toward the beginning of the fishing year (January 1). If the length of the required fishing season reduction exceeds the time period of January 1 through September 30, any additional fishing season reduction necessary would be applied in the same fishing year, starting from October 1 and moving later toward the end of the fishing year (December 31).

Pelagic stocks are not managed under the U.S. Caribbean-wide FMPs, but are managed under the St. Croix FMP. For each pelagic stock, the proposed rule would codify an ACT as 90 percent of the ACL that would serve as the AM trigger. An AM would be triggered if the landings for the pelagic stock exceed the ACT based on a moving multi-year average of annual landings, as described below. If an AM is triggered, NMFS in consultation with the Council would determine appropriate corrective action, including whether corrective action is needed. Corrective action could include actions such as fishing season reductions or modifications to the ACL and would depend on many factors, including an evaluation of the cause of the exceedance and the best way to protect against future ACL exceedances.

For queen conch, as under the U.S. Caribbean-wide Queen Conch FMP, harvest would continue to be allowed in the EEZ around St. Croix east of 64°34′ W longitude during the open fishing season. This measure was established in the 2005 Caribbean Sustainable Fisheries Act Amendment to the Queen Conch FMP (70 FR 62073; October 28, 2005). The rest of the U.S. Caribbean EEZ would continue to be closed to the harvest of queen conch. Under the St. Croix FMP, the AM for queen conch would continue to be triggered if, based on in-season monitoring, NMFS determines the queen conch ACL is reached or is projected to be reached prior to the end of the fishing season. If the AM is triggered, NMFS would close the EEZ around St. Croix east of 64°34′ W longitude to the harvest and possession of queen conch for the remainder of the fishing season. During any such closure, no person would be allowed to fish for or possess a queen conch in or from Federal waters off St. Croix.

For stocks (Nassau grouper and goliath grouper) and stock complexes (Parrotfish 1 (blue parrotfish, midnight parrotfish, and rainbow parrotfish), Sea Cucumbers, Sea Urchins, and Corals) with harvest prohibitions in St. Croix, those prohibitions would serve as the AMs under the proposed rule. This is the same approach to management for Nassau grouper, goliath grouper, the species in the Parrotfish 1 stock complex, and the coral species that are managed under the U.S. Caribbean-wide FMPs. The St. Croix FMP adopts this AM for the Sea Urchins and Sea Cucumber stock complexes.

St. Thomas and St. John AMs

The proposed AMs for reef fish stocks and stock complexes and for spiny lobster under the St. Thomas and St. John FMP are the same as the AMs for reef fish and spiny lobster under the U.S. Caribbean-wide Reef Fish and Spiny Lobster FMPs, with minor changes to the years of landings evaluated as the AM trigger. In addition, NMFS is proposing language to implement the AM to reflect and clarify that the AM trigger evaluation occurs at or near the beginning of the fishing year when necessary data are available. This change is consistent with the Council's intent, which is to establish an AM that relies on the best available data to prevent ACL exceedances.

Under the St. Thomas and St. John FMP for reef fish stocks and stock complexes and for spiny lobster, at or near the beginning of the fishing year, landings for each stock, stock complex, or indicator stock(s) would be evaluated relative to the ACL for the stock or stock complex based on a moving multi-year average of landings, as described below. If the ACL is exceeded, and NMFS determines that the ACL overage resulted from improved data collection or monitoring rather than from increased catch, the AM would not be triggered and NMFS would not reduce the length of the fishing season for the applicable stock or stock complex. If, however, NMFS determines that the ACL overage resulted from increased catch rather than from improved data collection or monitoring, the AM would be triggered and NMFS would reduce the length of the fishing season for the applicable stock or stock complex by the amount necessary to prevent landings from exceeding the ACL.

The AMs for reef fish stocks and stock complexes and spiny lobster under the St. Thomas and St. John FMP contain the same exception from the AM trigger for ACL exceedances based on improved data collection and monitoring as the AMs under the U.S. Caribbean-wide Reef Fish and Spiny Lobster FMPs. The proposed implementing regulations clarify that the AM trigger evaluation (*i.e.,* the comparison of landings to the ACL) is made at or near the beginning of the fishing year to better reflect when landings data are available.

As under the U.S. Caribbean-wide Reef Fish and Spiny Lobster FMPs, any required fishing season reduction would be applied starting from September 30 and moving earlier toward the beginning of the fishing year (January 1). If the length of the required fishing season reduction exceeds the time period of January 1 through September 30, any additional fishing season reduction necessary would be applied in the same fishing year, starting from October 1 and moving later toward the end of the fishing year (December 31).

Pelagic stocks are not managed under the U.S. Caribbean-wide FMPs, but are managed under the St. Thomas and St. John FMP. For each pelagic stock, the proposed rule would codify an ACT as 90 percent of the ACL that would serve as the AM trigger. An AM would be triggered if the landings for the pelagic stock exceed ACT based on a moving multi-year average of annual landings, as described below. If an AM is triggered, NMFS in consultation with the Council would determine appropriate corrective action, including whether corrective action is needed. Corrective action could include actions such as fishing season reductions or modifications to the ACL and would depend on many factors, including an evaluation of the cause of the exceedance and the best way to protect against future ACL exceedances.

For stocks (queen conch, Nassau grouper, and goliath grouper) and stock complexes (Parrotfish 1 (blue parrotfish, midnight parrotfish, and rainbow parrotfish), Sea Cucumbers, Sea Urchins, and Corals) with harvest prohibitions in St. Thomas and St. John, those prohibitions would serve as the AMs under the proposed rule. This is the same approach to management for queen conch, Nassau grouper, goliath grouper, the species in the Parrotfish 1 stock complex, and the coral species that are managed under the U.S. Caribbean-wide FMPs. The St. Thomas and St. John FMP adopts this AM for the Sea Urchins and Sea Cucumber stock complexes.

AM Trigger and ACL Monitoring

Each of the island-based FMPs specify the moving multi-year average of landings to be used to monitor compliance with the ACLs and ACTs under the AM trigger. The FMPs state that in the first year of FMP implementation, ACL and ACTs will be monitored using a single year of landings from 2018; then a single year of landings from 2019; then a 2-year average of landings from 2019 and 2020; then a 3-year average of landings from 2019 to 2021; and thereafter a progressive running 3-year average of landings. As specified in the island-based FMPs, the Regional Administrator in consultation with the Council may deviate from the specific time sequences based on data availability. For example, the specified year(s) of landings would likely be updated to account for the time it has taken to implement the island-based FMPs to reflect more recent, available landings. If the island-based FMPs are effective for the 2022 fishing season, NMFS could rely on the most recent single year of landings data at that time, and follow the progression set forth in the FMP in subsequent years (*i.e.,* then the next most recent single year of landings, then a 2-year average of the most recent 2 years of landings, etc.). The specified years could also be updated to account for periods where landings data may be incomplete, such as for years when hurricanes impact the ability to get a complete set of data.

Landings data for Puerto Rico and the USVI generally are not available for comparison to the ACLs or ACTs until 1 to 2 years after the year in which the fishing activity occurred. During this transition period, until available landings reflect fishing under the island-specific FMPs as opposed to the U.S. Caribbean-wide FMPs, NMFS would evaluate if the landings available for each stock, stock complex, or indicator stock(s) would exceed the ACLs or ACTs for the stock or stock complex specified in the island-based FMPs as the AM trigger. Once landings data from years when the island-based FMPs and ACLs are in place are available, NMFS would evaluate whether landings for each stock, stock complex, or indicator stock(s) exceeded the ACL or ACT for each stock or stock complex specified under the island-based FMPs. In all cases, if an AM is triggered, the AM would be applied as described previously.

Essential Fish Habitat

In addition to the management measures that this proposed rule would implement through regulations, the island-based FMPs include actions to identify essential fish habitat (EFH) for species new to management that NMFS would implement but not codify through regulations.

The EFH designations for species and species groups that were managed under the U.S. Caribbean-wide FMPs and are included for management under the respective Puerto Rico FMP, St. Croix FMP, and St. Thomas and St. John FMP would remain as currently described in the 2005 Caribbean Sustainable Fisheries Act Amendment. These descriptions are included in each of the island-based FMPs. For species new to management, each island-based FMP describes and identifies EFH according to functional relationships between life history stages of the species and marine and estuarine habitats, based on best scientific information available.

Framework Procedures

The framework procedures for the U.S. Caribbean-wide Reef Fish, Spiny Lobster, Queen Conch, and Coral FMPs provided the Council and NMFS the flexibility to expeditiously adjust management options to respond to changing fishery conditions or new scientific information. This proposed rule would update the framework procedures under each island-based FMP to establish the basis for a broader range of management measures that can be approved by the Council and implemented by NMFS through the framework process. The framework procedures for each island-based FMP and in this proposed rule are identical for each island management area. Future proposed actions could be implemented either by an open abbreviated framework, an open standard framework, or through a closed framework procedure, as applicable. Each island-based FMP describes and provides the list of open and closed framework procedures and the differences from a full FMP amendment process. Some of the management measures proposed to be adjusted through framework procedures include re-specification of SDC and other management reference points, modification of seasonal, year-round, or area closures, commercial trip limits, recreational bag and possession limits, size limits, or allowable fishing gear.

Additional Proposed Changes to Codified Text Not in the Island-Based FMPs

NMFS proposes to revise the authorized gear table in 50 CFR 600.725(v) under V. Caribbean Fishery Management Council, to incorporate changes to the organization of federally

managed fisheries and gear descriptions under the island-based FMPs.

Currently, the authorized gear table at 50 CFR 600.725(v) under V subdivides the U.S. Caribbean fisheries by whether the fishery is managed under an FMP or not. Each fishery is then subdivided into fishery components by fishing gear type (*e.g.,* trap/pot, longline/hook and line, etc.) or sector (*i.e.,* commercial or recreational), and the authorized gears are specified for these fishery components.

NMFS proposes to revise the gear table to reflect the transition to island-based fishery management. Within the gear table for the U.S. Caribbean, the fisheries would be described by island area, and then by whether the fishery is managed under an FMP. Each fishery would then be broken into components by fishing gear type or sector, as appropriate. As with the current table, the authorized gears would be specified for each fishery component.

NMFS proposes to clarify and make consistent the description of the authorized gear for all fisheries. For example, NMFS proposes to specify the individual hook and line gear types authorized rather than listing ''hook and line'' as an authorized gear. Under 50 CFR 622.2, hook and line gear means automatic reel, bandit gear, buoy gear, handline, longline, and rod and reel. The authorized gear table would list those gears as authorized, rather than the more general ''hook and line''. Further, NMFS would clarify that trap and pot gear is an authorized recreational gear type for the reef fish and spiny lobster fisheries managed under each of the island-based FMPs.

In addition, NMFS proposes to make additional clarifying and non-substantive changes to regulations in part 622 through this proposed rule. For example, to account for management measures that occur in leap years, NMFS would revise language currently at 50 CFR 622.435(a)(2)(ii), which describes the annual seasonal closure for the red hind spawning aggregation areas off Puerto Rico and St. Croix, from ''through February 28 each year,'' to ''through the last day of February each year.'' The seasonal closure, with this updated language, would be included in the subparts containing the regulations implementing the Puerto Rico FMP and the St Croix FMP.

This proposed rule would update the cross references to the subparts in 50 CFR part 622 to reflect changes to implement the island-based FMPs where there would be three U.S. Caribbean specific subparts instead of four as in the current regulations. This proposed rule would amend the import restrictions regulatory language for queen conch to reflect the change to island-based management. At 50 CFR 622.2, this proposed rule would revise the definition of fish trap in the U.S. Caribbean EEZ consistent with the island-based FMPs. The vessel color code requirements at 50 CFR 622.6(a)(2) would be clarified to reflect a change in how the fisheries would be described and identified under the island-based FMPs. The landing fish intact provisions at 50 CFR 622.10(b) would be updated to clarify the requirements for highly migratory species. This proposed rule would also clarify the St. Croix queen conch prohibition at 50 CFR 622.479(b)(4) to state that the prohibition applies whether or not queen conch are on a vessel, but also in a person's possession.

Further, NMFS proposes to revise appendix A to part 622 that currently lists federally managed species in the U.S. Caribbean. NMFS would remove the species tables applicable to the previous U.S. Caribbean-wide FMPs. The proposed rule would specify the federally managed species for Puerto Rico, St. Croix, and St. Thomas and St. John in subparts S, T, and U, respectively. As a result of removing U.S. Caribbean species tables from appendix A to part 622, NMFS would also revise the numbering for the tables of Gulf of Mexico reef fish, South Atlantic snapper-grouper, and Atlantic dolphin and wahoo species.

Classification

Pursuant to section 304(b)(1)(A) of the Magnuson-Stevens Act, the NMFS Assistant Administrator has determined that this proposed rule is consistent with the island-based FMPs, other provisions of the Magnuson-Stevens Act and other applicable laws, subject to further consideration after public comment.

This proposed rule has been determined to be not significant for purposes of Executive Order 12866.

The Chief Counsel for Regulation of the Department of Commerce certified to the Chief Counsel for Advocacy of the Small Business Administration that this proposed rule, if adopted, would not have a significant economic impact on a substantial number of small entities. The factual basis for this certification is as follows. A copy of the full analysis is available from NMFS (See **ADDRESSES**).

A description of the proposed management actions, why they are being considered, and the objectives of and legal basis for the actions are contained in the **SUMMARY** and **SUPPLEMENTARY INFORMATION** sections of the preamble.

The Magnuson-Stevens Act provides the statutory basis for this proposed rule. No duplicative, overlapping, or conflicting Federal rules have been identified. In addition, no new reporting or recordkeeping compliance requirements are introduced in this proposed rule even for species new to Federal management because landings of those species are already reported in commercial logbooks. Therefore, this proposed rule contains no new information collection requirements under the Paperwork Reduction Act of 1995.

The proposed rule concerns commercial and recreational fishing in Federal waters of the U.S. Caribbean. It directly affects both recreational anglers and commercial fishing businesses of Puerto Rico and the USVI.

Recreational anglers are not considered small entities as that term is defined in 5 U.S.C. 601(6), whether fishing from for-hire, privately owned, or leased vessels. Therefore, neither estimates of the number of anglers nor the impacts on them are required or provided in this analysis.

Both Puerto Rico and the USVI require commercial fishermen to have a commercial fishing license (non-Federal). An estimated 1,074 commercial fishing businesses operate off Puerto Rico, another 141 operate off St. Croix, and still another 119 operate off St. Thomas and St. John. All of these businesses are expected to operate primarily in the commercial fishing industry. A subset of these businesses operate within Federal waters.

A business primarily involved in the commercial fishing industry (NAICS 11411) is classified as a small business if it is independently owned and operated, is not dominant in its field of operation (including its affiliates), and its combined annual receipts are not in excess of $11 million for all of its affiliated operations worldwide. All of the commercial fishing businesses in Puerto Rico, St. Croix, and St. Thomas and St. John have annual revenues substantially less than $11 million. Each RFA estimated the number of small commercial fishing businesses from the number of commercial fishermen operating in Federal waters and determined that 383 small commercial fishing businesses in Puerto Rico, 30 small commercial fishing businesses in St. Croix, and 31 small businesses in St. Thomas and St. John would be directly affected the proposed rule.

The proposed rule would replace management measures from the U.S. Caribbean region-wide FMPs and manage Federal fishery resources under the three recently approved island-

based FMPs. The island-based FMPs retain most of the current management measures established under the U.S. Caribbean region-wide FMPs that apply to the respective island management area, including seasonal and area closures, minimum size limits, and recreational bag limits. The proposed rule, therefore, will continue to include those measures for each island-management area, as applicable. There would be no adverse or beneficial economic impact on small businesses from the retention of current management measures.

The proposed rule would implement revised management measures under each of the island-based FMPs, such as the species included for management, ACLs, and AMs. Species managed under the U.S. Caribbean-wide FMPs but not found or rarely found in Federal waters are excluded from management under the island-based FMPs and this proposed rule. Because the species are rarely found in Federal waters, no or negligible beneficial impact is expected from their exclusion from management. Any direct economic impact from the inclusion of new species for management, or from continuing to manage other species, would be from revisions of ACLs and AMs. The direct economic impacts of the proposed rule on small businesses are summarized in the following tables for the three island management areas.

PUERTO RICO FMP

Proposed individual stocks and (stock complex)	Expected direct economic impact	Basis for expected economic impact
Queen, gray and French angelfish (Angelfish); great barracuda*; dolphinfish* and pompano dolphinfish* (Dolphin); coney and graysby (Grouper 3); black, red, tiger, yellowfin, and yellowmouth grouper* (Grouper 4); misty and yellowedge grouper (Grouper 5); red hind and rock hind (Grouper 6); white grunt (Grunts); crevalle jack* (Jacks 1); African pompano* (Jacks 2); rainbow runner* (Jacks 3); king mackerel* and cero* (Mackerel); lane snapper (Snapper 3); dog, mutton, and schoolmaster snapper (Snapper 4); Yellowtail snapper (Snapper 5); blue tang, doctorfish, and surgeonfish (Surgeonfish); gray* triggerfish (part of the Triggerfish complex), tripletail* (Tripletail); little tunny* and blackfin* tuna (Tuna); wahoo* (Wahoo); puddingwife and Spanish hogfish (Wrasses 2).	None	ACL and AM not expected to affect baseline landings.
Black, blackfin, silk, vermilion, and wenchman snapper (Snapper 1); cardinal and queen snapper (Snapper 2); princess, queen, redband, redtail, stoplight, and striped parrotfish (Parrotfish 2); spiny lobster (Spiny Lobster); ocean and queen triggerfish (part of the Triggerfish complex); hogfish (Wrasses 1).	None, but potential future beneficial impact.	ACL and AM not expected to affect baseline landings; however, would allow for greater landings in the future.
Cubera snapper* (Snapper 6)	None, but potential future adverse impact.	ACL and AM not expected to affect baseline landings, but could have future adverse impact of $29 (2020 $) per small business if recreational data collection not resumed in future.
Giant manta ray* (Rays 1) Spotted eagle ray* (Rays 2) Southern stingray* (Rays 3)	None	ACL and AM consistent with zero baseline landings.
Any corals** in EEZ around Puerto Rico (Corals)	None	ACL and AM consistent with current harvest prohibition for currently managed species and expectation of zero baseline harvest for newly added species.
Any sea urchins in EEZ around Puerto Rico (Sea Urchins). Any sea cucumbers in EEZ around Puerto Rico (Sea Cucumbers), Queen conch Nassau grouper (Grouper 1) Goliath grouper (Grouper 2). Blue, midnight, and rainbow parrotfish (Parrotfish 1).	None	ACL and AM consistent with current harvest prohibition; no change in management.

*Species new to management.
**This includes currently prohibited species.

As summarized in the table for Puerto Rico above, there would be no significant impacts on a substantial number of small businesses in Puerto Rico because the revised management provisions are not expected to affect baseline landings and associated revenues for most stocks and stock complexes. However, the changes to management would allow for increased landings and associated revenues in the future for the following stocks and stock complexes: Snapper 1; Snapper 2; Parrotfish 2; Spiny Lobster; ocean and queen triggerfish (part of the Triggerfish complex); and Wrasses 1. We do not have sufficient information to estimate the magnitude of those potential changes. In addition, if recreational landings data collection is not continued in Puerto Rico, there could be an adverse annual insignificant impact of $29 (2020 dollars) per small business on those commercial fishing businesses that harvest cubera snapper because that figure represents less than 0.39 percent of annual revenue of the small businesses.

ST. CROIX FMP

Proposed individual stocks and (stock complex)	Expected direct economic impact	Basis for expected economic impact
Queen conch; dolphinfish* (Dolphin); coney and graysby (Grouper 3); red hind and rock hind (Grouper 4); black, red, tiger and yellowfin grouper (Grouper 5); princess, queen, redband, redfin, redtail, stoplight, and striped parrotfish (Parrotfish 2); bluestriped and white grunt (Grunts); queen triggerfish (Triggerfish); doctorfish (Surgeonfish).	None	ACL and AM not expected to affect baseline landings.

