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OFFICE OF PERSONNEL MANAGEMENT

5 CFR Part 890

RIN 3206–AO18

Access to Federal Employees Health Benefits (FEHB) for Employees of Certain Tribally Controlled Schools

AGENCY: Office of Personnel Management.

ACTION: Interim final rule; request for comments.

SUMMARY: The Office of Personnel Management (OPM) is issuing an interim final rule to expand eligibility for enrollment in the Federal Employees Health Benefits (FEHB) Program to additional tribal employees. The Consolidated Appropriations Act, 2021 (FY21 CAA) amended section 409 of the Indian Health Care Improvement Act and expanded entitlement to Indian tribes or tribal organizations carrying out programs under the Tribally Controlled Schools Act of 1988 (TCSA) to purchase coverage, rights, and benefits under the FEHB Program for their employees.

DATES:

Effective date: This rule is effective on September 3, 2021.

Comment date: OPM must receive comments on or before November 2, 2021.

ADDRESSES: You may submit comments, identified by docket number and/or Regulatory Information Number (RIN) and title, by the following method:

- *Federal Rulemaking Portal:* <http://www.regulations.gov>. Follow the instructions for submitting comments.

All submissions received must include the agency name and docket number or RIN for this document. The general policy for comments and other submissions from members of the public is to make these submissions available for public viewing at <http://www.regulations.gov> as they are

received without change, including any personal identifiers or contact information.

FOR FURTHER INFORMATION CONTACT: Julia Elam, Program Analyst, at julia.elam@opm.gov or (202) 606–2128.

SUPPLEMENTARY INFORMATION:

FEHB Program Background

The FEHB Program was established in 1960 and is the largest employer-sponsored health insurance program in the United States. As of March 2021, there were approximately 8.2 million covered individuals in the FEHB Program. Covered individuals, as defined in 5 CFR 890.101, include employees of the Federal government, annuitants, members of their families, former spouses, and miscellaneous groups, enumerated in 5 U.S.C. 8901; United States Postal Service employees and annuitants, pursuant to 39 U.S.C. 1005; tribal employees of tribal employers, pursuant to 25 U.S.C. 1647b; and separated employees and former dependents who are eligible for Temporary Continuation of Coverage under 5 U.S.C. 8905a.

For the 2021 plan year, there are 276 plan choices across the entire FEHB Program. The actual number of options available to any given enrollee depends on the individual's geographic location but will include a minimum of 18 nationwide plan choices, as well as local and regional plans. OPM estimates, using the 2020 head count, that total 2021 premiums are approximately \$59 billion.

Authority for This Rulemaking

Section 1114 of the Consolidated Appropriations Act, 2021 (Pub. L. 116–260) amended Section 409 of the Indian Health Care Improvement Act (25 U.S.C. 1647b) to extend entitlement to Indian tribes or tribal organizations carrying out programs under the Tribally Controlled Schools Act of 1988 (TCSA) (25 U.S.C. 2501 *et seq.*) to purchase coverage, rights and benefits under the FEHB Program for their employees.

The FEHB Program is administered by OPM in accordance with Title 5 Chapter 89, United States Code and implementing regulations (title 5, parts 890, 892 and Title 48, Chapter 16).

The Patient Protection and Affordable Care Act (ACA) (Pub. L. 111–148) and the Health Care and Education Reconciliation Act of 2010 (Pub. L. 111–

152), as amended extended entitlement to Indian tribes and tribal organizations carrying out programs under the Indian Self-Determination and Education Assistance Act (ISDEAA) (Pub. L. 93–638), and urban Indian organizations carrying out programs under Title V of the Indian Health Care Improvement Act (IHCIA) to purchase coverage, rights, and benefits under the FEHB Program for their employees, defined in the FEHB regulations as “tribal employees.” As the administrator of the FEHB Program, OPM extended eligibility to tribal employees of entitled tribal employers within the meaning of section 409 of the IHCIA. Tribal employers began purchasing FEHB for their employees on March 22, 2012 with coverage effective on May 1, 2012. As of April 2021, 125 tribes participate in the FEHB Program, and there are 32,178 tribal employees for a total of 64,208 covered lives.