ST. CROIX FMP—Continued

Proposed individual stocks and (stock complex)	Expected direct economic impact	Basis for expected economic impact
Spiny lobster; blue tang and ocean surgeonfish (part of the Surgeonfish complex); French, gray, and queen angelfish (Angelfish); black, blackfin, silk, and vermilion snapper (Snapper 1); queen snapper (Snapper 2); gray and lane snapper (Snapper 3); mutton snapper (Snapper 4); schoolmaster (Snapper 5); yellowtail snapper (Snapper 6); longspine squirrelfish (Squirrelfish).	None, but potential future beneficial impact.	ACL and AM not expected to affect baseline landings; however, would allow for greater landings in the future.
Wahoo* (Wahoo); misty grouper (Grouper 6)	None, but potential future adverse impact.	ACL and AM not expected to affect baseline landings, but could have future adverse impact. Unknown for wahoo harvesters and could be less than $2 (2020 $) per small business in future for reef fish harvesters.
Any corals** in EEZ around St. Croix (Corals) Any sea urchins in EEZ around St. Croix (Sea Urchins) Any sea cucumbers in EEZ around St. Croix (Sea Cucumbers)	None	ACL and AM consistent with harvest prohibition for currently managed species and expectation of zero baseline harvest of newly added species.
Nassau grouper (Grouper 1) Goliath grouper (Grouper 2) Blue, midnight, and rainbow parrotfish (Parrotfish 1)	None	ACL and AM consistent with current harvest prohibition; no change in management.

*Species new to management.
**This includes currently prohibited species.

As summarized in the table for St. Croix above, there would be no significant impacts on a substantial number of small businesses in St. Croix because the revised management provisions are not expected to affect baseline landings and associated revenues for most stocks and stock complexes. However, the changes to management would allow for increased landings and associated revenues in the future for the following stocks and stock complexes: Spiny Lobster, blue tang and ocean surgeonfish (part of the Surgeonfish complex), Angelfish, Squirrelfish, and Snapper 1 through 6. We do have sufficient information to estimate the magnitude of those potential changes. Moreover, in the future, there could be an insignificant loss of less than $2 (2020 dollars) per small business that harvests misty grouper if landings of that species were to exceed the ACL and the Council determined that it would be necessary to take corrective action. Small businesses that harvest wahoo also could experience adverse economic impact if future landings were to exceed the ACT and the Council determined that correction action would be necessary; however, that impact is unknown at this time and the magnitude is dependent on the correction action, if any, that is taken at that time.

ST. THOMAS AND ST. JOHN FMP

Proposed individual stocks and (stock complex)	Expected direct economic impact	Basis for expected economic impact
Yellowmouth grouper* (Grouper 5); wahoo* (Wahoo); white and bluestriped grunt (Grunts 1); margate (Grunts 2); misty and yellowedge grouper (Grouper 5); blue runner (Jacks); doctorfish (part of the Surgeonfish complex).	None	ACL and AM not expected to affect baseline landings.
French, gray, and queen angelfish (Angelfish); spiny lobster; black, blackfin, silk, and vermillion snapper (Snapper 1); queen snapper(Snapper 2); lane and mutton snapper (Snapper 3); yellowtail snapper (Snapper 4); red hind and coney grouper (Grouper 3); princess, queen, redfin, redtail, stoplight, redband, and striped parrotfish (Parrotfish 2); sea bream, jolthead, sheepshead, and saucereye porgy (Porgies); hogfish (Wrasses); queen triggerfish (Triggerfish); blue tang and ocean surgeonfish (part of the Surgeonfish complex).	None, but potential future beneficial impact.	ACL and AM not expected to affect baseline landings; however, would allow for greater landings in the future.
Dolphinfish* (Dolphin); black, red, tiger and yellowfin grouper (Grouper 4)	None, but potential future adverse impact.	ACL and AM not expected to affect baseline landings, but could have future adverse impact. Unknown future impact for dolphinfish harvesters and in future could be approximately $70 (2020 $) per small business for reef fish harvesters.
Any corals** in EEZ around St. Thomas and St. John (Corals) Any sea urchins in EEZ around St. Thomas and St. John (Sea Urchins) Any sea cucumbers in EEZ around St. Thomas and St. John (Sea Cucumbers)	None	ACL and AM consistent with current harvest prohibition for currently managed species and expectation of zero baseline harvest for newly added species.
Nassau grouper (Grouper 1) Goliath grouper (Grouper 2) Queen conch Blue, midnight, and rainbow parrotfish (Parrotfish 1)..	None	ACL and AM consistent with current harvest prohibition; no change in management.

*Species new to management.
**This includes currently prohibited species.

As summarized in the table for St. Thomas and St. John above, there would be no significant impacts on a substantial number of small businesses in St. Thomas and St. John because the revised management provisions are not expected to affect baseline landings and associated revenues for most stocks and stock complexes. However, the changes to management would allow for increased landings and associated revenues in the future for the following stocks and stock complexes: Spiny Lobster, Angelfish, Snapper 1 through 4, Grouper 3, Parrotfish 2, Porgies, Wrasses, Triggerfish, and blue tang and ocean surgeonfish (part of the Surgeonfish complex). We do have

sufficient information to estimate the magnitude of those potential changes. Moreover, in the future, there could be an insignificant loss of approximately $70 (2020 dollars) per small business that harvests Grouper 4 if landings of that stock complex were to exceed its ACL and the Council determined that correction action would be necessary. That figure represents less than 0.94 percent of annual revenue. Small businesses that harvest dolphinfish also could experience an adverse economic impact if future landings were to exceed the ACT and the Council determined that correction action would be necessary; however, that impact is unknown at this time and the magnitude is dependent on the correction action, if any, that is taken at that time.

As such, this action is not expected to have a significant economic impact on a substantial number of small entities and will not have a disproportionate economic impact on small business entities relative to the large entities. Therefore, an Initial Regulatory Flexibility Analysis is not required and none has been prepared.

List of Subjects

50 CFR Part 600

Caribbean, Commercial, Fisheries, Fishing, Recreational.

50 CFR Part 622

Caribbean, Commercial, Fisheries, Fishing, Incorporation by Reference, Recreational.

Dated: April 28, 2022.

Samuel D. Rauch, III,

Deputy Assistant Administrator for Regulatory Programs, National Marine Fisheries Service.

For the reasons set out in the preamble, 50 CFR parts 600 and 622 are proposed to be amended as follows:

PART 600—MAGNUSON-STEVENS ACT PROVISIONS

■ 1. The authority citation for part 600 continues to read as follows:

Authority: 5 U.S.C. 561 and 16 U.S.C. 1801 *et seq.*

■ 2. In § 600.725(v), revise the entries under V. Caribbean Fishery Management Council to read as follows:

§ 600.725 General prohibitions.

* * * * *

(v) * * *

Fishery	Authorized gear types
* * * * * * *	
V. Caribbean Fishery Management Council	
1. Exclusive Economic Zone around Puerto Rico	
A. Puerto Rico Reef Fish Fishery (FMP)	
i. Commercial fishery	i. Automatic reel, bandit gear, buoy gear, handline, longline, rod and reel, trap, pot, spear.
ii. Recreational fishery	ii. Dip net, handline, rod and reel, slurp gun, spear, trap, pot.
B. Puerto Rico Pelagic Fishery (FMP)	
i. Commercial fishery	i. Automatic reel, bandit gear, buoy gear, handline, longline, rod and reel, gillnet.
ii. Recreational fishery	ii. Spear, handline, longline, rod and reel.
C. Puerto Rico Spiny Lobster Fishery (FMP)	
i. Commercial fishery	i. Trap, pot, dip net, hand harvest, snare.
ii. Recreational fishery	ii. Trap, pot, dip net, hand harvest, snare.
D. Puerto Rico Coral Reef Resources Fishery (FMP).	No harvest or possession in the EEZ.
E. Puerto Rico Queen Conch Fishery (FMP)	No harvest or possession in the EEZ.
F. Puerto Rico Pelagic Fishery (Non-FMP):	
i. Commercial fishery	i. Gillnet, automatic reel, bandit gear, buoy gear, handline, longline, rod and reel.
ii. Recreational fishery	ii. Spear, handline, longline, rod and reel.
G. Puerto Rico Commercial Fishery (Non-FMP)	Automatic reel, bandit gear, buoy gear, handline, longline, rod and reel, trawl, gillnet, cast net, spear.
H. Puerto Rico Recreational Fishery (Non-FMP)	Automatic reel, bandit gear, buoy gear, handline, longline, rod and reel, spear, powerhead, hand harvest, cast net.
2. Exclusive Economic Zone around St. Croix	
A. St. Croix Reef Fish Fishery (FMP):	
i. Commercial fishery	i. Automatic reel, bandit gear, buoy gear, handline, longline, rod and reel, trap, pot, spear.
ii. Recreational fishery	ii. Dip net, handline, rod and reel, slurp gun, spear, trap, pot.
B. St. Croix Pelagic Fishery (FMP):	
i. Commercial fishery	i. Gillnet, automatic reel, bandit gear, buoy gear, handline, longline, rod and reel.
ii. Recreational fishery	ii. Spear, handline, longline, rod and reel.
C. St. Croix Spiny Lobster Fishery (FMP):	
i. Commercial fishery	i. Trap, pot, dip net, hand harvest, snare.
ii. Recreational fishery	ii. Trap, pot, dip net, hand harvest, snare.
D. St. Croix Coral Reef Resource Fishery (FMP):	No harvest or possession in the EEZ.
E. St. Croix Queen Conch Fishery (FMP):	
i. Commercial fishery	i. Hand harvest.
ii. Recreational fishery	ii. Hand harvest.
F. St. Croix Pelagic Fishery (Non-FMP):	
i. Commercial fishery	i. Gillnet, automatic reel, bandit gear, buoy gear, handline, longline, rod and reel.
ii. Recreational fishery	ii. Spear, handline, longline, rod and reel.
G. St. Croix Commercial Fishery (Non-FMP)	Automatic reel, bandit gear, buoy gear, handline, longline, rod and reel, trawl, gillnet, cast net, spear.
H. St. Croix Recreational Fishery (Non-FMP)	Automatic reel, bandit gear, buoy gear, handline, longline, rod and reel, spear, powerhead, hand harvest, cast net.

Fishery	Authorized gear types
3. Exclusive Economic Zone around St. Thomas and St. John.	
A. St. Thomas and St. John Reef Fish Fishery (FMP):	
i. Commercial fishery	i. Automatic reel, bandit gear, buoy gear, handline, longline, rod and reel, trap, pot, spear.
ii. Recreational fishery	ii. Dip net, handline, rod and reel, slurp gun, spear, trap, pot.
B. St. Thomas and St. John Pelagic Fishery (FMP):	
i. Commercial fishery	i. Automatic reel, bandit gear, buoy gear, handline, longline, rod and reel, gillnet.
ii. Recreational fishery	ii. Spear, handline, longline, rod and reel.
C. St. Thomas and St. John Spiny Lobster Fishery (FMP).	
i. Commercial fishery	i. Trap, pot, dip net, hand harvest, snare.
ii. Recreational fishery	ii. Trap, pot, dip net, hand harvest, snare.
D. St. Thomas and St. John Coral Reef Resource Fishery (FMP).	No harvest or possession in the EEZ.
E. St. Thomas and St. John Queen Conch Fishery (FMP).	No harvest or possession in the EEZ.
F. St. Thomas and St. John Pelagic Fishery (Non-FMP):	
i. Commercial fishery	i. Gillnet, automatic reel, bandit gear, buoy gear, handline, longline, rod and reel.
ii. Recreational fishery	ii. Spear, handline, longline, rod and reel.
G. St. Thomas and St. John Commercial Fishery (Non-FMP).	Automatic reel, bandit gear, buoy gear, handline, longline, rod and reel, trawl, gillnet, cast net, spear.
H. St. Thomas and St. John Recreational Fishery (Non-FMP).	Automatic reel, bandit gear, buoy gear, handline, longline, rod and reel, spear, powerhead, hand harvest, cast net.
* * * * * * *	

* * * * *

PART 622—FISHERIES OF THE CARIBBEAN, GULF OF MEXICO, AND SOUTH ATLANTIC

■ 3. The authority citation for part 622 continues to read as follows:

Authority: 16 U.S.C. 1801 *et seq.*

■ 4. Amend § 622.1 by:

■ a. Revising paragraph (c); and

■ b. In Table 1:

■ i. Removing the entry for ''FMP for Corals and Reef Associated Plants and Invertebrates of Puerto Rico and the U.S. Virgin Islands'';

■ ii. Adding entries for ''FMP for the Exclusive Economic Zone around Puerto Rico'', ''FMP for the Exclusive Economic Zone around St. Croix'', and ''FMP for the Exclusive Economic Zone around St. Thomas and St. John'' in alphabetical order; and

■ iii. Removing the entries for ''FMP for Queen Conch Resources of Puerto Rico and the U.S. Virgin Islands'', ''FMP for the Reef Fish Fishery of Puerto Rico and the U.S. Virgin Islands'', and ''FMP for the Spiny Lobster Fishery of Puerto Rico and the U.S. Virgin Islands''.

The revisions and additions read as follows:

§ 622.1 Purpose and scope.

* * * * *

(c) This part also governs the importation of spiny lobster into Puerto Rico or the U.S. Virgin Islands.

* * * * *

TABLE 1 TO § 622.1—FMPS IMPLEMENTED UNDER PART 622

FMP title	Responsible fishery management council(s)	Geographical area
* * * * * * *		
FMP for the Exclusive Economic Zone around Puerto Rico	CFMC	Caribbean.
FMP for the Exclusive Economic Zone around St. Croix	CFMC	Caribbean.
FMP for the Exclusive Economic Zone around St. Thomas and St. John	CFMC	Caribbean.
* * * * * * *		

* * * * *

■ 5. Amend § 622.2 by:

■ a. Removing the definitions of ''Caribbean coral reef resource'', ''Caribbean prohibited coral'', ''Caribbean queen conch'', ''Caribbean reef fish'', and ''Caribbean spiny lobster or spiny lobster'';

■ b. Revising paragraph (1) in the definition for ''Fish trap'' and paragraph (1) in the definition for ''Import''; and

■ c. Adding, in alphabetical order, the definition for ''Spiny lobster''.

The revisions and addition read as follows:

§ 622.2 Definitions and acronyms.

* * * * *

Fish trap * * *

(1) In the Caribbean EEZ, a trap and its component parts, including the lines and buoys, regardless of the construction material, used for or capable of taking finfish. This does not include a spiny lobster trap as defined in subparts S, T, and U of this part.

* * * * *

Import * * *

(1) For the purpose of § 622.1(c) and subparts S, T, and U of this part only—To land on, bring into, or introduce into, or attempt to land on, bring into, or introduce into, Puerto Rico or the U.S. Virgin Islands, whether or not such landing, bringing, or introduction constitutes an importation within the meaning of the customs laws of the United States;

* * * * *

Spiny lobster means the species *Panulirus argus,* or a part thereof.

* * * * *

■ 6. In § 622.4, revise the introductory text and paragraphs (b) and (f)(1) to read as follows:

§ 622.4 Permits and fees—general.

This section contains general information about procedures related to permits. See also §§ 622.70 and 622.220 regarding certain permit procedures unique to coral permits in the Gulf of Mexico and the South Atlantic, respectively. See subpart F of this part for permit requirements related to aquaculture of species other than live rock. Permit requirements for specific fisheries, as applicable, are contained in the permit sections within subparts B through U of this part.

* * * * *

(b) *Change in application information.* The owner or operator of a vessel with a permit, a person with a coral permit, a person with an operator permit, or a dealer with a permit must notify the RA within 30 days after any change in the application information specified in paragraph (a) of this section or in § 622.70(b), § 622.220(b), or § 622.400(b). The permit is void if any change in the information is not reported within 30 days.

* * * * *

(f) * * *

(1) *Vessel permits, licenses, and endorsements and dealer permits.* A vessel permit, license, or endorsement or a dealer permit or endorsement issued under this part is not transferable or assignable, except as provided in the permits sections within subparts B through U of this part, where applicable. A person who acquires a vessel or dealership who desires to conduct activities for which a permit, license, or endorsement is required must apply for a permit, license, or endorsement in accordance with the provisions of this section and other applicable sections of this part. If the acquired vessel or dealership is currently permitted, the application must be accompanied by the original permit, and a copy of a signed bill of sale or equivalent acquisition papers. In those cases where a permit, license, or endorsement is transferable, the seller must sign the back of the permit, license, or endorsement and have the signed transfer document notarized.

* * * * *

■ 7. In § 622.5, revise the introductory text and paragraph (a) and paragraph (b) introductory text to read as follows:

§ 622.5 Recordkeeping and reporting—general.

This section contains recordkeeping and reporting requirements that are broadly applicable, as specified, to most or all fisheries governed by this part. Additional recordkeeping and reporting requirements specific to each fishery are contained in the respective subparts B through U of this part.

(a) *Collection of additional data and fish inspection.* In addition to data required to be reported as specified in subparts B through U of this part, as applicable, additional data will be collected by authorized statistical reporting agents and by authorized officers. A person who fishes for or possesses species in or from the EEZ governed in this part is required to make the applicable fish or any part thereof available for inspection by the SRD or an authorized officer on request.

(b) *Commercial vessel, charter vessel, and headboat inventory.* The owner or operator of a commercial vessel, charter vessel, or headboat operating in a fishery governed in this part who is not selected to report by the SRD under the recordkeeping and reporting requirements in subparts B through U of this part, must provide the following information when interviewed by the SRD:

* * * * *

■ 8. In § 622.6, revise the introductory text of paragraphs (a)(1) and (2) to read as follows:

§ 622.6 Vessel identification.

* * * * *

(a) * * *

(1) *Official number.* A vessel for which a permit has been issued under subparts B through U of this part, except for subpart R, and a vessel that fishes for or possesses pelagic sargassum in the South Atlantic EEZ, must display its official number—

* * * * *

(2) *Official number and color code.* The following vessels must display their official number as specified in paragraph (a)(1) of this section and, in addition, must display their assigned color code: A vessel for which a permit has been issued to fish with a sea bass pot, as required under § 622.170(a)(1); and, in the EEZ around Puerto Rico, St. Croix, or St. Thomas and St. John, a vessel fishing commercially with traps for reef fish, as defined in subparts S through U of this part, or a vessel fishing for spiny lobster, when color codes are required and have been assigned to the vessel by Puerto Rico or the U.S. Virgin Islands, as applicable. Color codes required for vessels fishing in the EEZ around Puerto Rico, St. Croix, or St. Thomas and St. John are assigned by Puerto Rico or the U.S. Virgin Islands, as applicable. Color codes required in all other fisheries are assigned by the RA. The color code must be displayed—

* * * * *

■ 9. Revise § 622.8 to read as follows:

§ 622.8 Quotas—general.

(a) *Applicability.* Quotas apply for the fishing year for each species, species group, sector, or sector component unless accountability measures are implemented during the fishing year pursuant to the applicable annual catch limits (ACLs) and accountability measures (AMs) sections within subparts B through U of this part due to a quota overage occurring in the previous year, in which case a reduced quota will be specified through notification in the **Federal Register**. Annual quota increases are contingent on the total allowable catch for the applicable species not being exceeded in the previous fishing year. If the total allowable catch is exceeded in the previous fishing year, the RA will file a notification with the Office of the Federal Register to maintain the quota for the applicable species, species group, sector, or sector component from the previous fishing year for following fishing years unless NMFS determines based upon the best scientific information available that maintaining the quota from the previous year is unnecessary. Except for the quotas for Gulf and South Atlantic coral, the quotas include species harvested from state waters adjoining the EEZ.

(b) *Quota closures.* When a quota specified in this part is reached or is projected to be reached, the Assistant Administrator will file a notification to

that effect with the Office of the Federal Register. On and after the effective date of such notification, for the remainder of the fishing year, the applicable closure restrictions for such a quota, as specified in this part apply. See the applicable ACLs, annual catch targets (ACTs), and AMs sections in subparts B through U of this part for closure provisions when an applicable ACL or ACT is reached or projected to be reached.

(c) *Reopening.* When a species, species group, sector, or sector component has been closed based on a projection of the quota specified in this part, or the ACL specified in the applicable ACL and accountability measures sections of subparts B through U of this part being reached and subsequent data indicate that the quota or ACL was not reached, the Assistant Administrator may file a notification to that effect with the Office of the Federal Register. Such notification may reopen the species, species group, sector, or sector component to provide an opportunity for the quota or ACL to be harvested.

■ 10. In § 622.9, revise the introductory text and paragraph (b) to read as follows:

§ 622.9 Prohibited gear and methods—general.

This section contains prohibitions on use of gear and methods that are of general applicability, as specified. Additional prohibitions on use of gear and methods applicable to specific species or species groups are contained in subparts B through U of this part.

* * * * *

(b) *Chemicals and plants.* A toxic chemical may not be used or possessed in a coral area.

* * * * *

■ 11. In § 622.10, revise the introductory text and paragraph (b) to read as follows:

§ 622.10 Landing fish intact—general.

This section contains requirements for landing fish intact that are broadly applicable to finfish in the Gulf EEZ and Caribbean EEZ, as specified. See subparts B through U of this part, as applicable, for additional species-specific requirements for landing fish intact.

* * * * *

(b) Atlantic highly migratory species, such as tunas, billfishes (marlins, spearfishes, and swordfish), and oceanic sharks are not subject to the requirements of paragraph (a) of this section. See 50 CFR part 635 for any requirements applicable to landing Atlantic highly migratory species intact.

* * * * *

■ 12. Revise § 622.11 to read as follows:

§ 622.11 Bag and possession limits—general applicability.

This section describes the general applicability provisions for bag and possession limits specified in subparts B through U of this part.

(a) *Applicability.* (1) The bag and possession limits apply for a species or species group in or from the EEZ. Unless specified otherwise, bag limits apply to a person on a daily basis, regardless of the number of trips in a day. Unless specified otherwise, a person is limited to a single bag limit for a trip lasting longer than one calendar day. Unless specified otherwise, possession limits apply to a person on a trip after the first 24 hours of that trip. The bag and possession limits apply to a person who fishes in the EEZ in any manner, except a person on a vessel in the EEZ that has on board the commercial vessel permit required under this part for the appropriate species or species group. The possession of a commercial vessel permit notwithstanding, the bag and possession limits apply when the vessel is operating as a charter vessel or headboat. A person who fishes in the EEZ may not combine a bag limit specified in subparts B through U of this part with a bag or possession limit applicable to state waters. A species or species group subject to a bag limit specified in subparts B through U of this part and taken in the EEZ by a person subject to the bag limits may not be transferred at sea, regardless of where such transfer takes place, and such fish may not be transferred in the EEZ. The operator of a vessel that fishes in the EEZ is responsible for ensuring that the bag and possession limits specified in subparts B through U of this part are not exceeded.

(2) [Reserved]

(b) [Reserved]

§ 622.12 [Removed and Reserved]

■ 13. Remove and reserve § 622.12.

§ 622.413 [Redesignated as § 622.19]

■ 14. Redesignate § 622.413 as § 622.19 in subpart A.

■ 15. In newly redesignated § 622.19, revise paragraphs (a) and (b)(7) and (8) to read as follows:

§ 622.19 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, NMFS must publish a document in the **Federal Register** and the material must be available to the public. All approved material is available for inspection at NMFS and at the National Archives and Records Administration (NARA). Contact NMFS at: NMFS, Office of Sustainable Fisheries, 1315 East-West Highway, Silver Spring, MD; 301–427–8500; *www.fisheries.noaa.gov/about/office-sustainable-fisheries.* For information on the availability of this material at NARA, email: *fr.inspection@nara.gov,* or go to: *www.archives.gov/federal-register/cfr/ibr-locations.html.* The material may be obtained from the source(s) in paragraphs (b) and (c) of this section.

(b) * * *

(7) F.A.C., Chapter 68B–55: Trap retrieval and trap debris removal, Rule 68B–55.002: Retrieval of Trap Debris, in effect as of October 15, 2007, IBR approved for §§ 622.402(c) and 622.403(b).

(8) F.A.C., Chapter 68B–55: Trap retrieval and trap debris removal, Rule 68B–55.004: Retrieval of Derelict and Traps Located in Areas Permanently Closed to Trapping, in effect as of October 15, 2007, IBR approved for §§ 622.402(c) and 622.403(b).

* * * * *

■ 16. In § 622.409, revise paragraphs (a) introductory text and (a)(2) to read as follows:

§ 622.409 Spiny lobster import prohibitions.

(a) *Minimum size limits for imported spiny lobster.* Multiple minimum size limits apply to the importation of spiny lobster into the United States—one that applies any place subject to the jurisdiction of the United States other than Puerto Rico or the U.S. Virgin Islands, and more restrictive minimum size limits that apply to Puerto Rico, St. Croix, and St. Thomas and St. John, respectively.

* * * * *

(2) See subparts S, T, and U of this part for the more restrictive minimum size limits that apply to spiny lobster imported into Puerto Rico, St. Croix, and St. Thomas and St. John, respectively.

* * * * *

■ 17. Revise subpart S to read as follows:

Subpart S—FMP for the EEZ Around Puerto Rico

Sec.

622.430 Management area.

622.431 Definitions.
622.432 [Reserved]
622.433 Vessel identification.
622.434 Gear identification.
622.435 Trap construction specifications and tending restrictions.
622.436 Anchoring restrictions.
622.437 Prohibited gear and methods.
622.438 Prohibited species.
622.439 Area and seasonal closures.
622.440 Annual catch limits (ACLs), annual catch targets (ACTs), and accountability measures (AMs).
622.441 Size limits.
622.442 [Reserved]
622.443 Restrictions on sale or purchase.
622.444 Bag and possession limits.
622.445 Other harvest restrictions.
622.446 Spiny lobster import prohibitions.
622.447 Adjustment of management measures.

§ 622.430 Management area.

The management area is the EEZ around Puerto Rico bounded by rhumb lines connecting the following points and geographic instructions in order:

TABLE 1 TO § 622.430

Point	North lat.	West long.
A (intersects with the international and EEZ boundary)	19°37′29″	65°20′57″
B	18°25′46.3015″	65°06′31.866″
From Point B proceed southerly along the 3-nautical mile territorial boundary of the St. Thomas and St. John island group to Point C.		
C	18°13′59.0606″	65°05′33.058″
D	18°01′16.9636″	64°57′38.817″
E	17°30′00.000″	65°20′00.1716″
F	16°02′53.5812″	65°20′00.1716″
From Point F proceed along the international and EEZ boundary southwesterly, then northerly, then easterly, and finally southerly to Point A.		
A (intersects with the International and EEZ boundary)	19°37′29″	65°20′57″

§ 622.431 Definitions.

In addition to the definitions and acronyms in § 622.2, the terms and acronyms used in this subpart have the following meanings:

Coral means any or all species, or a part thereof, of coral occurring in the EEZ around Puerto Rico, including any or all species, or a part thereof, of soft corals and gorgonians in Order Alcyonacea; sea pens and sea pansies in Order Pennatulacea; black corals in Order Antipatharia; stony corals in Order Scleractinia; and, within Order Anthoatheacata, fire corals in Family Milleporidae and lace corals in Family Stylasteridae.

Coral reef resource means any or all species, or a part thereof, of coral, sea cucumber, and sea urchin.

Pelagic fish means any or all species, or a part thereof, as follows:

TABLE 1 TO § 622.431

Class or Family	Scientific name	English common name
Dolphinfishes—Coryphaenidae	*Coryphaena hippurus*	Dolphinfish.
	Coryphaena equiselis	Pompano dolphinfish.
Barracudas—Sphyraenidae	*Sphyraena barracuda*	Great barracuda.
Mackerels and tunas—Scombridae	*Thunnus atlanticus*	Blackfin tuna.
	Scomberomorus regalis	Cero.
	Scomberomorus cavalla	King mackerel.
	Euthynnus alletteratus	Little tunny.
	Acanthocybium solandri	Wahoo.
Tripletails—Lobotidae	*Lobotes surinamensis*	Tripletail.

Queen conch means the species *Lobatus gigas,* or a part thereof.

Rays means any or all species, or a part thereof, as follows:

TABLE 2 TO § 622.431

Class or Family	Scientific name	English common name
Eagle and manta rays—Myliobatidae	*Manta birostris*	Giant manta.
	Aetobatus narinari	Spotted eagle ray.
Stingrays—Dasyatidae	*Dasyatis americana*	Southern stingray.

Reef fish means any or all species, or a part thereof, as follows:

TABLE 3 TO § 622.431

Class or Family	Scientific name	English common name
Angelfishes—Pomacanthidae	*Pomacanthus paru*	French angelfish.
	Pomacanthus arcuatus	Gray angelfish.

TABLE 3 TO § 622.431—Continued

Class or Family	Scientific name	English common name
	Holacanthus ciliaris	Queen angelfish.
Groupers—Serranidae	*Mycteroperca bonaci*	Black grouper.
	Cephalopholis fulva	Coney.
	Epinephelus itajara	Goliath grouper.
	Cephalopholis cruentata	Graysby.
	Hyporthodus mystacinus	Misty grouper.
	Epinephelus striatus	Nassau grouper.
	Epinephelus morio	Red grouper.
	Epinephelus guttatus	Red hind.
	Epinephelus adscensionis	Rock hind.
	Mycteroperca tigris	Tiger grouper.
	Hyporthodus flavolimbatus	Yellowedge grouper.
	Mycteroperca venenosa	Yellowfin grouper.
	Mycteroperca interstitialis	Yellowmouth grouper.
Grunts—Haemulidae	*Haemulon plumierii*	White grunt.
Jacks—Carangidae	*Alectis ciliaris*	African pompano.
	Caranx hippos	Crevalle jack.
	Elagatis bipinnulata	Rainbow runner.
Parrotfishes—Scaridae	*Scarus coeruleus*	Blue parrotfish.
	Scarus coelestinus	Midnight parrotfish.
	Scarus taeniopterus	Princess parrotfish.
	Scarus vetula	Queen parrotfish.
	Scarus guacamaia	Rainbow parrotfish.
	Sparisoma aurofrenatum	Redband parrotfish.
	Sparisoma chrysopterum	Redtail parrotfish.
	Sparisoma viride	Stoplight parrotfish.
	Scarus iseri	Striped parrotfish.
Snappers—Lutjanidae	*Apsilus dentatus*	Black snapper.
	Lutjanus buccanella	Blackfin snapper.
	Pristipomoides macrophthalmus	Cardinal snapper.
	Lutjanus cyanopterus	Cubera snapper.
	Lutjanus jocu	Dog snapper.
	Lutjanus synagris	Lane snapper.
	Lutjanus analis	Mutton snapper.
	Etelis oculatus	Queen snapper.
	Lutjanus apodus	Schoolmaster.
	Lutjanus vivanus	Silk snapper.
	Rhomboplites aurorubens	Vermilion snapper.
	Pristipomoides aquilonaris	Wenchman.
	Ocyurus chrysurus	Yellowtail snapper.
Surgeonfishes—Acanthuridae	*Acanthurus coeruleus*	Blue tang.
	Acanthurus chirurgus	Doctorfish.
	Acanthurus tractus	Ocean surgeonfish.
Triggerfishes—Balistidae	*Balistes capriscus*	Gray triggerfish.
	Canthidermis sufflamen	Ocean triggerfish.
	Balistes vetula	Queen triggerfish.
Wrasses—Labridae	*Lachnolaimus maximus*	Hogfish.
	Halichoeres radiatus	Puddingwife.
	Bodianus rufus	Spanish hogfish.

Sea cucumber means any or all species, or a part thereof, in Class Holothuroidea and occurring in the EEZ around Puerto Rico.

Sea urchin means any or all species of sea urchin, or a part thereof, in Class Echinoidea and occurring in the EEZ around Puerto Rico.

Spiny lobster trap means a trap and its component parts, including the lines and buoys, used for or capable of taking spiny lobster and meeting the spiny lobster trap construction specifications of this subpart.

§ 622.432 [Reserved]

§ 622.433 Vessel identification.

See § 622.6 for vessel identification requirements applicable to this subpart.

§ 622.434 Gear identification.

(a) *Reef fish*—(1) *Fish traps and associated buoys.* All fish traps used or possessed in the EEZ around Puerto Rico must display the official number specified for the vessel by Puerto Rico or the U.S. Virgin Islands. A fish trap that is fished individually, rather than tied together in a trap line, must have at least one buoy attached that floats on the surface. Fish traps that are tied together in a trap line must have at least one buoy that floats at the surface attached at each end of the trap line. All buoys must display the official number and color code assigned to the vessel by Puerto Rico or the U.S. Virgin Islands, whichever is applicable.

(2) *Presumption of ownership of fish traps.* A fish trap in the EEZ around Puerto Rico will be presumed to be the property of the most recently documented owner. This presumption will not apply with respect to such traps that are lost or sold if the owner reports the loss or sale within 15 days to the RA.

(3) *Disposition of unmarked fish traps or buoys.* An unmarked fish trap or buoy deployed in the EEZ around Puerto Rico

is illegal and may be disposed of in any appropriate manner by the Assistant Administrator or an authorized officer.

(b) [Reserved]

(c) *Spiny lobster*—(1) *Spiny lobster traps and associated buoys.* All spiny lobster traps used or possessed in the EEZ around Puerto Rico must display the official number specified for the vessel by Puerto Rico or the U.S. Virgin Islands. A spiny lobster trap that is fished individually, rather than tied together in a trap line, must have at least one buoy attached that floats on the surface. Spiny lobster traps that are tied together in a trap line must have at least one buoy that floats at the surface attached at each end of the trap line. All buoys must display the official number and color code assigned to the vessel by Puerto Rico or the U.S. Virgin Islands, whichever is applicable.

(2) *Presumption of ownership of spiny lobster traps.* A spiny lobster trap in the EEZ around Puerto Rico will be presumed to be the property of the most recently documented owner. This presumption will not apply with respect to such traps that are lost or sold if the owner reports the loss or sale within 15 days to the RA.

(3) *Disposition of unmarked spiny lobster traps or buoys.* An unmarked spiny lobster trap or buoy deployed in the EEZ around Puerto Rico is illegal and may be disposed of in any appropriate manner by the Assistant Administrator or an authorized officer.

§ 622.435 Trap construction specifications and tending restrictions.

(a) *Reef fish*—(1) *Construction specifications*—(i) *Minimum mesh size.* A bare-wire fish trap used or possessed in the EEZ around Puerto Rico that has hexagonal mesh openings must have a minimum mesh size of 1.5 inches (3.8 cm) in the smallest dimension measured between centers of opposite strands. A bare-wire fish trap used or possessed in the EEZ around Puerto Rico that has other than hexagonal mesh openings or a fish trap of other than bare wire, such as coated wire or plastic, used or possessed in the EEZ around Puerto Rico, must have a minimum mesh size of 2 inches (5.1 cm) in the smallest dimension measured between centers of opposite strands.

(ii) *Escape mechanisms.* A fish trap used or possessed in the EEZ around Puerto Rico must have a panel located on one side of the trap, excluding the top, bottom, and side containing the trap entrance. The opening covered by the panel must measure not less than 8 by 8 inches (20.3 by 20.3 cm). The mesh size of the panel may not be smaller than the mesh size of the trap. The panel must be attached to the trap with untreated jute twine with a diameter not exceeding ⅛-inch (3.2 mm). An access door may serve as the panel, provided it is on an appropriate side, it is hinged only at its bottom, its only other fastening is untreated jute twine with a diameter not exceeding ⅛-inch (3.2 mm), and such fastening is at the top of the door so that the door will fall open when such twine degrades. Jute twine used to secure a panel may not be wrapped or overlapped.

(2) *Tending restrictions.* A fish trap in the EEZ around Puerto Rico may be pulled or tended only by a person (other than an authorized officer) aboard the fish trap owner's vessel, or aboard another vessel if such vessel has on board written consent of the trap owner, or if the trap owner is aboard and has documentation verifying his identification number and color code. An owner's written consent must specify the time period such consent is effective and the trap owner's gear identification number and color code.

(b) [Reserved]

(c) *Spiny lobster*—(1) *Construction specifications*—(i) *Escape mechanisms.* A spiny lobster trap used or possessed in the EEZ around Puerto Rico must contain on any vertical side or on the top a panel no smaller in diameter than the throat or entrance of the trap. The panel must be made of or attached to the trap by one of the following degradable materials:

(A) Untreated fiber of biological origin with a diameter not exceeding ⅛-inch (3.2 mm). This includes, but is not limited to tyre palm, hemp, jute, cotton, wool, or silk.

(B) Ungalvanized or uncoated iron wire with a diameter not exceeding 1/16-inch (1.6 mm), that is, 16-gauge wire.

(ii) [Reserved]

(2) *Tending restrictions.* A spiny lobster trap in the EEZ around Puerto Rico may be pulled or tended only by a person (other than an authorized officer) aboard the trap owner's vessel, or aboard another vessel if such vessel has on board written consent of the trap owner, or if the trap owner is aboard and has documentation verifying his identification number and color code. An owner's written consent must specify the time period such consent is effective and the trap owner's gear identification number and color code.

§ 622.436 Anchoring restrictions.

The owner or operator of any fishing vessel, recreational or commercial, that fishes for or possesses reef fish in or from the EEZ around Puerto Rico must ensure that the vessel uses only an anchor retrieval system that recovers the anchor by its crown, thereby preventing the anchor from dragging along the bottom during recovery. For a grapnel hook, this could include an incorporated anchor rode reversal bar that runs parallel along the shank, which allows the rode to reverse and slip back toward the crown. For a fluke- or plow-type anchor, a trip line consisting of a line from the crown of the anchor to a surface buoy is required.

§ 622.437 Prohibited gear and methods.

Also see § 622.9 for additional prohibited gear and methods that apply more broadly to multiple fisheries or in some cases all fisheries.

(a) *Reef fish*—(1) *Poisons.* A poison, drug, or other chemical may not be used to fish for reef fish in the EEZ around Puerto Rico.

(2) *Powerheads.* A powerhead may not be used in the EEZ around Puerto Rico to harvest reef fish. The possession of a mutilated reef fish in or from the EEZ around Puerto Rico and a powerhead constitutes a rebuttable presumption of a violation of this paragraph (a)(2).

(3) *Gillnets and trammel nets.* A gillnet or trammel net may not be used in the EEZ around Puerto Rico to fish for reef fish. The possession of a reef fish in or from the EEZ around Puerto Rico and a gillnet or trammel net constitutes a rebuttable presumption of a violation of this paragraph (a)(3). A gillnet or trammel net used in the EEZ around Puerto Rico to fish for any other species must be tended at all times.

(b) [Reserved]

(c) *Spiny lobster*—(1) *Spears and hooks.* A spear, hook, or similar device may not be used in the EEZ around Puerto Rico to harvest a spiny lobster. The possession of a speared, pierced, or punctured spiny lobster in or from the EEZ around Puerto Rico constitutes a rebuttable presumption of a violation of this paragraph (c)(1).

(2) *Gillnets and trammel nets.* A gillnet or trammel net may not be used in the EEZ around Puerto Rico to fish for spiny lobster. The possession of a spiny lobster in or from the EEZ around Puerto Rico and a gillnet or trammel net constitutes a rebuttable presumption of a violation of this paragraph (c)(2). A gillnet or trammel net used in the EEZ around Puerto Rico to fish for any other species must be tended at all times.

§ 622.438 Prohibited species.

The harvest and possession restrictions of this section apply without regard to whether the species is harvested by a vessel operating under a commercial vessel permit. The operator of a vessel that fishes in the EEZ around

Puerto Rico is responsible for the limit applicable to that vessel. Any of the following species caught in the EEZ around Puerto Rico must be released immediately with a minimum of harm.

(a) *Reef fish.* No person may fish for or possess the following reef fish species in or from the EEZ around Puerto Rico.

(1) Goliath grouper or Nassau grouper.

(2) Blue parrotfish, midnight parrotfish, or rainbow parrotfish.

(b)–(c) [Reserved]

(d) *Coral, sea cucumber, and sea urchin.* A coral, sea cucumber, or sea urchin may not be fished for or possessed in or from the EEZ around Puerto Rico. The taking of coral in the EEZ around Puerto Rico is not considered unlawful possession provided it is returned immediately to the sea in the general area of fishing.

(e) *Queen conch.* No person may fish for or possess queen conch in or from the EEZ around Puerto Rico.

(f) *Rays.* No person may fish for or possess giant manta, spotted eagle ray, or southern stingray in or from the EEZ around Puerto Rico.

§ 622.439 Area and seasonal closures.

(a) *Closures applicable to specific areas*—(1) *Abrir La Sierra Bank red hind spawning aggregation area.* Abrir La Sierra Bank is bounded by rhumb lines connecting, in order, the points listed in Table 1 to this paragraph (a)(1).

(i) From December 1 through the last day of February, each year, fishing is prohibited in Abrir La Sierra Bank.

(ii) Fishing with pots, traps, bottom longlines, gillnets or trammel nets is prohibited year-round in Abrir La Sierra Bank.

TABLE 1 TO § 622.439(a)(1)—ABRIR LA SIERRA BANK

Point	North lat.	West long.
A	18°06.5′	67°26.9′
B	18°06.5′	67°23.9′
C	18°03.5′	67°23.9′
D	18°03.5′	67°26.9′
A	18°06.5′	67°26.9′

(2) *Tourmaline Bank red hind spawning aggregation area.* Tourmaline Bank is bounded by rhumb lines connecting, in order, the points listed in Table 2 to this paragraph (a)(2).

(i) From December 1 through the last day of February, each year, fishing is prohibited in those parts of Tourmaline Bank that are in the EEZ around Puerto Rico.

(ii) Fishing with pots, traps, bottom longlines, gillnets or trammel nets is prohibited year-round in those parts of Tourmaline Bank that are in the EEZ around Puerto Rico.