Tribally Controlled Schools and FEHB Eligibility

In 2010, section 409 of the IHCIA did not explicitly extend entitlement to tribes and tribal organizations operating schools pursuant to the TCSA. After the extension of FEHB to tribal employers in 2012, OPM received applications from tribal schools carrying out agreements under Public Law 100–297, commonly referred to as “297 grant schools” (hereinafter referred to as “TCSA grant schools”). OPM's understanding was that Public Law 100–297 contracts did not fall within the ISDEAA or Title V of the IHCIA. In April 2012, OPM sent a letter to the Interior Department's Office of the Solicitor seeking the Solicitor's opinion regarding its conclusion that tribes or tribal organizations carrying out programs under Public Law 100–297 were not entitled to purchase FEHB. In June 2012, the Office of the Solicitor within the Interior Department confirmed that tribal employers who receive grants pursuant to Public Law 100–297 were not “*ipso facto* eligible to purchase Federal Employee Health Benefit (FEHB) . . .”¹

Under Public Law 116–260, tribes or tribal organizations carrying out programs under the TCSA became tribal

¹ Sabrina A. McCarthy, Office of the Solicitor, U.S. Department of the Interior, to John O' Brien, Director, Healthcare and Insurance, Office of Personnel Management (June 1, 2012).

employers within the meaning of section 409 of the IHCA and are entitled to purchase coverage, rights, and benefits under the FEHB Program for their tribal employees. Accordingly, under 25 U.S.C. 1647b, tribally controlled schools include both TCSA grant schools and schools operating under the ISDEAA (Pub. L. 93-638) or a “638 contract.” Tribes or tribal organizations operating schools under 638 contracts were already entitled to purchase FEHB since the extension of FEHB to tribal employers in 2012. Currently, there are 128 tribally controlled schools with approximately 4,533 employees. Three of these tribally controlled schools operate under 638 contracts schools, and the remainder are TCSA grant schools. Tribal employees, as defined at 5 CFR 890.1402, across the 125 TCSA grant schools are now eligible for FEHB. Section 1114 of the FY21 CAA is expected to make FEHB accessible to approximately 4,328 tribal employees of entitled TCSA grant schools.

Tribal Consultation

Under Executive Order 13175, OPM has an obligation to engage in “regular and meaningful consultation and collaboration with tribal officials in the development of Federal policies that have tribal implications.” OPM continues to be committed to effective consultation and collaboration with tribes and tribal organizations.

OPM conducted extensive consultation with tribes and tribal organizations in 2011 and 2012 before implementation of the Tribal FEHB Program. OPM representatives attended more than 20 tribal conferences and meetings to provide information and consultation about the Program. In addition, OPM hosted training sessions for interested tribes and tribal organizations on numerous occasions. OPM also published a series of policy papers regarding the implementation of the Tribal FEHB Program, and tribes, tribal organizations, and urban Indian organizations were given an opportunity to provide feedback on these papers. A Tribal Technical Workgroup was established to support the implementation of the Tribal FEHB Program. Other tribal consultative actions included collaborating with the Department of Health and Human Services (HHS) to conduct in-person briefings for tribal communities across the country, focusing on the implementation of the ACA. Consultation for the Tribal FEHB Program is detailed in the proposed rule, 81 FR 59907, and the final rule, 81 FR 95397, which are the implementing

regulations for section 409 of the IHCA, and set forth the conditions for coverage, rights, and benefits under the FEHB Program for certain tribal employers who are entitled to purchase FEHB coverage for their tribal employees. Public Law 116-260 has tribal implications by broadening the category of eligible tribal employees of tribally controlled schools that are entitled to purchase FEHB coverage for their tribal employees.

On March 24, 2021, OPM issued a Dear Tribal Leader Letter (DTLL) that outlined proposed consultation topics and provided background on OPM’s mission and activities. OPM also posted a public notice of the Consultation on its website and on the National Congress of American Indians (NCAI)’s consultation site, and OPM created a new page dedicated to current and future consultation activities. On April 16, 2021, OPM held a virtual tribal consultation with tribes about federal human resources policies and programs; ways to improve consultation and sustain strong partnerships with Tribal governments; access to Federal employee benefits, including the FEHB Program and the newly eligible tribal employees of entitled tribally controlled schools under the FY21 CAA; and recruitment and hiring. A Dear Tribal Principals Letter was also issued on May 20, 2021 announcing a Listening Session detailing FEHB enrollment, which was held on June 8, 2021.