TABLE 2 TO § 622.439(a)(2)—TOURMALINE BANK

Point	North lat.	West long.
A	18°11.2′	67°22.4′
B	18°11.2′	67°19.2′
C	18°08.2′	67°19.2′
D	18°08.2′	67°22.4′
A	18°11.2′	67°22.4′

(3) *Bajo de Sico.* Bajo de Sico is bounded by rhumb lines connecting, in order, the points listed in Table 3 to this paragraph (a)(3).

(i) From October 1 through March 31, each year, no person may fish for or possess any reef fish in or from those parts of Bajo de Sico that are in the EEZ around Puerto Rico. The prohibition on possession does not apply to such reef fish harvested and landed ashore prior to the closure.

(ii) Fishing with pots, traps, bottom longlines, gillnets or trammel nets is prohibited year-round in those parts of Bajo de Sico that are in the EEZ around Puerto Rico.

(iii) Anchoring by fishing vessels is prohibited year-round in those parts of Bajo de Sico that are in the EEZ around Puerto Rico.

TABLE 3 TO § 622.439(a)(3)—BAJO DE SICO

Point	North lat.	West long.
A	18°15.7′	67°26.4′
B	18°15.7′	67°23.2′
C	18°12.7′	67°23.2′
D	18°12.7′	67°26.4′
A	18°15.7′	67°26.4′

(b) *Seasonal closures applicable to specific species*—(1) *Black, red, tiger, yellowedge, and yellowfin grouper closure.* From February 1 through April 30, each year, no person may fish for or possess black, red, tiger, yellowedge, or yellowfin grouper in or from the EEZ around Puerto Rico. The prohibition on possession does not apply to such grouper harvested and landed ashore prior to the closure.

(2) *Red hind closure.* From December 1 through the last day of February, each year, no person may fish for or possess red hind in or from the EEZ around Puerto Rico west of 67°10′ W longitude. The prohibition on possession does not apply to red hind harvested and landed ashore prior to the closure.

(3) *Black, blackfin, silk, and vermilion snapper closure.* From October 1 through December 31, each year, no person may fish for or possess black, blackfin, silk, or vermilion snapper in or from the EEZ around Puerto Rico. The prohibition on possession does not apply to such snapper harvested and landed ashore prior to the closure.

(4) *Lane and mutton snapper closure.* From April 1 through June 30, each year, no person may fish for or possess lane or mutton snapper in or from the EEZ around Puerto Rico. The prohibition on possession does not apply to such snapper harvested and landed ashore prior to the closure.

§ 622.440 Annual catch limits (ACLs), annual catch targets (ACTs), and accountability measures (AMs).

(a) *Reef fish.* For those fishing commercially, the applicable ACL is the commercial ACL. For those fishing recreationally, the applicable ACL is the recreational ACL. When landings for one sector are not available for comparison to that sector's ACL, the ACL for the sector with available landings is the ACL for the stock or stock complex.

(1) *Commercial ACLs.* The commercial ACLs are as follows and given in round weight.

TABLE 1 TO § 622.440(a)(1)

Family	Stock or stock complex and species composition	Commercial ACL
Angelfishes	Angelfish—French angelfish, gray angelfish, queen angelfish	137 lb (62.1 kg).
Groupers	Grouper 3—coney[1], graysby	23,890 lb (10,836.3 kg).
	Grouper 4—black grouper, red grouper, tiger grouper, yellowfin grouper, yellowmouth grouper.	2,492 lb (1,130.3 kg).
	Grouper 5—misty grouper, yellowedge grouper	15,327 lb (6,952.2 kg).
	Grouper 6—red hind[1], rock hind	121,729 lb (55,215.3 kg).
Grunts	Grunts—white grunt	177,923 lb (80,704.5 kg).
Jacks	Jacks 1—crevalle jack	46 lb (20.8 kg).
	Jacks 2—African pompano	1,052 lb (477.1 kg).

TABLE 1 TO § 622.440(a)(1)—Continued

Family	Stock or stock complex and species composition	Commercial ACL
	Jacks 3—rainbow runner	913 lb (414.1 kg).
Parrotfishes	Parrotfish 2—princess parrotfish, queen parrotfish, redband parrotfish, redtail parrotfish, stoplight parrotfish, striped parrotfish.	147,774 lb (67,029.1 kg).
Snappers	Snapper 1—black snapper, blackfin snapper, silk snapper [1], vermilion snapper, wenchman.	424,009 lb (192,327.2 kg).
	Snapper 2—cardinal snapper, queen snapper [1]	257,236 lb (116,680.2 kg).
	Snapper 3—lane snapper	244,376 lb (110,847 kg).
	Snapper 4—dog snapper, mutton snapper [1], schoolmaster	116,434 lb (52,813.5 kg).
	Snapper 5—yellowtail snapper	315,806 lb (143,247.1 kg).
	Snapper 6—cubera snapper	119 lb (53.9 kg).
Surgeonfishes	Surgeonfish—blue tang, doctorfish, ocean surgeonfish	147 lb (66.6 kg).
Triggerfishes	Triggerfish—gray triggerfish, ocean triggerfish, queen triggerfish [1]	83,099 lb (37,693 kg).
Wrasses	Wrasses 1—hogfish	70,140 lb (31,814.9 kg).
	Wrasses 2—puddingwife, Spanish hogfish	20,126 lb (9,129 kg).

[1] Indicator stock.

(2) *Recreational ACLs.* The recreational ACLs are as follows and given in round weight.

TABLE 2 TO § 622.440(a)(2)

Family	Stock or stock complex and species composition	Recreational ACL
Angelfishes	Angelfish—French angelfish, gray angelfish, queen angelfish	2,985 lb (1,353.9 kg).
Groupers	Grouper 3—coney [1], graysby	19,634 lb (8,905.8 kg).
	Grouper 4—black grouper, red grouper, tiger grouper, yellowfin grouper, yellowmouth grouper.	5,867 lb (2,661.2 kg).
	Grouper 5—misty grouper, yellowedge grouper	4,225 lb (1,916.4 kg).
	Grouper 6—red hind [1], rock hind	34,493 lb (15,645.7 kg).
Grunts	Grunts—white grunt	2,461 lb (1,116.2 kg).
Jacks	Jacks 1—crevalle jack	41,894 lb (19,002.7 kg).
	Jacks 2—African pompano	5,719 lb (2,594 kg).
	Jacks 3—rainbow runner	8,091 lb (3,670 kg).
Parrotfishes	Parrotfish 2—princess parrotfish, queen parrotfish, redband parrotfish, redtail parrotfish, stoplight parrotfish, striped parrotfish.	17,052 lb (7,734.6 kg).
Snappers	Snapper 1—black snapper, blackfin snapper, silk snapper [1], vermilion snapper, wenchman.	111,943 lb (50,776.4 kg).
	Snapper 2—cardinal snapper, queen snapper [1]	24,974 lb (11,328 kg).
	Snapper 3—lane snapper	21,603 lb (9,798.9 kg).
	Snapper 4—dog snapper, mutton snapper*, schoolmaster	76,625 lb (34,756.5 kg).
	Snapper 5—yellowtail snapper	23,988 lb (10,880.7 kg).
	Snapper 6—cubera snapper	6,448 lb (2,924.7 kg).
Surgeonfishes	Surgeonfish—blue tang, doctorfish, ocean surgeonfish	860 lb (390 kg).
Triggerfishes	Triggerfish—gray triggerfish, ocean triggerfish, queen triggerfish [1]	7,453 lb (3,380.6 kg).
Wrasses	Wrasses 1—hogfish	8,263 lb (3,748 kg).
	Wrasses 2—puddingwife, Spanish hogfish	5,372 lb (2,436.6 kg).

[1] Indicator stock.

(3) *Total ACLs.* The total ACLs (combined commercial and recreational ACLs) are as follows and given in round weight.

TABLE 3 TO § 622.440(a)(3)

Family	Stock or stock complex and species composition	Total ACL
Angelfishes	Angelfish—French angelfish, gray angelfish, queen angelfish	3,122 lb (1,416.1 kg).
Groupers	Grouper 3—coney [1], graysby	43,524 lb (19,742.1 kg).
	Grouper 4—black grouper, red grouper, tiger grouper, yellowfin grouper, yellowmouth grouper.	8,359 lb (3,791.5 kg).
	Grouper 5—misty grouper, yellowedge grouper	19,552 lb (8,868.6 kg).
	Grouper 6—red hind [1], rock hind	156,222 lb (70,861.1 kg).
Grunts	Grunts—white grunt	180,384 lb (81,820.8 kg).
Jacks	Jacks 1—crevalle jack	41,940 lb (19,023.6 kg).
	Jacks 2—African pompano	6,771 lb (3,071.2 kg).
	Jacks 3—rainbow runner	9,004 lb (4,084.1 kg).

TABLE 3 TO § 622.440(a)(3)—Continued

Family	Stock or stock complex and species composition	Total ACL
Parrotfishes	Parrotfish 2—princess parrotfish, queen parrotfish, redband parrotfish, redtail parrotfish, stoplight parrotfish, striped parrotfish.	164,826 lb (74,763.8 kg).
Snappers	Snapper 1—black snapper, blackfin snapper, silk snapper [1], vermilion snapper, wenchman.	535,952 lb (243,103.7 kg).
	Snapper 2—cardinal snapper, queen snapper [1]	282,210 lb (128,008.3 kg).
	Snapper 3—lane snapper	265,979 lb (120,646 kg).
	Snapper 4—dog snapper, mutton snapper [1], schoolmaster	193,059 lb (87,570 kg).
	Snapper 5—yellowtail snapper	339,794 lb (154,127.9 kg).
	Snapper 6—cubera snapper	6,567 lb (2,978.7 kg).
Surgeonfishes	Surgeonfish—blue tang, doctorfish, ocean surgeonfish	1,007 lb (456.7 kg).
Triggerfishes	Triggerfish—gray triggerfish, ocean triggerfish, queen triggerfish [1]	90,552 lb (41,073.6 kg).
Wrasses	Wrasses 1—hogfish	78,403 lb (35,563 kg).
	Wrasses 2—puddingwife, Spanish hogfish	25,498 lb (11,565.6 kg).

[1] Indicator stock.

(4) *General applicability and monitoring of AMs.* At or near the beginning the fishing year, landings for each stock, stock complex, or indicator stock will be evaluated relative to the ACL based on a moving multi-year average of landings, as described in the FMP. When landings for one sector are not available for comparison to that sector's ACL, the ACL for the sector with available landings is the ACL for the stock or stock complex and the AM specified in paragraph (a)(7) of this section applies. Any fishing season reduction required under paragraph (a) of this section will be applied starting from September 30 and moving earlier toward the beginning of the fishing year. If the length of the required fishing season reduction exceeds the time period of January 1 through September 30, any additional fishing season reduction will be applied starting from October 1 and moving later toward the end of the fishing year.

(5) *Commercial AMs.* If NMFS estimates that commercial landings for a stock, stock complex, or indicator stock have exceeded the applicable commercial ACL specified in paragraph (a)(1) of this section for the stock or stock complex, and the combined commercial and recreational landings for the stock, stock complex, or indicator stock have exceeded the applicable combined commercial and recreational sector ACL (total ACL) specified in paragraph (a)(3) of this section for that stock or stock complex, the Assistant Administrator for NOAA Fisheries (AA) will file a notification with the Office of the Federal Register to reduce the length of the commercial fishing season for the stock or stock complex within that fishing year by the amount necessary to prevent commercial landings from exceeding the commercial ACL for the stock or stock complex, unless NMFS determines that a fishing season reduction is not necessary based on the best scientific information available. If NMFS determines that either the commercial ACL or total ACL for the stock or stock complex was exceeded because data collection or monitoring improved rather than because landings increased, NMFS will not reduce the length of the commercial fishing season for the stock or stock complex.

(6) *Recreational AMs.* If NMFS estimates that recreational landings for a stock, stock complex, or indicator stock have exceeded the applicable recreational ACL specified in paragraph (a)(2) of this section for the stock or stock complex, and the combined commercial and recreational landings for the stock, stock complex, or indicator stock have exceeded the applicable combined commercial and recreational ACL (total ACL) specified in paragraph (a)(3) of this section for that stock or stock complex, the AA will file a notification with the Office of the Federal Register to reduce the length of the recreational fishing season for the stock or stock complex within that fishing year by the amount necessary to prevent recreational landings from exceeding the recreational ACL for the stock or stock complex, unless NMFS determines that a fishing season reduction is not necessary based on the best scientific information available. If NMFS determines that either the recreational ACL or total ACL for the stock or stock complex was exceeded because data collection or monitoring improved rather than because landings increased, NMFS will not reduce the length of the recreational fishing season for the stock or stock complex.

(7) *AM when only one sector's landings are available.* When landings for one sector are not available for comparison to that sector's ACL, the ACL for the sector with available landings in this paragraph (a) is the applicable ACL for the stock or stock complex. If NMFS estimates that available landings for the stock, stock complex, or indicator stock, have exceeded the applicable ACL for the stock or stock complex, the AA will file a notification with the Office of the Federal Register to reduce the length of the fishing season for the stock or stock complex within that fishing year by the amount necessary to prevent landings from exceeding the ACL, unless NMFS determines that a fishing season reduction is not necessary based on the best scientific information available. If NMFS determines that the ACL was exceeded because data collection or monitoring improved rather than because landings increased, NMFS will not reduce the length of the fishing season for the stock or stock complex.

(b) *Pelagic fish.* The ACLs and ACTs are given in round weight. Indicator stocks are noted in the relevant tables to paragraph (a) of this section. For those fishing commercially, the applicable ACL is the commercial ACL and the applicable ACT is the commercial ACT. For those fishing recreationally, the applicable ACL is the recreational ACL and the applicable ACT is the recreational ACT. When landings for one sector are not available for comparison to that sector's ACL and ACT, the ACL and ACT for the sector with available landings are the ACL and ACT for the stock or stock complex.

(1) *Barracuda—great barracuda.* (i) Commercial ACL—495 lb (224.5 kg).

(ii) Commercial ACT—445 lb (201.8 kg).

(iii) Recreational ACL—167,693 lb (76,064.2 kg).

(iv) Recreational ACT—150,924 lb (68,457.9 kg).

(2) *Dolphinfishes—dolphinfish, pompano dolphinfish.* (i) Commercial ACL—232,173 lb (105,311.9 kg).

(ii) Commercial ACT—208,956 lb (94,780.8 kg).

(iii) Recreational ACL—1,513,873 lb (686,681.2 kg).

(iv) Recreational ACT—1,362,486 lb (618,013.2 kg).

(3) *Mackerels—cero, king mackerel.* (i) Commercial ACL—232,422 lb (105,424.8 kg).

(ii) Commercial ACT—209,180 lb (94,882.4 kg).

(iii) Recreational ACL—129,180 lb (58,595 kg).

(iv) Recreational ACT—116,262 lb (52,735.5 kg).

(4) *Tripletail.* (i) Commercial ACL—270 lb (122.4 kg).

(ii) Commercial ACT—243 lb (110.2 kg).

(iii) Recreational ACL—39,005 lb (17,692.3 kg).

(iv) Recreational ACT—35,105 lb (15,923.3 kg).

(5) *Tunas—blackfin tuna, little tunny.* (i) Commercial ACL—82,779 lb (37,547.9 kg).

(ii) Commercial ACT—74,501 lb (33,793 kg).

(iii) Recreational ACL—34,485 lb (15,642.1 kg).

(iv) Recreational ACT—31,037 lb (14,078.1 kg).

(6) *Wahoo.* (i) Commercial ACL—25,911 lb (11,753 kg).

(ii) Commercial ACT—23,320 lb (10,577.7 kg).

(iii) Recreational ACL—210,737 lb (95,588.6 kg).

(iv) Recreational ACT—189,663 lb (86,029.6 kg).

(7) *Pelagic fish AM application.* At or near the beginning the fishing year, landings for each stock, stock complex, or indicator stock will be evaluated relative to the applicable ACT for the stock or stock complex based on a moving multi-year average of landings, as described in the FMP. If NMFS estimates that landings have exceeded the applicable ACT specified in paragraph (b) of this section for a stock or stock complex, NMFS in consultation with the Caribbean Fishery Management Council will determine appropriate corrective action.

(c) *Spiny lobster.* (1) ACL—527,232 lb (239,148.4 kg), round weight.

(2) At or near the beginning the fishing year, landings will be evaluated relative to the ACL based on a moving multi-year average of landings, as described in the FMP. If NMFS estimates that landings have exceeded the ACL specified in paragraph (c)(1) of this section, the AA will file a notification with the Office of the Federal Register to reduce the length of the fishing season for spiny lobster within that fishing year by the amount necessary to prevent landings from exceeding the ACL, unless NMFS determines that a fishing season reduction is not necessary based on the best scientific information available. If NMFS determines the ACL was exceeded because data collection or monitoring improved rather than because landings increased, NMFS will not reduce the length of the fishing season. Any fishing season reduction required under this paragraph (c)(2) will be applied starting from September 30 and moving earlier toward the beginning of the fishing year. If the length of the required fishing season reduction exceeds the time period of January 1 through September 30, any additional fishing season reduction will be applied starting from October 1 and moving later toward the end of the fishing year.

(d)–(e) [Reserved]

(f) *Closure provisions for reef fish and spiny lobster*—(1) *Restrictions applicable during a commercial closure for a reef fish stock or stock complex in the EEZ around Puerto Rico.* During the closure period announced in the notification filed pursuant to paragraph (a)(5) of this section, the commercial sector included in the notification is closed, and such stock or stock complex in or from the EEZ around Puerto Rico may not be purchased or sold. Harvest or possession of such reef fish stock or stock complex in or from the EEZ around Puerto Rico is limited to the recreational bag and possession limits. If the recreational sector for such stock or stock complex also is closed, such stock or stock complex in or from the EEZ around Puerto Rico may not be harvested, possessed, purchased, or sold, and the bag and possession limits are zero.

(2) *Restrictions applicable during a recreational closure for a reef fish stock or stock complex in the EEZ around Puerto Rico.* During the closure period announced in the notification filed pursuant to paragraph (a)(6) of this section, the recreational sector for the reef fish stock or stock complex included in the notification is closed, and the bag and possession limits for such stock or stock complex in or from the EEZ around Puerto Rico are zero. If the commercial sector for such stock or stock complex also is closed, such stock or stock complex in or from the EEZ around Puerto Rico may not be harvested, possessed, purchased, or sold, and the bag and possession limits are zero.

(3) *Restrictions applicable during a closure for a reef fish stock or stock complex in the EEZ around Puerto Rico when only one sector's landings are available.* During the closure period announced in the notification filed pursuant to paragraph (a)(7) of this section, the fishing season for the reef fish stock or stock complex included in the notification is closed, and such stock or stock complex in or from the EEZ around Puerto Rico may not be harvested, possessed, purchased, or sold, and the bag and possession limits for such stock or stock complex are zero.

(4) *Restrictions applicable during a spiny lobster closure in the EEZ around Puerto Rico.* During the closure period announced in the notification filed pursuant to paragraph (c)(2) of this section, the fishing season for spiny lobster is closed, and spiny lobster in or from the EEZ around Puerto Rico may not be harvested, possessed, purchased, or sold, and the bag and possession limits are zero.

§ 622.441 Size limits.

All size limits in this section are minimum size limits unless specified otherwise. A fish not in compliance with its size limit in or from the EEZ around Puerto Rico may not be possessed, sold, or purchased, and must be released immediately with a minimum of harm. The operator of a vessel that fishes in the EEZ around Puerto Rico is responsible for ensuring that all species on board are in compliance with the size limits specified in this section. See § 622.10 regarding requirements for landing fish intact. See § 622.445(c)(2) regarding requirements for landing spiny lobster intact.

(a) *Reef fish.* (1) Yellowtail snapper—12 inches (30.5 cm), TL.

(2) [Reserved]

(b) [Reserved]

(c) *Spiny lobster.* 3.5 inches (8.9 cm), carapace length.

§ 622.442 [Reserved]

§ 622.443 Restrictions on sale or purchase.

(a) *Reef fish.* A live red hind or live mutton snapper in or from the EEZ around Puerto Rico may not be sold or purchased and used in the marine aquarium trade.

(b) [Reserved]

(c) *Coral.* (1) No person may sell or purchase a coral harvested in the EEZ around Puerto Rico.

(2) A coral that is sold in Puerto Rico will be presumed to have been harvested in the EEZ around Puerto Rico, unless it is accompanied by documentation showing that it was harvested elsewhere. Such documentation must contain:

(i) The information specified in subpart K of part 300 of this title for marking containers or packages of fish

or wildlife that are imported, exported, or transported in interstate commerce.

(ii) The name and home port of the vessel, or the name and address of the individual harvesting the coral.

(iii) The port and date of landing the coral.