The public comment period for the interim final rule is an important opportunity to receive meaningful feedback about the entitlement of tribally controlled schools to purchase FEHB coverage for their tribal employees. Upon publication of the interim final rule, OPM will provide notification to Tribal Leaders, stakeholders, and other interested parties alerting them of the publication of the rule and the process for submitting formal comments. OPM has begun outreach to and will continue to assist newly entitled tribally controlled schools after the final rule is in effect.

Discussion of the Proposed Changes

This rule will clarify that newly entitled TCSA grant schools are subject to FEHB regulations, as set forth in subpart N of 5 CFR 890 by including them in the definition of “tribal employer,” and newly eligible tribal employees are subject to applicable provisions in the regulations. There are technical corrections and clarifications such as amending the definitions of “billing unit” and 5 CFR 890.1402 to tribe or tribal organization carrying out programs under the TCSA and

including the term “tribally controlled school” in 5 CFR 890.1402. In addition, the definition of paymaster has been revised to clarify that OPM may designate more than one entity to perform the responsibilities of the paymaster. There is also the inclusion of tribally controlled schools throughout subpart N in Part 890, the regulatory provisions on FEHB,² as defined in 5 CFR 890.1402. The newly entitled tribally controlled schools are also included throughout section 5 CFR 890.1404, which details a tribal employer’s election and agreement to purchase FEHB. These technical amendments are included at 5 CFR 890.1404(a)(1), (a)(2), (b)(5), (b)(9), and (e)(1).

Expected Impact of Proposed Changes

While this rule identifies TCSA grant schools as tribal employers entitled to purchase FEHB coverage for their tribal employees, pursuant to Public Law 116-260, OPM does not believe this regulation will have a large impact on the broader health insurance markets. Currently, there are an estimated 4,533 eligible tribal employees of tribally controlled schools, including TCSA grant schools and “638 contract schools.” Eligible tribal employees are full-time common law employees as determined by a tribal employer. There are an estimated 4,328 newly eligible tribal employees at TCSA grant schools. The impact on carriers is relatively small, as tribal enrollments make up 0.78 percent of enrollments in the FEHB Program. As of April 2021, the total tribal enrollment in the FEHB Program is 32,178 with a total of 64,208 covered lives. Overall, as of March 2021 there are over 4.1 million separate enrollments in the FEHB Program, providing health insurance to about 8.2 million Federal employees, annuitants, certain tribal employees, and their family members covered by the FEHB Program.

For states with larger AI/AN populations, OPM does not expect an outsized impact on local carriers as local carriers plans generally reflect the cost of their area. OPM does not anticipate that the newly eligible tribal employees will be significantly more expensive than other current FEHB enrollees in the same geographic region. For example, OPM estimates, for tribally controlled schools in which data is

² A tribal employer includes an Indian tribe or tribal organization carrying out at least one program under the ISDEAA; an Indian tribe or tribal organization carrying out at least one program under the TCSA; and an urban Indian organization carrying out at least one program under title V of the IHCA.

available, that in states with large AI/AN populations, such as New Mexico, Arizona, and South Dakota, only about 1,899 tribal employees are eligible at TCSA grant schools. Therefore, OPM does not anticipate a material impact if these tribal enrollees were to enroll in FEHB coverage. For FEHB nationwide fee-for-service (FFS) plans, there will not be enough new enrollees in this group to have a material impact.

Waiver of Proposed Rulemaking

OPM is issuing this rulemaking as an interim final rule and has determined that, under the Administrative Procedure Act (APA), 5 U.S.C. 553(b)(B), it would be impracticable, unnecessary, and contrary to the public interest to delay a final regulation until a public notice and comment process has been completed. For the same reasons, under the Civil Service Reform Act's parallel rulemaking provision, 5 U.S.C. 1103(b)(3), OPM is waiving general notice of proposed rulemaking because the interim final rule is temporary in nature and necessary to be implemented expeditiously as a result of an emergency. OPM will promulgate a final rule as soon as is practical after receiving public comments on the interim final rule. The conclusion of a public notice and comment period before the rule is finalized would be impracticable because it would impede due and timely execution of OPM's functions:

This rule will facilitate the purchase of FEHB by entitled tribes or tribal organizations carrying out programs under the TCSA that became entitled to purchase FEHB on December 27, 2020, pursuant to the enactment of Public Law 116–260. OPM, as administrator of the FEHB Program and Tribal FEHB Program, has reached out to the U.S. Department of Interior's Bureau of Indian Education to identify entitled tribally controlled schools that may apply for the FEHB Program. Outreach included identifying the entitled tribally controlled schools to communicate with them about tribal employees' eligibility, enrollment, and key dates for enrolling in FEHB; issuing a Dear Tribal Leader Letter to announce an OPM wide consultation with Tribal Leaders in accordance with the Presidential Memorandum on Tribal Consultation³ and conducting an OPM wide consultation with Tribal Leaders to improve the ways OPM can partner with

Tribal governments and provide services to tribal members and employees on April 16, 2021; issuing a separate letter to tribally controlled school principals about their entitlement to purchase FEHB for their tribal employees; and working with the paymaster to expedite processing of the newly entitled tribally controlled schools.

To the extent that a public notice and comment process would furnish general public information about the entitlement of tribes or tribal organizations carrying out programs under the TCSA and the conditions for coverage, rights, and benefits under the FEHB Program for employees of tribal employers, it is unnecessary in light of OPM's outreach to Tribal Leaders and tribally controlled schools operated by tribes and tribal organizations. Four eligible tribally controlled schools elected to begin purchasing FEHB coverage for their tribal employees on May 1, 2021 with an insurance coverage effective date of May 1, 2021. As of July 2021, 7 tribally controlled schools have enrolled in the FEHB Program.

Although OPM has engaged in these outreach efforts, given the law's effective date of December 27, 2020, there is an immediate need for this interim final rule in order to establish and regulate relations between tribal employees and their employers, and between tribal employers and OPM, and to ensure that proper processes for purchase of FEHB coverage by tribally controlled schools and enrollment of tribal employees are followed.

The expeditious implementation of these rules is necessary to support the administration of the purchase of FEHB coverage by TCSA grant schools and enrollment of their tribal employees. In addition, implementation of these rules will serve to protect the rights of newly eligible tribal employees by placing TCSA grant schools and tribal employees on immediate notice that such processes have been implemented to eliminate any doubt that might exist regarding the immediate ability of tribally controlled schools to purchase FEHB covered for their tribal employees and for tribal employees to enroll. Failure to expeditiously implement these rules could lead to confusion and administrative challenges due to a lack of awareness about the manner in which this new coverage may be purchased and tribal employees may enroll, as well as an unnecessary delay in providing healthcare coverage.

On December 28, 2016, OPM promulgated a final rule, 81 FR 95397, that established how FEHB enrollment under the Tribal FEHB Program is

administered, including eligibility; tribal employer and tribal employee contribution to premiums; the process by which tribal employers will access the program; the process by which tribal employees will elect coverage, and circumstances for termination and cancellation of enrollment; tribal employers responsibilities such as communicating notice of termination of enrollment, and accompanying rights and obligations, to their tribal employees. This interim final rule includes technical amendments to clarify that newly entitled TCSA grant schools are now tribal employers, and tribal employees of those schools are subject to the regulations in subpart N in Part 890, setting forth the conditions for coverage, rights, and benefits under the FEHB Program for employees of tribal employers.

This interim final rule is urgently needed to establish that tribally controlled schools are newly subject to the same regulations as existing tribal employers and to assist them in understanding the requirements of the Tribal FEHB Program. The interim final rule includes TCSA grant schools as tribal employers who must follow the same processes as other tribal employers. For example, they must provide certification and documentation demonstrating that the tribal employer is entitled to purchase FEHB as an Indian tribe or tribal organization carrying out at least one program under Tribally Controlled Schools Act of 1988. They are also subject to the regulations, including, but not limited to, the following: election and agreement to purchase FEHB; current deposit of premium payments and collection of the administrative fee; acknowledging that participation in FEHB makes the tribal employer subject to Federal Government audit with respect to such participation; and *administering the program in accordance with the subpart N*.

For these reasons, OPM has determined that the public notice and participation that the APA ordinarily requires would, in this case, be impracticable, unnecessary, and contrary to the public interest and that good cause exists for waiving proposed rulemaking and delaying its solicitation of comments from the public until after it issues an interim final rule. OPM will promulgate a final rule as soon as practical after receiving comments on the interim final rule.