(iv) A statement signed by the person selling the coral attesting that, to the best of his or her knowledge, information, and belief, such coral was harvested from other than in the EEZ around Puerto Rico or the waters of Puerto Rico or the U.S. Virgin Islands.

§ 622.444 Bag and possession limits.

Section 622.11(a) provides the general applicability for bag and possession limits. However, § 622.11(a) notwithstanding, the bag limits of this section do not apply to a person who has a valid commercial fishing license issued by Puerto Rico or the U.S. Virgin Islands.

(a) *Reef fish.* (1) Groupers, parrotfishes, and snappers combined—5 per person per day or, if 3 or more persons are aboard, 15 per vessel per day; but not to exceed 2 parrotfish per person per day or 6 parrotfish per vessel per day.

(2) Angelfishes, grunts, jacks, surgeonfishes, triggerfishes, and wrasses combined—5 per person per day or, if 3 or more persons are aboard, 15 per vessel per day, but not to exceed 1 surgeonfish per person per day or 4 surgeonfish per vessel per day.

(b) [Reserved]

(c) *Spiny lobster.* 3 per person per day, not to exceed 10 per vessel per day, whichever is less.

§ 622.445 Other harvest restrictions.

(a)–(b) [Reserved]

(c) *Spiny lobster*—(1) *Prohibition on harvest of egg-bearing spiny lobster.* Egg-bearing spiny lobster in the EEZ around Puerto Rico must be returned to the water unharmed. An egg-bearing spiny lobster may be retained in a spiny lobster trap, provided the trap is returned immediately to the water. An egg-bearing spiny lobster may not be stripped, scraped, shaved, clipped, or in any other manner molested, in order to remove the eggs.

(2) *Landing spiny lobster intact.* (i) A spiny lobster in or from the EEZ around Puerto Rico must be maintained with head and carapace intact through offloading ashore.

(ii) The operator of a vessel that fishes in the EEZ around Puerto Rico is responsible for ensuring that spiny lobster on that vessel are maintained intact through offloading ashore, as specified in this section.

§ 622.446 Spiny lobster import prohibitions.

(a) *Minimum size limits for imported spiny lobster.* Multiple minimum size limits apply to importation of spiny lobster into the United States—one that applies any place subject to the jurisdiction of the United States other than Puerto Rico or the U.S. Virgin Islands, and more restrictive minimum size limits that apply to Puerto Rico, St. Croix, and St. Thomas and St. John, respectively.

(1) No person may import a spiny lobster with less than a 6-ounce (170-gram) tail weight into Puerto Rico. For the purposes of paragraph (a) of this section, a 6-ounce (170-gram) tail weight is defined as a tail that weighs 5.9–6.4 ounces (167–181 grams). If the documentation accompanying an imported spiny lobster, including but not limited to product packaging, customs entry forms, bills of lading, brokerage forms, or commercial invoices, indicates that the product does not satisfy the minimum tail-weight, the person importing such spiny lobster has the burden to prove that such spiny lobster does satisfy the minimum tail-weight requirement or that such spiny lobster has a tail length of 6.2 inches (15.75 cm) or greater or that such spiny lobster has or had a carapace length of 3.5 inches (8.89 cm) or greater. If the imported product itself does not satisfy the minimum tail-weight requirement, the person importing such spiny lobster has the burden to prove that such spiny lobster has a tail length of 6.2 inches (15.75 cm) or greater or that such spiny lobster has or had a carapace length of 3.5 inches (8.89 cm) or greater. If the burden is satisfied, such spiny lobster will be considered to be in compliance with the minimum 6-ounce (170-gram) tail-weight requirement.

(2) See § 622.409 regarding the minimum size limit that applies to spiny lobster imported into any place subject to the jurisdiction of the United States other than Puerto Rico or the U.S. Virgin Islands.

(3) See subparts T and U of this part for the minimum size limits that apply to spiny lobster imported into St. Croix and St. Thomas and St. John, respectively.

(b) *Additional spiny lobster import prohibitions*—(1) *Prohibition related to tail meat.* No person may import into any place subject to the jurisdiction of the United States spiny lobster tail meat that is not in whole tail form with the exoskeleton attached.

(2) *Prohibitions related to egg-bearing spiny lobster.* No person may import into any place subject to the jurisdiction of the United States spiny lobster with eggs attached or spiny lobster from which eggs or pleopods (swimmerets) have been removed or stripped. Pleopods are the first five pairs of abdominal appendages.

§ 622.447 Adjustment of management measures.

In accordance with the framework procedure of the Fishery Management Plan for the EEZ around Puerto Rico, the RA may establish or modify the following items.

(a) *Standard open framework procedures.* Re-specify maximum sustainable yield (MSY), optimum yield (OY), overfishing limit (OFL), maximum fishing mortality threshold (MFMT), minimum stock size threshold (MSST), acceptable biological catch (ABC), ACL, ACT, sustainable yield level, and other related management reference points and status determination criteria; establish or revise rebuilding plans; revise AMs; modify reporting or monitoring requirements, and time or area closures and closure procedures.

(b) *Abbreviated open framework procedures.* Gear or vessel marking requirements, maintaining fish in a specific condition, size limits, commercial trip limits, recreational bag and possession limits, changes to the length of an established closed season of no more than 1 day, and gear modifications to address conservation issues including responding to interactions with species listed under the Endangered Species Act or protected under the Marine Mammal Protection Act.

§§ 622.470 through 622.474 [Redesignated as §§ 622.505 through 622.509]

■ 18. Redesignate §§ 622.470 through 622.474 as §§ 622.505 through 622.509.

■ 19. Revise subpart T to read as follows:

Subpart T—FMP for the EEZ around St. Croix

Sec.

622.470 Management area.
622.471 Definitions.
622.472 [Reserved]
622.473 Vessel identification.
622.474 Gear identification.
622.475 Trap construction specifications and tending restrictions.
622.476 Anchoring restrictions.
622.477 Prohibited gear and methods.
622.478 Prohibited species.
622.479 Area and seasonal closures.
622.480 Annual catch limits (ACLs), annual catch targets (ACTs), and accountability measures (AMs).
622.481 Size limits.
622.482 Commercial trip limits.
622.483 Restrictions on sale or purchase.
622.484 Bag and possession limits.
622.485 Other harvest restrictions.

622.486 Spiny lobster import prohibitions.
622.487 Adjustment of management measures.

§ 622.470 Management area.

The management area is the EEZ around St. Croix bounded by rhumb lines connecting the following points and geographic instructions in order:

TABLE 1 TO § 622.470

Point	North lat.	West long.
G	18°03′03″	64°38′03″
From Point G proceed along the international and EEZ boundary easterly, then southerly, then southwesterly to Point F.		
F	16°02′53.5812″	65°20′00.1716″
E	17°30′00.000″	65°20′00.1716″
D	18°01′16.9636″	64°57′38.817″
G	18°03′03″	64°38′03″

§ 622.471 Definitions.

In addition to the definitions and acronyms in § 622.2, the terms and acronyms used in this subpart have the following meanings:

Coral means any or all species, or a part thereof, of coral occurring in the EEZ around St. Croix, including any or all species, or a part thereof, of soft corals and gorgonians in Order Alcyonacea; sea pens and sea pansies in Order Pennatulacea; black corals in Order Antipatharia; stony corals in Order Scleractinia; and, within Order Anthoatheacata, fire corals in Family Milleporidae and lace corals in Family Stylasteridae.

Coral reef resource means any or all species, or a part thereof, of coral, sea cucumber, and sea urchin.

Pelagic fish means any or all species, or a part thereof, as follows:

TABLE 1 TO § 622.471

Class or family	Scientific name	English common name
Dolphinfishes—Coryphaenidae	*Coryphaena hippurus*	Dolphinfish.
Mackerels and tunas—Scombridae	*Acanthocybium solandri*	Wahoo.

Queen conch means the species *Lobatus gigas,* or a part thereof.

Reef fish means any or all species, or a part thereof, as follows:

TABLE 2 TO § 622.471

Class or family	Scientific name	English common name
Angelfishes—Pomacanthidae	*Pomacanthus paru*	French angelfish.
	Pomacanthus arcuatus	Gray angelfish.
	Holacanthus ciliaris	Queen angelfish.
Groupers—Serranidae	*Mycteroperca bonaci*	Black grouper.
	Cephalopholis fulva	Coney.
	Epinephelus itajara	Goliath grouper.
	Cephalopholis cruentata	Graysby.
	Hyporthodus mystacinus	Misty grouper.
	Epinephelus striatus	Nassau grouper.
	Epinephelus morio	Red grouper.
	Epinephelus guttatus	Red hind.
	Epinephelus adscensionis	Rock hind.
	Mycteroperca tigris	Tiger grouper.
	Mycteroperca venenosa	Yellowfin grouper.
Grunts—Haemulidae	*Haemulon sciurus*	Bluestriped grunt.
	Haemulon plumierii	White grunt.
Parrotfishes—Scaridae	*Scarus coeruleus*	Blue parrotfish.
	Scarus coelestinus	Midnight parrotfish.
	Scarus taeniopterus	Princess parrotfish.
	Scarus vetula	Queen parrotfish.
	Scarus guacamaia	Rainbow parrotfish.
	Sparisoma aurofrenatum	Redband parrotfish.
	Sparisoma rubripinne	Redfin parrotfish.
	Sparisoma chrysopterum	Redtail parrotfish.
	Sparisoma viride	Stoplight parrotfish.
	Scarus iseri	Striped parrotfish.
Snappers—Lutjanidae	*Apsilus dentatus*	Black snapper.
	Lutjanus buccanella	Blackfin snapper.
	Lutjanus griseus	Gray snapper.
	Lutjanus synagris	Lane snapper.
	Lutjanus analis	Mutton snapper.
	Etelis oculatus	Queen snapper.

TABLE 2 TO § 622.471—Continued

Class or family	Scientific name	English common name
	Lutjanus apodus	Schoolmaster.
	Lutjanus vivanus	Silk snapper.
	Rhomboplites aurorubens	Vermilion snapper.
	Ocyurus chrysurus	Yellowtail snapper.
Squirrelfishes—Holocentridae	*Holocentrus rufus*	Longspine squirrelfish.
Surgeonfishes—Acanthuridae	*Acanthurus coeruleus*	Blue tang.
	Acanthurus chirurgus	Doctorfish.
	Acanthurus tractus	Ocean surgeonfish.
Triggerfishes—Balistidae	*Balistes vetula*	Queen triggerfish.

Sea cucumber means any or all species, or a part thereof, in Class Holothuroidea and occurring in the EEZ of St. Croix.

Sea urchin means any or all species of sea urchin, or a part thereof, in Class Echinoidea and occurring in the EEZ of St. Croix.

Spiny lobster trap means a trap and its component parts, including the lines and buoys, used for or capable of taking spiny lobster and meeting the spiny lobster trap construction specifications of this subpart.

§ 622.472 [Reserved]

§ 622.473 Vessel identification.

See § 622.6 for vessel identification requirements applicable to this subpart.

§ 622.474 Gear identification.

(a) *Reef fish*—(1) *Fish traps and associated buoys.* All fish traps used or possessed in the EEZ around St. Croix must display the official number specified for the vessel by Puerto Rico or the U.S. Virgin Islands. A fish trap that is fished individually, rather than tied together in a trap line, must have at least one buoy attached that floats on the surface. Fish traps that are tied together in a trap line must have at least one buoy that floats at the surface attached at each end of the trap line. All buoys must display the official number and color code assigned to the vessel by Puerto Rico or the U.S. Virgin Islands, whichever is applicable.

(2) *Presumption of ownership of fish traps.* A fish trap in the EEZ around St. Croix will be presumed to be the property of the most recently documented owner. This presumption will not apply with respect to such traps that are lost or sold if the owner reports the loss or sale within 15 days to the RA.

(3) *Disposition of unmarked fish traps or buoys.* An unmarked fish trap or buoy deployed in the EEZ around St. Croix is illegal and may be disposed of in any appropriate manner by the Assistant Administrator or an authorized officer.

(b) [Reserved]

(c) *Spiny lobster*—(1) *Spiny lobster traps and associated buoys.* All spiny lobster traps used or possessed in the EEZ around St. Croix must display the official number specified for the vessel by Puerto Rico or the U.S. Virgin Islands. A spiny lobster trap that is fished individually, rather than tied together in a trap line, must have at least one buoy attached that floats on the surface. Spiny lobster traps that are tied together in a trap line must have at least one buoy that floats at the surface attached at each end of the trap line. All buoys must display the official number and color code assigned to the vessel by Puerto Rico or the U.S. Virgin Islands, whichever is applicable.

(2) *Presumption of ownership of spiny lobster traps.* A spiny lobster trap in the EEZ around St. Croix will be presumed to be the property of the most recently documented owner. This presumption will not apply with respect to such traps that are lost or sold if the owner reports the loss or sale within 15 days to the RA.

(3) *Disposition of unmarked spiny lobster traps or buoys.* An unmarked spiny lobster trap or buoy deployed in the EEZ around St. Croix is illegal and may be disposed of in any appropriate manner by the Assistant Administrator or an authorized officer.

§ 622.475 Trap construction specifications and tending restrictions.

(a) *Reef fish*—(1) *Construction specifications*—(i) *Minimum mesh size.* A bare-wire fish trap used or possessed in the EEZ around St. Croix that has hexagonal mesh openings must have a minimum mesh size of 1.5 inches (3.8 cm) in the smallest dimension measured between centers of opposite strands. A bare-wire fish trap used or possessed in the EEZ around St. Croix that has other than hexagonal mesh openings or a fish trap of other than bare wire, such as coated wire or plastic, used or possessed in the EEZ around St. Croix, must have a minimum mesh size of 2 inches (5.1 cm) in the smallest dimension measured between centers of opposite strands.

(ii) *Escape mechanisms.* A fish trap used or possessed in the EEZ around St. Croix must have a panel located on one side of the trap, excluding the top, bottom, and side containing the trap entrance. The opening covered by the panel must measure not less than 8 by 8 inches (20.3 by 20.3 cm). The mesh size of the panel may not be smaller than the mesh size of the trap. The panel must be attached to the trap with untreated jute twine with a diameter not exceeding ⅛-inch (3.2 mm). An access door may serve as the panel, provided it is on an appropriate side, it is hinged only at its bottom, its only other fastening is untreated jute twine with a diameter not exceeding ⅛-inch (3.2 mm), and such fastening is at the top of the door so that the door will fall open when such twine degrades. Jute twine used to secure a panel may not be wrapped or overlapped.

(2) *Tending restrictions.* A fish trap in the EEZ around St. Croix may be pulled or tended only by a person (other than an authorized officer) aboard the fish trap owner's vessel, or aboard another vessel if such vessel has on board written consent of the trap owner, or if the trap owner is aboard and has documentation verifying his identification number and color code. An owner's written consent must specify the time period such consent is effective and the trap owner's gear identification number and color code.

(b) [Reserved]

(c) *Spiny lobster*—(1) *Construction specifications*—(i) *Escape mechanisms.* A spiny lobster trap used or possessed in the EEZ around St. Croix must contain on any vertical side or on the top a panel no smaller in diameter than the throat or entrance of the trap. The panel must be made of or attached to the trap by one of the following degradable materials:

(A) Untreated fiber of biological origin with a diameter not exceeding ⅛-inch (3.2 mm). This includes, but is not limited to tyre palm, hemp, jute, cotton, wool, or silk.

(B) Ungalvanized or uncoated iron wire with a diameter not exceeding 1/16-inch (1.6 mm), that is, 16-gauge wire.

(ii) [Reserved]

(2) *Tending restrictions.* A spiny lobster trap in the EEZ around St. Croix may be pulled or tended only by a person (other than an authorized officer) aboard the trap owner's vessel, or aboard another vessel if such vessel has on board written consent of the trap owner, or if the trap owner is aboard and has documentation verifying his identification number and color code. An owner's written consent must specify the time period such consent is effective and the trap owner's gear identification number and color code.

§ 622.476 Anchoring restrictions.

The owner or operator of any fishing vessel, recreational or commercial, that fishes for or possesses reef fish in or from the EEZ around St. Croix must ensure that the vessel uses only an anchor retrieval system that recovers the anchor by its crown, thereby preventing the anchor from dragging along the bottom during recovery. For a grapnel hook, this could include an incorporated anchor rode reversal bar that runs parallel along the shank, which allows the rode to reverse and slip back toward the crown. For a fluke- or plow-type anchor, a trip line consisting of a line from the crown of the anchor to a surface buoy is required.

§ 622.477 Prohibited gear and methods.

Also see § 622.9 for additional prohibited gear and methods that apply more broadly to multiple fisheries or in some cases all fisheries.

(a) *Reef fish*—(1) *Poisons.* A poison, drug, or other chemical may not be used to fish for reef fish in the EEZ around St. Croix.

(2) *Powerheads.* A powerhead may not be used in the EEZ around St. Croix to harvest reef fish. The possession of a mutilated reef fish in or from the EEZ around St. Croix and a powerhead constitutes a rebuttable presumption of a violation of this paragraph (a)(2).

(3) *Gillnets and trammel nets.* A gillnet or trammel net may not be used in the EEZ around St. Croix to fish for reef fish. The possession of a reef fish in or from the EEZ around St. Croix and a gillnet or trammel net constitutes a rebuttable presumption of a violation of this paragraph (a)(3). A gillnet or trammel net used in the EEZ around St. Croix to fish for any other species must be tended at all times.

(b) [Reserved]

(c) *Spiny lobster*—(1) *Spears and hooks.* A spear, hook, or similar device may not be used in the EEZ around St. Croix to harvest a spiny lobster. The possession of a speared, pierced, or punctured spiny lobster in or from the EEZ around St. Croix constitutes a rebuttable presumption of a violation of this paragraph (c)(1).

(2) *Gillnets and trammel nets.* A gillnet or trammel net may not be used in the EEZ around St. Croix to fish for spiny lobster. The possession of a spiny lobster in or from the EEZ around St. Croix and a gillnet or trammel net constitutes a rebuttable presumption of a violation of this paragraph (c)(2). A gillnet or trammel net used in the EEZ around St. Croix to fish for any other species must be tended at all times.

(d) [Reserved]

(e) *Queen conch.* In the EEZ around St. Croix, no person may harvest queen conch by diving while using a device that provides a continuous air supply from the surface.

§ 622.478 Prohibited species.

The harvest and possession restrictions of this section apply without regard to whether the species is harvested by a vessel operating under a commercial vessel permit. The operator of a vessel that fishes in the EEZ around St. Croix is responsible for the limit applicable to that vessel. Any of the following species caught in the EEZ around St. Croix must be released immediately with a minimum of harm.

(a) *Reef fish.* No person may fish for or possess the following reef fish species in or from the EEZ around St. Croix.

(1) Goliath grouper or Nassau grouper.

(2) Blue parrotfish, midnight parrotfish, or rainbow parrotfish.

(b)–(c) [Reserved]

(d) *Coral, sea cucumber, and sea urchin.* A coral, sea cucumber, or sea urchin may not be fished for or possessed in or from the EEZ around St. Croix. The taking of coral in the EEZ around St. Croix is not considered unlawful possession provided it is returned immediately to the sea in the general area of fishing.

(e) [Reserved]

§ 622.479 Area and seasonal closures.

(a) *Closures applicable to specific areas*—(1) *Mutton snapper spawning aggregation area.* The mutton snapper spawning aggregation area is bounded by rhumb lines connecting, in order, the points listed in Table 1 to this paragraph (a).

(i) From March 1 through June 30, each year, fishing is prohibited in those parts of the mutton snapper spawning aggregation area that are in the EEZ around St. Croix.

(ii) Fishing with pots, traps, bottom longlines, gillnets or trammel nets is prohibited year-round in those parts of the mutton snapper spawning aggregation area that are in the EEZ around St. Croix.

TABLE 1 TO § 622.479(a)—MUTTON SNAPPER SPAWNING AGGREGATION AREA

Point	North lat.	West long.
A	17°37.8′	64°53.0′
B	17°39.0′	64°53.0′
C	17°39.0′	64°50.5′
D	17°38.1′	64°50.5′
E	17°37.8′	64°52.5′
A	17°37.8′	64°53.0′

(2) *Red hind spawning aggregation area east of St. Croix.* The red hind spawning aggregation area east of St. Croix is bounded by rhumb lines connecting, in order, the points listed in Table 2 to this paragraph (a)(2).

(i) From December 1 through the last day of February, each year, fishing is prohibited in the red hind spawning aggregation area east of St. Croix.

(ii) Fishing with pots, traps, bottom longlines, gillnets or trammel nets is prohibited year-round in the red hind spawning aggregation area east of St. Croix.

TABLE 2 TO § 622.479(a)(2)—RED HIND SPAWNING AGGREGATION AREA EAST OF ST. CROIX

Point	North lat.	West long.
A	17°50.2′	64°27.9′
B	17°50.1′	64°26.1′
C	17°49.2′	64°25.8′
D	17°48.6′	64°25.8′
E	17°48.1′	64°26.1′
F	17°47.5′	64°26.9′
A	17°50.2′	64°27.9′

(b) *Seasonal closures applicable to specific species*—(1) *Black, red, tiger, and yellowfin grouper closure.* From February 1 through April 30, each year, no person may fish for or possess black, red, tiger, or yellowfin grouper in or from the EEZ around St. Croix. The prohibition on possession does not apply to such grouper harvested and landed ashore prior to the closure.

(2) *Black, blackfin, silk, and vermilion snapper closure.* From October 1 through December 31, each year, no person may fish for or possess black, blackfin, silk, or vermilion snapper in or from the EEZ around St. Croix. The prohibition on possession does not apply to such snapper harvested and landed ashore prior to the closure.

(3) *Lane and mutton snapper closure.* From April 1 through June 30, each year, no person may fish for or possess

lane or mutton snapper in or from the EEZ around St. Croix. The prohibition on possession does not apply to such snapper harvested and landed ashore prior to the closure.

(4) *Queen conch.* No person may fish for or possess a queen conch in or from the EEZ around St. Croix, except from November 1 through May 31 in the area east of 64°34′ W longitude, which includes Lang Bank.

§ 622.480 Annual catch limits (ACLs), annual catch targets (ACTs), and accountability measures (AMs).

(a) *Reef fish.* (1) The ACLs are as follows and given in round weight.

TABLE 1 TO § 622.480(a)(1)

Family	Stock or stock complex and species composition	ACL
Angelfishes	Angelfish—French angelfish, gray angelfish, queen angelfish	6,412 lb (2,908.4 kg).
Groupers	Grouper 3—coney,[1] graysby	13,529 lb (6,136.6 kg).
	Grouper 4—red hind,[1] rock hind	11,849 lb (5,374.6 kg).
	Grouper 5—black grouper, red grouper, tiger grouper, yellowfin grouper	701 lb (317.9 kg).
	Grouper 6—misty grouper	77 lb (34.9 kg).
Grunts	Grunts—bluestriped grunt, white grunt	27,169 lb (12,323.6 kg).
Parrotfishes	Parrotfish 2—princess parrotfish, queen parrotfish, redband parrotfish, redfin parrotfish, redtail parrotfish,[1] stoplight parrotfish,[1] striped parrotfish.	72,365 lb (32,824.2 kg).
Snappers	Snapper 1—black snapper, blackfin snapper,[1] silk snapper,[1] vermilion snapper	61,455 lb (27,875.5 kg).
	Snapper 2—queen snapper	7,911 lb (3,588.3 kg).
	Snapper 3—gray snapper, lane snapper	14,156 lb (6,421 kg).
	Snapper 4—mutton snapper	8,513 lb (3,861.4 kg).
	Snapper 5—schoolmaster	22,879 lb (10,377.7 kg).
	Snapper 6—yellowtail snapper	15,670 lb (7,107.7 kg).
Squirrelfishes	Squirrelfish—longspine squirrelfish	3,514 (1,593.9 kg).
Surgeonfishes	Surgeonfish—blue tang, doctorfish, ocean surgeonfish	39,061 lb (17,717.7 kg).
Triggerfishes	Triggerfish—queen triggerfish	21,450 lb (9,729.5 kg).

[1] Indicator stock.

(2) At or near the beginning the fishing year, landings for each stock, stock complex, or indicator stock will be evaluated relative to the ACL based on a moving multi-year average of landings, as described in the FMP. If NMFS estimates that landings for a stock, stock complex, or indicator stock have exceeded the ACL specified in paragraph (a)(1) of this section for the stock or stock complex, the Assistant Administrator for NOAA Fisheries (AA) will file a notification with the Office of the Federal Register to reduce the length of the fishing season for the stock or stock complex within that fishing year by the amount necessary to prevent landings from exceeding the ACL for the stock or stock complex, unless NMFS determines that a fishing season reduction is not necessary based on the best scientific information available. If NMFS determines that the ACL for a particular stock or stock complex was exceeded because data collection or monitoring improved rather than because landings increased, NMFS will not reduce the length of the fishing season for the stock or stock complex. Any fishing season reduction required under this paragraph (a)(2) will be applied starting from September 30 and moving earlier toward the beginning of the fishing year. If the length of the required fishing season reduction exceeds the time period of January 1 through September 30, any additional fishing season reduction will be applied starting from October 1 and moving later toward the end of the fishing year.

(b) *Pelagic fish.* The ACLs and ACTs are given in round weight.

(1) *Dolphinfish.* (i) ACL—86,633 lb (39,296 kg).

(ii) ACT—77,970 lb (35,366.5 kg).

(2) *Wahoo.* (i) ACL—27,260 lb (12,364.9 kg).

(ii) ACT—24,534 lb (11,128.4 kg).

(3) *Pelagic fish AM application.* At or near the beginning the fishing year, landings for the stock or stock complex will be evaluated relative to the ACT for the stock or stock complex based on a moving multi-year average of landings, as described in the FMP. If NMFS estimates that landings have exceeded the ACT specified in paragraph (b) of this section, NMFS in consultation with the Caribbean Fishery Management Council will determine appropriate corrective action.

(c) *Spiny lobster.* (1) ACL—197,528 lb (89,597.1 kg), round weight.

(2) At or near the beginning the fishing year, landings will be evaluated relative to the ACL based on a moving multi-year average of landings, as described in the FMP. If NMFS estimates that landings have exceeded the ACL specified in paragraph (c)(1) of this section, the AA will file a notification with the Office of the Federal Register to reduce the length of the fishing season for spiny lobster within that fishing year by the amount necessary to prevent landings from exceeding the ACL, unless NMFS determines that a fishing season reduction is not necessary based on the best scientific information available. If NMFS determines the ACL was exceeded because data collection or monitoring improved rather than because landings increased, NMFS will not reduce the length of the fishing season. Any fishing season reduction required under this paragraph (c)(2) will be applied starting from September 30 and moving earlier toward the beginning of the fishing year. If the length of the required fishing season reduction exceeds the time period of January 1 through September 30, any additional fishing season reduction will be applied starting from October 1 and moving later toward the end of the fishing year.

(d) [Reserved]

(e) *Queen conch.* (1) ACL—50,000 lb (22,679.6 kg), round weight.

(2) If NMFS estimates landings reach or are projected to reach the ACL specified in paragraph (e)(1) of this section, the AA will close the area east of 64°34′ W longitude in the EEZ around St. Croix to the harvest and possession of queen conch by filing a notification of the closure with the Office of the Federal Register. During the closure period, no person may fish for or possess a queen conch in or from the area east of 64°34′ W longitude in the EEZ around St. Croix.

(f) *Closure provisions for reef fish, spiny lobster, and queen conch.* The following restrictions apply during a fishing season closure for reef fish,

spiny lobster, or queen conch in the EEZ around St. Croix. During the closure period announced in the notification filed pursuant to paragraph (a)(2), (c)(2), or (e)(2) of this section, such stock or stock complex in or from the EEZ around St. Croix may not be harvested, possessed, purchased, or sold, and the commercial trip limits and recreational bag and possession limits are zero.

§ 622.481 Size limits.

All size limits in this section are minimum size limits unless specified otherwise. A fish not in compliance with its size limit in or from the EEZ around St. Croix may not be possessed, sold, or purchased, and must be released immediately with a minimum of harm. The operator of a vessel that fishes in the EEZ around St. Croix is responsible for ensuring that all species on board are in compliance with the size limits specified in this section. See § 622.10 regarding requirements for landing fish intact. See § 622.485(c)(2) regarding requirements for landing spiny lobster intact. See § 622.485(e) regarding requirements for landing queen conch with the meat and shell intact.

(a) *Reef fish.* (1) Yellowtail snapper—12 inches (30.5 cm), TL.

(2) Parrotfishes, except for redband parrotfish, and prohibited blue parrotfish, midnight parrotfish, or rainbow parrotfish—9 inches (22.9 cm), FL.

(3) Redband parrotfish—8 inches (20.3 cm), FL.

(b) [Reserved]

(c) *Spiny lobster.* 3.5 inches (8.9 cm), carapace length.

(d) [Reserved]

(e) *Queen conch.* (1) The minimum size limit is either 9 inches (22.9 cm) in length, that is, from the tip of the spire to the distal end of the shell, or 3/8-inch (9.5 mm) in lip width at its widest point.

(2) A queen conch not in compliance with its size limit, as specified in paragraph (e)(1) of this section, in or from the EEZ around St. Croix, may not be possessed, sold, or purchased and must be released immediately with a minimum of harm. The operator of a vessel that fishes in the EEZ around St. Croix is responsible for ensuring that queen conch on board are in compliance with the size limit specified in paragraph (e)(1) this section.

§ 622.482 Commercial trip limits.

Commercial trip limits are limits on the amount of the applicable species that may be possessed on board or landed, purchased, or sold from a vessel per day. A person who fishes in the EEZ around St. Croix may not combine a trip limit specified in this section with any trip or possession limit applicable to state waters. A species subject to a trip limit specified in this section taken in the EEZ around St. Croix may not be transferred at sea, regardless of where such transfer takes place.

(a) *Queen conch.* (1) 200.

(2) The trip limits specified in paragraph (a)(1) of this section apply to a vessel that has at least one person on board with a valid commercial fishing license issued by Puerto Rico or the U.S. Virgin Islands. If no person on the vessel has a valid commercial fishing license issued by Puerto Rico or the U.S. Virgin Islands, the bag and possession limits specified in § 622.484(e) apply.

(b) [Reserved]

§ 622.483 Restrictions on sale or purchase.

(a) *Reef fish.* A live red hind or live mutton snapper in or from the EEZ around St. Croix may not be sold or purchased and used in the marine aquarium trade.

(b) [Reserved]

(c) *Coral.* (1) No person may sell or purchase a coral harvested in the EEZ around St. Croix.

(2) A coral that is sold in St. Croix will be presumed to have been harvested in the EEZ around St. Croix, unless it is accompanied by documentation showing that it was harvested elsewhere. Such documentation must contain:

(i) The information specified in subpart K of part 300 of this title for marking containers or packages of fish or wildlife that are imported, exported, or transported in interstate commerce.

(ii) The name and home port of the vessel, or the name and address of the individual harvesting the coral.

(iii) The port and date of landing the coral.

(iv) A statement signed by the person selling the coral attesting that, to the best of his or her knowledge, information, and belief, such coral was harvested from other than in the EEZ around St. Croix or the waters of Puerto Rico or the U.S. Virgin Islands.

§ 622.484 Bag and possession limits.

Section 622.11(a) provides the general applicability for bag and possession limits. However, § 622.11(a) notwithstanding, the bag limits of this section do not apply to a person who has a valid commercial fishing license issued by Puerto Rico or the U.S. Virgin Islands.

(a) *Reef fish.* (1) Groupers, parrotfishes, and snappers combined—5 per person per day or, if 3 or more persons are aboard, 15 per vessel per day; but not to exceed 2 parrotfish per person per day or 6 parrotfish per vessel per day.

(2) Angelfishes, grunts, squirrelfishes, surgeonfishes, and triggerfishes combined—5 per person per day or, if 3 or more persons are aboard, 15 per vessel per day, but not to exceed 1 surgeonfish per person per day or 4 surgeonfish per vessel per day.

(b) [Reserved]

(c) *Spiny lobster.* 3 per person per day, not to exceed 10 per vessel per day, whichever is less.

(d) [Reserved]

(e) *Queen conch.* 3 per person per day or, if more than 4 persons are aboard, 12 per vessel per day.

§ 622.485 Other harvest restrictions.

(a)–(b) [Reserved]

(c) *Spiny lobster*—(1) *Prohibition on harvest of egg-bearing spiny lobster.* Egg-bearing spiny lobster in the EEZ around St. Croix must be returned to the water unharmed. An egg-bearing spiny lobster may be retained in a spiny lobster trap, provided the trap is returned immediately to the water. An egg-bearing spiny lobster may not be stripped, scraped, shaved, clipped, or in any other manner molested, in order to remove the eggs.

(2) *Landing spiny lobster intact.* (i) A spiny lobster in or from the EEZ around St. Croix must be maintained with head and carapace intact through offloading ashore.

(ii) The operator of a vessel that fishes in the EEZ around St. Croix is responsible for ensuring that spiny lobster on that vessel are maintained intact through offloading ashore, as specified in this section.

(d) [Reserved]

(e) *Queen conch.* (1) A queen conch in or from the EEZ around St. Croix must be maintained with meat and shell intact through offloading ashore.

(2) The operator of a vessel that fishes in the EEZ around St. Croix is responsible for ensuring that queen conch on that vessel are maintained intact through offloading ashore, as specified in this section.

§ 622.486 Spiny lobster import prohibitions.

(a) *Minimum size limits for imported spiny lobster.* Multiple minimum size limits apply to importation of spiny lobster into the United States—one that applies any place subject to the jurisdiction of the United States other than Puerto Rico or the U.S. Virgin Islands, and more restrictive minimum size limits that apply to Puerto Rico, St Croix, and St. Thomas and St. John, respectively.

(1) No person may import a spiny lobster with less than a 6-ounce (170-gram) tail weight into St. Croix. For the purposes of paragraph (a) of this section, a 6-ounce (170-gram) tail weight is defined as a tail that weighs 5.9–6.4 ounces (167–181 grams). If the documentation accompanying an imported spiny lobster, including but not limited to product packaging, customs entry forms, bills of lading, brokerage forms, or commercial invoices, indicates that the product does not satisfy the minimum tail-weight, the person importing such spiny lobster has the burden to prove that such spiny lobster does satisfy the minimum tail-weight requirement or that such spiny lobster has a tail length of 6.2 inches (15.75 cm) or greater or that such spiny lobster has or had a carapace length of 3.5 inches (8.89 cm) or greater. If the imported product itself does not satisfy the minimum tail-weight requirement, the person importing such spiny lobster has the burden to prove that such spiny lobster has a tail length of 6.2 inches (15.75 cm) or greater or that such spiny lobster has or had a carapace length of 3.5 inches (8.89 cm) or greater. If the burden is satisfied, such spiny lobster will be considered to be in compliance with the minimum 6-ounce (170-gram) tail-weight requirement.

(2) See § 622.409 regarding the minimum size limit that applies to spiny lobster imported into any place subject to the jurisdiction of the United States other than Puerto Rico or the U.S. Virgin Islands.

(3) See subparts S and U of this part for the minimum size limits that apply to spiny lobster imported into Puerto Rico and St. Thomas and St. John, respectively.

(b) *Additional spiny lobster import prohibitions*—(1) *Prohibition related to tail meat.* No person may import into any place subject to the jurisdiction of the United States spiny lobster tail meat that is not in whole tail form with the exoskeleton attached.

(2) *Prohibitions related to egg-bearing spiny lobster.* No person may import into any place subject to the jurisdiction of the United States spiny lobster with eggs attached or spiny lobster from which eggs or pleopods (swimmerets) have been removed or stripped. Pleopods are the first five pairs of abdominal appendages.

§ 622.487 Adjustment of management measures.

In accordance with the framework procedure of the Fishery Management Plan for the EEZ around St Croix, the RA may establish or modify the following items.

(a) *Standard open framework procedures.* Re-specify maximum sustainable yield (MSY), optimum yield (OY), overfishing limit (OFL), maximum fishing mortality threshold (MFMT), minimum stock size threshold (MSST), acceptable biological catch (ABC), ACL, ACT, sustainable yield level, and other related management reference points and status determination criteria; establish or revise rebuilding plans; revise AMs; modify reporting or monitoring requirements, and time or area closures and closure procedures.

(b) *Abbreviated open framework procedures.* Gear or vessel marking requirements, maintaining fish in a specific condition, size limits, commercial trip limits, recreational bag and possession limits, changes to the length of an established closed season of no more than 1 day, and gear modifications to address conservation issues including responding to interactions with species listed under the Endangered Species Act or protected under the Marine Mammal Protection Act.

■ 20. Revise subpart U to read as follows:

Subpart U—FMP for the EEZ Around St. Thomas and St. John

Sec.

622.505 Management area.
622.506 Definitions.
622.507 [Reserved]
622.508 Vessel identification.
622.509 Gear identification.
622.510 Trap construction specifications and tending restrictions.
622.511 Anchoring restrictions.
622.512 Prohibited gear and methods.
622.513 Prohibited species.
622.514 Area and seasonal closures.
622.515 Annual catch limits (ACLs), annual catch targets (ACTs), and accountability measures (AMs).
622.516 Size limits.
622.517 [Reserved]
622.518 Restrictions on sale or purchase.
622.519 Bag and possession limits.
622.520 Other harvest restrictions.
622.521 Spiny lobster import prohibitions.
622.522 Adjustment of management measures.

§ 622.505 Management area.

The management area is the EEZ around St. Thomas and St. John bounded by rhumb lines connecting the following points and geographic instructions in order:

TABLE 1 TO § 622.505

Point	North lat.	West long.
A (intersects with the international and EEZ boundary)	19°37′29″	65°20′57″
From Point A proceed along the international and EEZ boundary southeasterly to Point G.		
G	18°03′03″	64°38′03″
D	18°01′16.9636″	64°57′38.817″
C	18°13′59.0606″	65°05′33.058″
From Point C proceed along the 3-nautical mile territorial boundary around St. Thomas and St. John northerly to Point B.		
B	18°25′46.3015″	65°06′31.866″
A (intersects with the international and EEZ boundary)	19°37′29″	65°20′57″

§ 622.506 Definitions.

In addition to the definitions and acronyms in § 622.2, the terms and acronyms used in this subpart have the following meanings:

Coral means any or all species, or a part thereof, of coral occurring in the EEZ around St. Thomas and St. John, including any or all species, or a part thereof, of soft corals and gorgonians in Order Alcyonacea; sea pens and sea pensies in Order Pennatulacea; black corals in Order Antipatharia; and stony corals in Order Scleractinia; and, within Order Anthoatheacata, fire corals in Family Milleporidae and lace corals in Family Stylasteridae.

Coral reef resource means any or all species, or a part thereof, of coral, sea cucumber, and sea urchin.

Pelagic fish means any or all species, or a part thereof, as follows:

TABLE 1 TO § 622.506

Class or Family	Scientific name	English common name
Dolphinfishes—Coryphaenidae	*Coryphaena hippurus*	Dolphinfish.
Mackerels and tunas—Scombridae	*Acanthocybium solandri*	Wahoo.

Queen conch means the species *Lobatus gigas,* or a part thereof.

Reef fish means any or all species, or a part thereof, as follows:

TABLE 2 TO § 622.506

Class or Family	Scientific name	English common name
Angelfishes—Pomacanthidae	*Pomacanthus paru*	French angelfish.
	Pomacanthus arcuatus	Gray angelfish.
	Holacanthus ciliaris	Queen angelfish.
Groupers—Serranidae	*Mycteroperca bonaci*	Black grouper.
	Cephalopholis fulva	Coney.
	Epinephelus itajara	Goliath grouper.
	Hyporthodus mystacinus	Misty grouper.
	Epinephelus striatus	Nassau grouper.
	Epinephelus morio	Red grouper.
	Epinephelus guttatus	Red hind.
	Mycteroperca tigris	Tiger grouper.
	Hyporthodus flavolimbatus	Yellowedge grouper.
	Mycteroperca venenosa	Yellowfin grouper.
	Mycteroperca interstitialis	Yellowmouth grouper.
Grunts—Haemulidae	*Haemulon sciurus*	Bluestriped grunt.
	Haemulon album	Margate.
	Haemulon plumierii	White grunt.
Jacks—Carangidae	*Caranx crysos*	Blue runner.
Parrotfishes—Scaridae	*Scarus coeruleus*	Blue parrotfish.
	Scarus coelestinus	Midnight parrotfish.
	Scarus taeniopterus	Princess parrotfish.
	Scarus vetula	Queen parrotfish.
	Scarus guacamaia	Rainbow parrotfish.
	Sparisoma aurofrenatum	Redband parrotfish.
	Sparisoma rubripinne	Redfin parrotfish.
	Sparisoma chrysopterum	Redtail parrotfish.
	Sparisoma viride	Stoplight parrotfish.
	Scarus iseri	Striped parrotfish.
Porgies—Sparidae	*Calamus bajonado*	Jolthead porgy.
	Calamus calamus	Saucereye porgy.
	Archosargus rhomboidalis	Sea bream.
	Calamus penna	Sheepshead porgy.
Snappers—Lutjanidae	*Apsilus dentatus*	Black snapper.
	Lutjanus buccanella	Blackfin snapper.
	Lutjanus synagris	Lane snapper.
	Lutjanus analis	Mutton snapper.
	Etelis oculatus	Queen snapper.
	Lutjanus vivanus	Silk snapper.
	Rhomboplites aurorubens	Vermilion snapper.
	Ocyurus chrysurus	Yellowtail snapper.
Surgeonfishes—Acanthuridae	*Acanthurus coeruleus*	Blue tang.
	Acanthurus chirurgus	Doctorfish.
	Acanthurus tractus	Ocean surgeonfish.
Triggerfishes—Balistidae	*Balistes vetula*	Queen triggerfish.
Wrasses—Labridae	*Lachnolaimus maximus*	Hogfish.