Regulatory Impact Analysis

Executive Orders 12866 and 13563 direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is

³Memorandum on Tribal Consultation and Strengthening Nation-to-Nation Relationships, January 26, 2021, at <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/26/memorandum-on-tribal-consultation-and-strengthening-nation-to-nation-relationships/>.

necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distribute impacts, and equity). This rule is a significant regulatory action under E.O. 12866. As of July 2021, 7 tribally controlled schools have enrolled in the FEHB Program. Currently, there are an estimated 4,328 newly eligible employees of 297 grant schools and 205 eligible tribal employees at 638 contract schools.

Need for Regulatory Action

The FY21 CAA amended section 409 of the IHCA, codified at 25 U.S.C. 1647b, and expanded entitlement to tribes and tribal organizations carrying out programs under the TCSA to purchase coverage, rights and benefits under the FEHB Program for their tribal employees. As the administrator of the FEHB Program, OPM has extended eligibility to tribal employees of TCSA grant schools that have purchased FEHB coverage within the meaning of section 409 as amended. Issuance of Federal regulations without delay is necessary to apply the existing rules that govern the relationship between OPM and tribal employers, and between the tribal employers and their tribal employees who have already elected to enroll in FEHB. Therefore, OPM has good cause to issue interim final rules that will protect the interests of all stakeholders, memorialize processes and procedures, and provide transparency.

Currently, there are an estimated 4,328 newly eligible employees of TCSA grant schools and 205 eligible tribal employees at three "638 contract schools." Of these, 125 are tribally controlled schools where FEHB was previously not available, and 3 are other schools for which FEHB eligibility has previously been expanded.

At these affected schools, administrators will potentially take steps to update their health insurance offerings in line with expanded FEHB eligibility. This may include familiarization with FEHB policies, planning, enrolling schools, and providing information to staff on plan options. To the extent that this results in effort above and beyond normal effort associated with administering the health insurance selection process, this will generate costs for these schools. However, OPM lacks data to estimate the extent to which this rule will generate such costs.

This rule may affect expenses paid by tribal employers toward health insurance premiums for employees. Under 5 CFR 890.1413(b), tribal employers are required to contribute to

the premium for tribal employees at least the same as the Federal government does for its employees and may contribute more, up to 100 percent of the premium costs. Under 5 U.S.C. 8906, the Federal government contribution is statutorily defined as the lesser of 72 percent of the weighted average of all premiums or 75 percent of the plan premium. The Senate Report⁴ mentioned previously suggests that some tribal employers currently pay a substantial fraction of health insurance premiums, and that access to FEHB will appreciably reduce premiums. To the extent that this is the case, there will be a reduction in premium payments paid by tribal employers. We lack data to estimate the magnitude of these effects since they depend upon the number of enrollees who shift health insurance decisions as a result of the rule, the characteristics of the newly chosen health plans, and the portion of the premium paid by the employer.

In addition, tribal employers are responsible for the costs associated with administering the Tribal FEHB Program. The administrative fee covers costs for the paymaster to process tribal employee FEHB enrollments and collect and remit premiums. It also covers costs associated with dedicated OPM staff who process new tribe applications; oversee the paymaster; answer FEHB Program questions; and issue FEHB Program guidance through Tribal Benefits Administration Letters (TBALs) released and distributed to tribal employers. For fiscal year 2021, the administrative fee is \$5.63 per enrollee per month.

There is an immediate need for affordable health insurance for tribally controlled schools. According to a 2019 Senate Report,⁵ many Bureau of Indian Education (BIE) grant schools face challenges covering the cost of benefits for their employees because they do not have access to lower-cost options through the FEHB Program. Another urgent concern is that American Indian/Alaska Natives (AI/AN) experience health disparities, and, according to the Centers for Disease Control and Prevention (CDC), AI/AN have experienced disproportionate rates of infection and mortality during the COVID-19 pandemic.

Furthermore, according to the NCAI and the National Indian Health Board, many BIE grant schools utilize a portion of their educational services funding to

pay for health insurance and other benefits, which reduces financial resources for textbooks, teacher's aides, and extracurricular programs.⁶ Access to affordable health insurance could also reduce the financial burden on tribally controlled schools such that resources can be redirected for the benefit of students. Another benefit is that TCSA grant schools are provided with equal opportunity to enroll in the FEHB Program.