Sea cucumber means any or all species, or a part thereof, in Class Holothuroidea and occurring in the EEZ of St. Thomas and St. John.

Sea urchin means any or all species of sea urchin, or a part thereof, in Class Echinoidea and occurring in the EEZ of St. Thomas and St. John.

Spiny lobster trap means a trap and its component parts, including the lines and buoys, used for or capable of taking spiny lobster and meeting the spiny lobster trap construction specifications of this subpart.

§ 622.507 [Reserved]

§ 622.508 Vessel identification.

See § 622.6 for vessel identification requirements applicable to this subpart.

§ 622.509 Gear identification.

(a) *Reef fish*—(1) *Fish traps and associated buoys.* All fish traps used or possessed in the EEZ around St. Thomas and St. John must display the official number specified for the vessel by Puerto Rico or the U.S. Virgin Islands. A fish trap that is fished individually, rather than tied together in a trap line, must have at least one buoy attached that floats on the surface. Fish traps that

are tied together in a trap line must have at least one buoy that floats at the surface attached at each end of the trap line. All buoys must display the official number and color code assigned to the vessel by Puerto Rico or the U.S. Virgin Islands, whichever is applicable.

(2) *Presumption of ownership of fish traps.* A fish trap in the EEZ around St. Thomas and St. John will be presumed to be the property of the most recently documented owner. This presumption will not apply with respect to such traps that are lost or sold if the owner reports the loss or sale within 15 days to the RA.

(3) *Disposition of unmarked fish traps or buoys.* An unmarked fish trap or buoy deployed in the EEZ around St. Thomas and St. John is illegal and may be disposed of in any appropriate manner by the Assistant Administrator or an authorized officer.

(b) [Reserved]

(c) *Spiny lobster*—(1) *Spiny lobster traps and associated buoys.* All spiny lobster traps used or possessed in the EEZ around St. Thomas and St. John must display the official number specified for the vessel by Puerto Rico or the U.S. Virgin Islands. A spiny lobster trap that is fished individually, rather than tied together in a trap line, must have at least one buoy attached that floats on the surface. Spiny lobster traps that are tied together in a trap line must have at least one buoy that floats at the surface attached at each end of the trap line. All buoys must display the official number and color code assigned to the vessel by Puerto Rico or the U.S. Virgin Islands, whichever is applicable.

(2) *Presumption of ownership of spiny lobster traps.* A spiny lobster trap in the EEZ around St. Thomas and St. John will be presumed to be the property of the most recently documented owner. This presumption will not apply with respect to such traps that are lost or sold if the owner reports the loss or sale within 15 days to the RA.

(3) *Disposition of unmarked spiny lobster traps or buoys.* An unmarked spiny lobster trap or buoy deployed in the EEZ around St. Thomas and St. John is illegal and may be disposed of in any appropriate manner by the Assistant Administrator or an authorized officer.

§ 622.510 Trap construction specifications and tending restrictions.

(a) *Reef fish*—(1) *Construction specifications*—(i) *Minimum mesh size.* A bare-wire fish trap used or possessed in the EEZ around St. Thomas and St. John that has hexagonal mesh openings must have a minimum mesh size of 1.5 inches (3.8 cm) in the smallest dimension measured between centers of opposite strands. A bare-wire fish trap used or possessed in the EEZ around St. Thomas and St. John that has other than hexagonal mesh openings or a fish trap of other than bare wire, such as coated wire or plastic, used or possessed in the EEZ around St. Thomas and St. John, must have a minimum mesh size of 2 inches (5.1 cm) in the smallest dimension measured between centers of opposite strands.

(ii) *Escape mechanisms.* A fish trap used or possessed in the EEZ around St. Thomas and St. John must have a panel located on one side of the trap, excluding the top, bottom, and side containing the trap entrance. The opening covered by the panel must measure not less than 8 by 8 inches (20.3 by 20.3 cm). The mesh size of the panel may not be smaller than the mesh size of the trap. The panel must be attached to the trap with untreated jute twine with a diameter not exceeding 1/8-inch (3.2 mm). An access door may serve as the panel, provided it is on an appropriate side, it is hinged only at its bottom, its only other fastening is untreated jute twine with a diameter not exceeding 1/8-inch (3.2 mm), and such fastening is at the top of the door so that the door will fall open when such twine degrades. Jute twine used to secure a panel may not be wrapped or overlapped.

(2) *Tending restrictions.* A fish trap in the EEZ around St. Thomas and St. John may be pulled or tended only by a person (other than an authorized officer) aboard the fish trap owner's vessel, or aboard another vessel if such vessel has on board written consent of the trap owner, or if the trap owner is aboard and has documentation verifying his identification number and color code. An owner's written consent must specify the time period such consent is effective and the trap owner's gear identification number and color code.

(b) [Reserved]

(c) *Spiny lobster*—(1) *Construction specifications*—(i) *Escape mechanisms.* A spiny lobster trap used or possessed in the EEZ around St. Thomas and St. John must contain on any vertical side or on the top a panel no smaller in diameter than the throat or entrance of the trap. The panel must be made of or attached to the trap by one of the following degradable materials:

(A) Untreated fiber of biological origin with a diameter not exceeding 1/8-inch (3.2 mm). This includes, but is not limited to tyre palm, hemp, jute, cotton, wool, or silk.

(B) Ungalvanized or uncoated iron wire with a diameter not exceeding 1/16-inch (1.6 mm), that is, 16-gauge wire.

(ii) [Reserved]

(2) *Tending restrictions.* A spiny lobster trap in the EEZ around St. Thomas and St. John may be pulled or tended only by a person (other than an authorized officer) aboard the trap owner's vessel, or aboard another vessel if such vessel has on board written consent of the trap owner, or if the trap owner is aboard and has documentation verifying his identification number and color code. An owner's written consent must specify the time period such consent is effective and the trap owner's gear identification number and color code.

§ 622.511 Anchoring restrictions.

The owner or operator of any fishing vessel, recreational or commercial, that fishes for or possesses reef fish in or from the EEZ around St. Thomas and St. John must ensure that the vessel uses only an anchor retrieval system that recovers the anchor by its crown, thereby preventing the anchor from dragging along the bottom during recovery. For a grapnel hook, this could include an incorporated anchor rode reversal bar that runs parallel along the shank, which allows the rode to reverse and slip back toward the crown. For a fluke- or plow-type anchor, a trip line consisting of a line from the crown of the anchor to a surface buoy is required.

§ 622.512 Prohibited gear and methods.

Also see § 622.9 for additional prohibited gear and methods that apply more broadly to multiple fisheries or in some cases all fisheries.

(a) *Reef fish*—(1) *Poisons.* A poison, drug, or other chemical may not be used to fish for reef fish in the EEZ around St. Thomas and St. John.

(2) *Powerheads.* A powerhead may not be used in the EEZ around St. Thomas and St. John to harvest reef fish. The possession of a mutilated reef fish in or from the EEZ around St. Thomas and St. John and a powerhead constitutes a rebuttable presumption of a violation of this paragraph (a)(2).

(3) *Gillnets and trammel nets.* A gillnet or trammel net may not be used in the EEZ around St. Thomas and St. John to fish for reef fish. The possession of a reef fish in or from the EEZ around St. Thomas and St. John and a gillnet or trammel net constitutes a rebuttable presumption of a violation of this paragraph (a)(3). A gillnet or trammel net used in the EEZ around St. Thomas and St. John to fish for any other species must be tended at all times.

(b) [Reserved]

(c) *Spiny lobster*—(1) *Spears and hooks.* A spear, hook, or similar device may not be used in the EEZ around St. Thomas and St. John to harvest a spiny

lobster. The possession of a speared, pierced, or punctured spiny lobster in or from the EEZ around St. Thomas and St. John constitutes a rebuttable presumption of a violation of this paragraph (c)(1).

(2) *Gillnets and trammel nets.* A gillnet or trammel net may not be used in the EEZ around St. Thomas and St. John to fish for spiny lobster. The possession of a spiny lobster in or from the EEZ around St. Thomas and St. John and a gillnet or trammel net constitutes a rebuttable presumption of a violation of this paragraph (c)(2). A gillnet or trammel net used in the EEZ around St. Thomas and St. John to fish for any other species must be tended at all times.

§ 622.513 Prohibited species.

The harvest and possession restrictions of this section apply without regard to whether the species is harvested by a vessel operating under a commercial vessel permit. The operator of a vessel that fishes in the EEZ around St. Thomas and St. John is responsible for the limit applicable to that vessel. Any of the following species caught in the EEZ around St. Thomas and St. John must be released immediately with a minimum of harm.

(a) *Reef fish.* No person may fish for or possess the following reef fish species in or from the EEZ around St. Thomas and St. John.

(1) Goliath grouper or Nassau grouper.

(2) Blue parrotfish, midnight parrotfish, or rainbow parrotfish.

(b)–(c) [Reserved]

(d) *Coral, sea cucumber, and sea urchin.* A coral, sea cucumber, or sea urchin may not be fished for or possessed in or from the EEZ around St. Thomas and St. John. The taking of coral in the EEZ around St. Thomas and St. John is not considered unlawful possession provided it is returned immediately to the sea in the general area of fishing.

(e) *Queen conch.* No person may fish for or possess queen conch in or from the EEZ around St. Thomas and St. John.

§ 622.514 Area and seasonal closures.

(a) *Closures applicable to specific areas*—(1) *Grammanik Bank.* The Grammanik Bank is bounded by rhumb lines connecting, in order, the points listed in Table 1 to this paragraph (a)(1).

(i) From February 1 through April 30, each year, no person may fish for or possess any species of fish, except highly migratory species, in or from the Grammanik Bank. The prohibition on possession does not apply to such fish harvested and landed ashore prior to the closure. For the purpose of this paragraph, *fish* means finfish, mollusks, crustaceans, and all other forms of marine animal and plant life other than marine mammals and birds. *Highly migratory species* means bluefin, bigeye, yellowfin, albacore, and skipjack tunas; swordfish; sharks (listed in appendix A to part 635 of this title); and white marlin, blue marlin, sailfish, and longbill spearfish.

(ii) Fishing with pots, traps, bottom longlines, gillnets or trammel nets is prohibited year-round in the Grammanik Bank.

TABLE 1 TO § 622.514(a)(1)—GRAMMANIK BANK

Point	North lat.	West long.
A	18°11.898′	64°56.328′
B	18°11.645′	64°56.225′
C	18°11.058′	64°57.810′
D	18°11.311′	64°57.913′
A	18°11.898′	64°56.328′

(2) *Hind Bank Marine Conservation District (MCD).* The Hind Bank MCD is bounded by rhumb lines connecting, in order, the points listed in Table 2 to this paragraph (a)(2). Fishing for any species and anchoring by fishing vessels is prohibited year-round in those parts of the Hind Bank MCD that are in the EEZ around St. Thomas and St. John.

TABLE 2 TO § 622.514(a)(2)—HIND BANK MCD

Point	North lat.	West long.
A	18°13.2′	65°06.0′
B	18°13.2′	64°59.0′
C	18°11.8′	64°59.0′
D	18°10.7′	65°06.0′
A	18°13.2′	65°06.0′

(b) *Seasonal closures applicable to specific species*—(1) *Black, red, tiger, yellowedge, and yellowfin grouper closure.* From February 1 through April 30, each year, no person may fish for or possess black, red, tiger, yellowedge, or yellowfin grouper in or from the EEZ around St. Thomas and St. John. The prohibition on possession does not apply to such grouper harvested and landed ashore prior to the closure.

(2) *Black, blackfin, silk, and vermilion snapper closure.* From October 1 through December 31, each year, no person may fish for or possess black, blackfin, silk, or vermilion snapper in or from the EEZ around St. Thomas and St. John. The prohibition on possession does not apply to such snapper harvested and landed ashore prior to the closure.

(3) *Lane and mutton snapper closure.* From April 1 through June 30, each year, no person may fish for or possess lane or mutton snapper in or from the EEZ around St. Thomas and St. John. The prohibition on possession does not apply to such snapper harvested and landed ashore prior to the closure.

§ 622.515 Annual catch limits (ACLs), annual catch targets (ACTs), and accountability measures (AMs).

(a) *Reef fish.* (1) The following ACLs are as follows and given in round weight.

TABLE 1 TO § 622.515(a)(1)

Family	Stock or stock complex and species composition	ACL
Angelfishes	Angelfish—French angelfish, gray angelfish [1], queen angelfish	18,297 lb (8,299.3 kg).
Groupers	Grouper 3—coney, red hind [1]	65,030 lb (29,497.1 kg).
	Grouper 4—black grouper, red grouper, tiger grouper, yellowfin grouper	2,254 lb (1,022.3 kg).
	Grouper 5—misty grouper, yellowedge grouper, yellowmouth grouper	390 lb (176.9 kg).
Grunts	Grunts 1—bluestriped grunt, white grunt [1]	30,581 lb (13,871.3 kg).
	Grunts 2—margate	2,319 lb (1,051.8 kg).
Jacks	Jacks—blue runner	44,665 lb (20,259.7 kg).
Parrotfishes	Parrotfish 2—princess parrotfish, queen parrotfish, redband parrotfish, redfin parrotfish, redtail parrotfish [1], stoplight parrotfish [1], striped parrotfish.	60,026 lb (27,227.3 kg).
Porgies	Porgies—jolthead porgy, saucereye porgy [1], sea bream, sheepshead porgy	29,039 lb (13,171.8 kg).
Snappers	Snapper 1—black snapper, blackfin snapper [1], silk snapper, vermilion snapper	20,090 lb (9,112.6 kg).
	Snapper 2—queen snapper	568 lb (257.6 kg).
	Snapper 3—lane snapper, mutton snapper [1]	30,784 lb (13,963.3 kg).
	Snapper 4—yellowtail snapper	88,952 lb (40,347.9 kg).
Surgeonfishes	Surgeonfish—blue tang, doctorfish [1], ocean surgeonfish	22,630 lb (10,264.7 kg).

TABLE 1 TO § 622.515(a)(1)—Continued

Family	Stock or stock complex and species composition	ACL
Triggerfishes	Triggerfish—queen triggerfish	97,670 lb (44,302.3 kg).
Wrasses	Wrasses—hogfish	2,951 lb (1,338.5 kg).

[1] Indicator stock.

(2) At or near the beginning of the fishing year, landings for each stock, stock complex, or indicator stock will be evaluated relative to the ACL based on a moving multi-year average of landings, as described in the FMP. If NMFS estimates that landings for a stock, stock complex, or indicator stock have exceeded the ACL specified in paragraph (a)(1) of this section for the stock or stock complex, the Assistant Administrator for NOAA Fisheries (AA) will file a notification with the Office of the Federal Register to reduce the length of the fishing season for the stock or stock complex within that fishing year by the amount necessary to prevent landings from exceeding the ACL for the stock or stock complex, unless NMFS determines that a fishing season reduction is not necessary based on the best scientific information available. If NMFS determines that the ACL for a particular stock or stock complex was exceeded because data collection or monitoring improved rather than because landings increased, NMFS will not reduce the length of the fishing season for the stock or stock complex. Any fishing season reduction required under this paragraph (a)(2) will be applied starting from September 30 and moving earlier toward the beginning of the fishing year. If the length of the required fishing season reduction exceeds the time period of January 1 through September 30, any additional fishing season reduction will be applied starting from October 1 and moving later toward the end of the fishing year.

(b) *Pelagic fish.* The ACLs and ACTs are given in round weight.

(1) *Dolphinfish.* (i) ACL—9,778 lb (4,435.2 kg).

(ii) ACT—8,800 lb (3,991.6 kg).

(2) *Wahoo.* (i) ACL—6,879 lb (3,120.2 kg).

(ii) ACT—6,191 lb (2,808.1 kg).

(3) *Pelagic fish AM application.* At or near the beginning the fishing year, landings for the stock or stock complex will be evaluated relative to the ACT for the stock or stock complex based on a moving multi-year average of landings, as described in the FMP. If NMFS estimates that landings have exceeded the ACT specified in paragraph (b) of this section, NMFS in consultation with the Caribbean Fishery Management Council will determine appropriate corrective action.

(c) *Spiny lobster.* (1) ACL—209,210 lb (94,896 kg), round weight.

(2) At or near the beginning the fishing year, landings will be evaluated relative to the ACL based on a moving multi-year average of landings, as described in the FMP. If NMFS estimates that landings have exceeded the ACL specified in paragraph (c)(1) of this section, the AA will file a notification with the Office of the Federal Register to reduce the length of the fishing season for spiny lobster within that fishing year by the amount necessary to prevent landings from exceeding the ACL, unless NMFS determines that a fishing season reduction is not necessary based on the best scientific information available. If NMFS determines the ACL was exceeded because data collection or monitoring improved rather than because landings increased, NMFS will not reduce the length of the fishing season. Any fishing season reduction required under this paragraph (c)(2) will be applied starting from September 30 and moving earlier toward the beginning of the fishing year. If the length of the required fishing season reduction exceeds the time period of January 1 through September 30, any additional fishing season reduction will be applied starting from October 1 and moving later toward the end of the fishing year.

(d)–(e) [Reserved]

(f) *Closure provisions for reef fish and spiny lobster.* The following restrictions apply during a fishing season closure for reef fish or spiny lobster in the EEZ around St. Thomas and St. John. During the closure period announced in the notification filed pursuant to paragraph (a)(2) or (c)(2) of this section, such stock or stock complex in or from the EEZ around St. Thomas and St. John may not be harvested, possessed, purchased, or sold, and the bag and possession limits for such stock or stock complex are zero.

§ 622.516 Size limits.

All size limits in this section are minimum size limits unless specified otherwise. A fish not in compliance with its size limit in or from the EEZ around St. Thomas and St. John may not be possessed, sold, or purchased, and must be released immediately with a minimum of harm. The operator of a vessel that fishes in the EEZ around St. Thomas and St. John is responsible for ensuring that all species on board are in compliance with the size limits specified in this section. See § 622.10 regarding requirements for landing fish intact. See § 622.520(c)(2) regarding requirements for landing spiny lobster intact.

(a) *Reef fish.* (1) Yellowtail snapper—12 inches (30.5 cm), TL.

(2) [Reserved]

(b) [Reserved]

(c) *Spiny lobster.* 3.5 inches (8.9 cm), carapace length.

§ 622.517 [Reserved]

§ 622.518 Restrictions on sale or purchase.

(a) *Reef fish.* A live red hind or live mutton snapper in or from the EEZ around St. Thomas and St. John may not be sold or purchased and used in the marine aquarium trade.

(b) [Reserved]

(c) *Coral.* (1) No person may sell or purchase a coral harvested in the EEZ around St. Thomas and St. John.

(2) A coral that is sold in St. Thomas or St. John will be presumed to have been harvested in the EEZ around St. Thomas and St. John, unless it is accompanied by documentation showing that it was harvested elsewhere. Such documentation must contain:

(i) The information specified in subpart K of part 300 of this title for marking containers or packages of fish or wildlife that are imported, exported, or transported in interstate commerce.

(ii) The name and home port of the vessel, or the name and address of the individual harvesting the coral.

(iii) The port and date of landing the coral.

(iv) A statement signed by the person selling the coral attesting that, to the best of his or her knowledge, information, and belief, such coral was harvested from other than in the EEZ around St. Thomas and St. John, or the waters of Puerto Rico or the U.S. Virgin Islands.

§ 622.519 Bag and possession limits.

Section 622.11(a) provides the general applicability for bag and possession

limits. However, § 622.11(a) notwithstanding, the bag limits of this section do not apply to a person who has a valid commercial fishing license issued by Puerto Rico or the U.S. Virgin Islands.

(a) *Reef fish.* (1) Groupers, parrotfishes, and snappers combined—5 per person per day or, if 3 or more persons are aboard, 15 per vessel per day; but not to exceed 2 parrotfish per person per day or 6 parrotfish per vessel per day.

(2) Angelfishes, grunts, jacks, porgies, surgeonfishes, triggerfishes, and wrasses combined—5 per person per day or, if 3 or more persons are aboard, 15 per vessel per day, but not to exceed 1 surgeonfish per person per day or 4 surgeonfish per vessel per day.

(b) [Reserved]

(c) *Spiny lobster.* 3 per person per day, not to exceed 10 per vessel per day, whichever is less.

§ 622.520 Other harvest restrictions.

(a)–(b) [Reserved]

(c) Spiny lobster—(1) *Prohibition on harvest of egg-bearing spiny lobster.* Egg-bearing spiny lobster in the EEZ around St. Thomas and St. John must be returned to the water unharmed. An egg-bearing spiny lobster may be retained in a spiny lobster trap, provided the trap is returned immediately to the water. An egg-bearing spiny lobster may not be stripped, scraped, shaved, clipped, or in any other manner molested, in order to remove the eggs.

(2) *Landing spiny lobster intact.* (i) A spiny lobster in or from the EEZ around St. Thomas and St. John must be maintained with head and carapace intact through offloading ashore.

(ii) The operator of a vessel that fishes in the EEZ around St. John and St. Thomas is responsible for ensuring that spiny lobster on that vessel are maintained intact through offloading ashore, as specified in this section.

§ 622.521 Spiny lobster import prohibitions.

(a) *Minimum size limits for imported spiny lobster.* Multiple minimum size limits apply to importation of spiny lobster into the United States—one that applies any place subject to the jurisdiction of the United States other than Puerto Rico or the U.S. Virgin Islands, and more restrictive minimum size limits that apply to Puerto Rico, St. Croix, and St. Thomas and St. John, respectively.

(1) No person may import a spiny lobster with less than a 6-ounce (170-gram) tail weight into St. Thomas or St. John. For the purposes of paragraph (a) of this section, a 6-ounce (170-gram) tail weight is defined as a tail that weighs 5.9–6.4 ounces (167–181 grams). If the documentation accompanying an imported spiny lobster, including but not limited to product packaging, customs entry forms, bills of lading, brokerage forms, or commercial invoices, indicates that the product does not satisfy the minimum tail-weight, the person importing such spiny lobster has the burden to prove that such spiny lobster does satisfy the minimum tail-weight requirement or that such spiny lobster has a tail length of 6.2 inches (15.75 cm) or greater or that such spiny lobster has or had a carapace length of 3.5 inches (8.89 cm) or greater. If the imported product itself does not satisfy the minimum tail-weight requirement, the person importing such spiny lobster has the burden to prove that such spiny lobster has a tail length of 6.2 inches (15.75 cm) or greater or that such spiny lobster has or had a carapace length of 3.5 inches (8.89 cm) or greater. If the burden is satisfied, such spiny lobster will be considered to be in compliance with the minimum 6-ounce (170-gram) tail-weight requirement.

(2) See § 622.409 regarding the minimum size limit that applies to spiny lobster imported into any place subject to the jurisdiction of the United States other than Puerto Rico or the U.S. Virgin Islands.

(3) See subparts S and T of this part for the minimum size limits that apply to spiny lobster imported into Puerto Rico and St. Croix, respectively.

(b) *Additional spiny lobster import prohibitions*—(1) *Prohibition related to tail meat.* No person may import into any place subject to the jurisdiction of the United States spiny lobster tail meat that is not in whole tail form with the exoskeleton attached.

(2) *Prohibitions related to egg-bearing spiny lobster.* No person may import into any place subject to the jurisdiction of the United States spiny lobster with eggs attached or spiny lobster from which eggs or pleopods (swimmerets) have been removed or stripped. Pleopods are the first five pairs of abdominal appendages.

§ 622.522 Adjustment of management measures.

In accordance with the framework procedure of the Fishery Management Plan for the EEZ around St. Thomas and St. John, the RA may establish or modify the following items.

(a) *Standard open framework procedures.* Re-specify maximum sustainable yield (MSY), optimum yield (OY), overfishing limit (OFL), maximum fishing mortality threshold (MFMT), minimum stock size threshold (MSST), acceptable biological catch (ABC), ACL, ACT, sustainable yield level, and other related management reference points and status determination criteria; establish or revise rebuilding plans; revise AMs; modify reporting or monitoring requirements, and time or area closures and closure procedures.

(b) *Abbreviated open framework procedures.* Gear or vessel marking requirements, maintaining fish in a specific condition, size limits, commercial trip limits, recreational bag and possession limits, changes to the length of an established closed season of no more than 1 day, and gear modifications to address conservation issues including responding to interactions with species listed under the Endangered Species Act or protected under the Marine Mammal Protection Act.

Subpart V [Removed]

■ 21. Remove subpart V, consisting of §§ 622.490 through 622.497.

■ 22. Revise appendix A to read as follows:

Appendix A to Part 622—Species Tables

TABLE 1 TO APPENDIX A TO PART 622—GULF OF MEXICO REEF FISH

Balistidae—Triggerfishes:
- Gray triggerfish, *Balistes capriscus*.

Carangidae—Jacks:
- Greater amberjack, *Seriola dumerili*.
- Lesser amberjack, *Seriola fasciata*.
- Almaco jack, *Seriola rivoliana*.
- Banded rudderfish, *Seriola zonata*.

Labridae—Wrasses:
- Hogfish, *Lachnolaimus maximus*.

Lutjanidae—Snappers:
- Queen snapper, *Etelis oculatus*.

TABLE 1 TO APPENDIX A TO PART 622—GULF OF MEXICO REEF FISH—Continued

Mutton snapper, *Lutjanus analis*.
Blackfin snapper, *Lutjanus buccanella*.
Red snapper, *Lutjanus campechanus*.
Cubera snapper, *Lutjanus cyanopterus*.
Gray (mangrove) snapper, *Lutjanus griseus*.
Lane snapper, *Lutjanus synagris*.
Silk snapper, *Lutjanus vivanus*.
Yellowtail snapper, *Ocyurus chrysurus*.
Wenchman, *Pristipomoides aquilonaris*.
Vermilion snapper, *Rhomboplites aurorubens*.
Malacanthidae—Tilefishes:
Goldface tilefish, *Caulolatilus chrysops*.
Blueline tilefish, *Caulolatilus microps*.
Tilefish, *Lopholatilus chamaeleonticeps*.
Serranidae—Groupers:
Speckled hind, *Epinephelus drummondhayi*.
Yellowedge grouper, *Epinephelus flavolimbatus*.
Goliath grouper, *Epinephelus itajara*.
Red grouper, *Epinephelus morio*.
Warsaw grouper, *Epinephelus nigritus*.
Snowy grouper, *Epinephelus niveatus*.
Black grouper, *Mycteroperca bonaci*.
Yellowmouth grouper, *Mycteroperca interstitialis*.
Gag, *Mycteroperca microlepis*.
Scamp, *Mycteroperca phenax*.
Yellowfin grouper, *Mycteroperca venenosa*.

TABLE 2 TO APPENDIX A TO PART 622—SOUTH ATLANTIC SNAPPER-GROUPER

Balistidae—Triggerfishes:
Gray triggerfish, *Balistes capriscus*.
Carangidae—Jacks:
Bar jack, *Caranx ruber*.
Greater amberjack, *Seriola dumerili*.
Lesser amberjack, *Seriola fasciata*.
Almaco jack, *Seriola rivoliana*.
Banded rudderfish, *Seriola zonata*.
Ephippidae—Spadefishes:
Spadefish, *Chaetodipterus faber*.
Haemulidae—Grunts:
Margate, *Haemulon album*.
Tomtate, *Haemulon aurolineatum*.
Sailor's choice, *Haemulon parra*.
White grunt, *Haemulon plumierii*.
Labridae—Wrasses:
Hogfish, *Lachnolaimus maximus*.
Lutjanidae—Snappers:
Queen snapper, *Etelis oculatus*.
Mutton snapper, *Lutjanus analis*.
Blackfin snapper, *Lutjanus buccanella*.
Red snapper, *Lutjanus campechanus*.
Cubera snapper, *Lutjanus cyanopterus*.
Gray snapper, *Lutjanus griseus*.
Lane snapper, *Lutjanus synagris*.
Silk snapper, *Lutjanus vivanus*.
Yellowtail snapper, *Ocyurus chrysurus*.
Vermilion snapper, *Rhomboplites aurorubens*.
Malacanthidae—Tilefishes:
Blueline tilefish, *Caulolatilus microps*.
Golden tilefish, *Lopholatilus chamaeleonticeps*.
Sand tilefish, *Malacanthus plumieri*.
Percichthyidae—Temperate basses:
Wreckfish, *Polyprion americanus*.
Serranidae—Groupers:
Rock hind, *Epinephelus adscensionis*.
Graysby, *Epinephelus cruentatus*.
Speckled hind, *Epinephelus drummondhayi*.
Yellowedge grouper, *Epinephelus flavolimbatus*.
Coney, *Epinephelus fulvus*.
Red hind, *Epinephelus guttatus*.
Goliath grouper, *Epinephelus itajara*.
Red grouper, *Epinephelus morio*.
Misty grouper, *Epinephelus mystacinus*.
Warsaw grouper, *Epinephelus nigritus*.
Snowy grouper, *Epinephelus niveatus*.
Nassau grouper, *Epinephelus striatus*.
Black grouper, *Mycteroperca bonaci*.
Yellowmouth grouper, *Mycteroperca interstitialis*.
Gag, *Mycteroperca microlepis*.
Scamp, *Mycteroperca phenax*.
Yellowfin grouper, *Mycteroperca venenosa*.
Serranidae—Sea Basses:

TABLE 2 TO APPENDIX A TO PART 622—SOUTH ATLANTIC SNAPPER-GROUPER—Continued

Black sea bass, *Centropristis striata*.
Sparidae—Porgies:
Jolthead porgy, *Calamus bajonado*.
Saucereye porgy, *Calamus calamus*.
Whitebone porgy, *Calamus leucosteus*.
Knobbed porgy, *Calamus nodosus*.
Red porgy, *Pagrus pagrus*.
Scup, *Stenotomus chrysops*.
The following species are designated as ecosystem component species:
Cottonwick, *Haemulon melanurum*.
Bank sea bass, *Centropristis ocyurus*.
Rock sea bass, *Centropristis philadelphica*.
Longspine porgy, *Stenotomus caprinus*.
Ocean triggerfish, *Canthidermis sufflamen*.

TABLE 3 TO APPENDIX A TO PART 622—ATLANTIC DOLPHIN AND WAHOO

Dolphin, *Coryphaena equiselis or Coryphaena hippurus*.
Wahoo, *Acanthocybium solandri*.
The following species are designated as ecosystem component species:
Bullet mackerel, *Auxis rochei*.
Frigate mackerel, *Auxis thazard*.

■ 23. In addition to the previous amendments to this part, remove all references to ''622.413'' and add, in their place, ''622.419'' in the following sections:

■ a. 50 CFR 622.55(e);
■ b. 50 CFR 622.382(a)(1)(i)(B);
■ c. 50 CFR 622.400(a)(1)(i);
■ d. 50 CFR 622.402(a)(1), (2), (3), and (c)(1);
■ e. 50 CFR 622.403(b)(3)(i);
■ f. 50 CFR 622.404(e) and (f); and
■ g. 50 CFR 622.405(b)(2)(i).

[FR Doc. 2022–09588 Filed 5–18–22; 8:45 am]

BILLING CODE 3510–22–P

Reader Aids

Federal Register

Vol. 87, No. 97

Thursday, May 19, 2022

CUSTOMER SERVICE AND INFORMATION

Federal Register/Code of Federal Regulations	
General Information, indexes and other finding aids	**202–741–6000**
Laws	**741–6000**
Presidential Documents	
Executive orders and proclamations	**741–6000**
The United States Government Manual	**741–6000**
Other Services	
Electronic and on-line services (voice)	**741–6020**
Privacy Act Compilation	**741–6050**

ELECTRONIC RESEARCH

World Wide Web

Full text of the daily Federal Register, CFR and other publications is located at: **www.govinfo.gov.**

Federal Register information and research tools, including Public Inspection List and electronic text are located at: **www.federalregister.gov.**

E-mail

FEDREGTOC (Daily Federal Register Table of Contents Electronic Mailing List) is an open e-mail service that provides subscribers with a digital form of the Federal Register Table of Contents. The digital form of the Federal Register Table of Contents includes HTML and PDF links to the full text of each document.

To join or leave, go to **https://public.govdelivery.com/accounts/USGPOOFR/subscriber/new**, enter your email address, then follow the instructions to join, leave, or manage your subscription.

PENS (Public Law Electronic Notification Service) is an e-mail service that notifies subscribers of recently enacted laws.

To subscribe, go to **http://listserv.gsa.gov/archives/publaws-l.html and select** *Join or leave the list (or change settings);* then follow the instructions.

FEDREGTOC and **PENS** are mailing lists only. We cannot respond to specific inquiries.

Reference questions. Send questions and comments about the Federal Register system to: **fedreg.info@nara.gov**

The Federal Register staff cannot interpret specific documents or regulations.

FEDERAL REGISTER PAGES AND DATE, MAY

25569–26120 2
26121–26266 3
26267–26652 4
26653–26960 5
26961–27438 6
27439–27916 9
29717–28750 10
28751–29024 11
29025–29216 12
29217–29646 13
29647–29818 16
29819–30096 17
30097–30384 18
30385–30766 19

CFR PARTS AFFECTED DURING MAY

At the end of each month the Office of the Federal Register publishes separately a List of CFR Sections Affected (LSA), which lists parts and sections affected by documents published since the revision date of each title.

1 CFR

12 26267

2 CFR

200 29025
1500 30393

3 CFR

Proclamations:
10375 25569
10376 26121
10377 26653
10378 26655
10379 26657
10380 26659
10381 26661
10382 26663
10383 26665
10384 26667
10385 26669
10386 26671
10387 26673
10388 26959
10389 27905
10390 27907
10391 27915
10392 28751
10393 28753
10394 30095
10395 30385
10396 30387
10397 30387
10398 30391

Executive Orders:
14073 27909

Administrative Orders:
Memorandums:
Memorandum of May 6, 2022 29647
Notices
Notice of May 9, 2022 ..... 28749, 29019, 29021, 29023
Notice of May 12, 2022 29645
Presidential Determinations: No. 2022–12 of May 12, 2022 30383

5 CFR

1601 27917

7 CFR

1 25571
1728 26961
1755 26961

8 CFR

214 30334
274a 26614, 30334

9 CFR

Proposed Rules:
201 26695
203 26695

10 CFR

430 ..... 27439, 27461, 28755

Proposed Rules:
20 ..... 27025, 29840
26 ..... 27025, 29840
50 ..... 27025, 29840
51 ..... 27025, 29840
52 ..... 27025, 29840
72 ..... 27025, 29840
73 ..... 27025, 29840
140 ..... 27025, 29840
430 ..... 26303, 26304, 29576, 30433
431 ..... 27025, 28782, 30610

12 CFR

14 27482
201 29649
204 29650
329 27483
611 27483
615 27483
620 27483
621 27483
628 27483
630 27483
1002 30097

13 CFR

107 28756
120 28756
142 28756
146 28756

14 CFR

27 26123
39 ..... 26964, 26967, 26969, 26972, 27494, 27923, 29025, 29027, 29030, 29033, 29037, 29217, 29651, 29654, 29819, 29821, 30402, 30405, 30408, 30411
71 ..... 26974, 26975, 26977, 26978, 26980, 26981, 26983, 26984, 26985, 27506, 27507, 27508, 27509, 27925, 27927, 29039, 29220, 29222, 29823, 29825, 30414
73 ..... 26987, 27510
91 27928
97 ..... 29657, 29659

Proposed Rules:
29 26143
39 ..... 26699, 26702, 27029, 27032, 27035, 27037, 27533, 27954, 29841, 30434
71 ..... 26705, 27537, 27539,

27956, 29238, 29239, 29243

15 CFR

746.....28758
922.....29606

16 CFR

Proposed Rules:
Ch. II.....30436

17 CFR

Proposed Rules:
201.....28872
210.....29059, 29458
229.....29059, 29458
230.....29458
232.....28872, 29059, 29458
239.....29059, 29458
240.....28872, 29059, 29458
242.....28872, 29059
249.....28872, 29059, 29458
270.....29458
275.....29059

18 CFR

Proposed Rules:
35.....26504

19 CFR

122.....30415

20 CFR

220.....27512
404.....26268
641.....26988
655.....30334
Proposed Rules:
641.....27041

21 CFR

73.....27931
866.....29661
870.....26989
876.....26991
878.....26993
Proposed Rules:
172.....26707
1162.....26311, 26454
1166.....26311, 26396

23 CFR

650.....27396

24 CFR

887.....30020
984.....30020

26 CFR

Proposed Rules:
1.....26806
20.....26806
25.....26806

28 CFR

50.....27936
85.....27513

30 CFR

917.....27938
Proposed Rules:
250.....29790

31 CFR

589.....26094

32 CFR

310.....28774, 30416

33 CFR

100.....25571, 25572, 26270, 26273, 26996, 27943
110.....29668
117.....30418
165.....26273, 26675, 26996, 26998, 27943, 27944, 27945, 27947, 28776, 29041, 29043, 29226, 29228, 29828
Proposed Rules:
100.....26313, 26315, 27041
117.....26145
165.....27959, 29244, 29246
334.....25595

36 CFR

Proposed Rules:
242.....29061

37 CFR

201.....30060
220.....30060
222.....30060
224.....30060
225.....30060
226.....30060
227.....30060
228.....30060
229.....30060
230.....30060
231.....30060
232.....30060
233.....30060
Proposed Rules:
1.....27043

38 CFR

3.....26124
13.....29671

39 CFR

20.....29830
111.....30101
241.3.....29673
Proposed Rules:
3055.....25595

40 CFR

33.....30393
35.....30393
45.....30393
46.....30393
47.....30393
50.....29045
51.....29045
52.....26677, 26999, 27519, 27521, 27524, 27526, 27528, 27949, 29046, 29048, 29228, 29232, 29830, 29837, 30420, 30423
60.....30105
61.....30105
62.....26680, 30105
63.....27002
70.....30105
82.....26276
170.....29673
180.....26684, 26687, 26691, 29050, 29053, 29056, 30425
194.....26126
271.....26136
312.....25572
Proposed Rules:
2.....26146, 29078
52.....26707, 26710, 27048, 27050, 27540, 28783, 29103, 29105, 29108, 29707, 30129, 30437
59.....26146
60.....26146, 29710, 30141, 30160
61.....30160
62.....30160
70.....30160
75.....29108
78.....29108
80.....26146
81.....26146, 26710, 27540, 30129
85.....26147
86.....26146
87.....26146
97.....29108
118.....29728
152.....27059
180.....29843
271.....26151
300.....29728
600.....26146
702.....29078
703.....29078
704.....27060, 29078
707.....29078
716.....29078
717.....29078
720.....29078
723.....29078
725.....29078
790.....29078
1027.....26146
1030.....26146
1033.....26146
1036.....26146
1037.....26146
1039.....26146
1042.....26146
1043.....26146
1045.....26146
1048.....26146
1051.....26146
1054.....26146
1060.....26146
1065.....26146
1066.....26146
1068.....26146
1090.....26146

42 CFR

417.....27704
422.....27704
423.....27704
447.....29675
Proposed Rules:
88.....27961
412.....28108
413.....28108
482.....28108
485.....28108
495.....28108

45 CFR

144.....27208
147.....27208
153.....27208
155.....27208
156.....27208
158.....27208
Proposed Rules:
2507.....25598

46 CFR

Proposed Rules:
520.....27971

47 CFR

20.....26139
54.....30108
73.....30429
Proposed Rules:
14.....30442
15.....29248
20.....29248
22.....29248
24.....29248
25.....29248
27.....29248
30.....29248
54.....30161
73.....29248
74.....29248
76.....29248
78.....29248
80.....29248
87.....29248
90.....29248
95.....29248
96.....29248
101.....29248

48 CFR

4.....25572

49 CFR

107.....28779
190.....28779
191.....26296
192.....26296
214.....27530
531.....25710
533.....25710
536.....25710
537.....25710
Proposed Rules:
350.....27981
393.....26317
1146.....25609
1249.....27549

50 CFR

17.....26141
622.....25573, 29236
635.....26299
648.....27952
660.....27530, 29690, 30430
665.....25590
Proposed Rules:
17.....26152, 26319, 29272
100.....29061
600.....30730
622.....26178, 30730
660.....27557

LIST OF PUBLIC LAWS

Note: No public bills which have become law were received by the Office of the Federal Register for inclusion in today's **List of Public Laws**.

Last List May 18, 2022

Public Laws Electronic Notification Service (PENS)

PENS is a free electronic mail notification service of newly enacted public laws. To subscribe, go to *http://listserv.gsa.gov/archives/publaws-l.html*

Note: This service is strictly for E-mail notification of new laws. The text of laws is not available through this service. **PENS** cannot respond to specific inquiries sent to this address.