Ultimately, tribal schools assess the cost of participating in the FEHB Program and decide if it provides net benefits to their schools. For those tribally controlled schools that choose to participate it can be assumed that the benefits outweigh the costs of participation, and the Senate Report referenced above suggests that this may be the case for many affected schools. As noted above, we lack data to estimate the magnitude of these effects, and we seek public comment on data or methods to estimate these impacts.

Effects on Tribal Employees

There are an estimated 4,328 newly eligible employees at tribally controlled schools. As discussed above, this rule may result in tribal employers updating coverage options for employees to include FEHB plans. To the extent that this is the case, these employees may update their health insurance choices. This may result in some expended effort by affected employees, although the extent to which individuals will engage in effort above and beyond the baseline effort associated with health plan selection is unclear. The Senate Report referenced above suggests that this rule may result in appreciable differences in plan offerings and selections, although we lack data to estimate the potential impact.

To the extent that individuals adjust their health insurance choices, they may experience benefits. While the exact benefits of health insurance are difficult to quantify for tribal employees of tribally controlled schools, evidence supports that extending access to FEHB coverage for newly eligible individuals could have positive benefits. For example, Cecelia Firethunder, President of the Oglala Lakota Nation Education Coalition (OLNEC), provided testimony at a legislative hearing on H.R. 895, the Tribal School Federal Insurance Parity Act, suggesting that access to FEHB coverage may allow access to lower cost insurance options for their employees.⁷

⁴ *Id.*

⁵ See U.S. Senate. *To Allow Tribal Grant Schools to Participate in the Federal Employee Health Benefits Program* (S. Rep. No. 116-54). Available at <https://www.govinfo.gov/content/pkg/CRPT-116s rpt54/html/CRPT-116s rpt54.htm>.

⁶ *Id.*

⁷ See Written Testimony of Cecelia Firethunder, President of the Oglala Lakota Nation Education Coalition. *House Indigenous Peoples of the United*

This may, in turn, increase utilization of medical services for these individuals, resulting in net benefits to society to the extent that they provide benefits net of the costs of delivering these medical services. Although this increased utilization would represent a cost, it may result in a net benefit depending on the extent to which it improves health outcomes. OPM lacks data to estimate these impacts, and we request comment on data or methods to estimate potential impacts.

Access to FEHB for more tribal employees may help to reduce health disparities. According to a Kaiser Family Foundation report published in 2017, among nonelderly adults, AI/AN are more likely than other adults to report being in fair or poor health, being overweight or obese, and having diabetes.⁸ In addition, suicide disproportionately affects AI/AN, and in a CDC study, AI/AN decedents had lower odds than did White decedents of having received a mental health diagnosis or mental health treatment.⁹

Recently, health disparities have been highlighted for AI/AN, who have experienced disproportionate rates of infection and mortality during the COVID-19 pandemic.¹⁰ For persons aged 20–29 years, 30–39 years, and 40–49 years, the COVID-19 mortality rates among AI/AN were 10.5, 11.6, and 8.2 times, respectively, those among White persons.¹⁰ Increasing access to affordable healthcare is a way to improve access to medical and mental health services and may mitigate inequities. This rule may mitigate health inequities to the extent that it increases access to medical care.

Effects on Other Parties

As described above, one expected impact of this rule is that affected tribal employees will gain access to health insurance plans with lower health insurance premiums. A reduction in those premiums reflects transfers between various parties involved in

States Subcommittee Legislative Hearing on H.R. 895, the Tribal School Federal Insurance Parity Act (July 16, 2019), available at <https://www.congress.gov/116/meeting/house/109791/witnesses/HHRG-116-II24-Wstate-FirethunderC-20190716.pdf>.

⁸ See Kaiser Family Foundation, *Medicaid and American Indians and Alaska Natives*, September 7, 2017, <https://www.kff.org/medicaid/issue-brief/medicaid-and-american-indians-and-alaska-natives/>.

⁹ See “Suicides Among American Indian/Alaska Natives—National Violent Death Reporting System, 18 States, 2003–2014.” *Morbidity and Mortality Weekly Reports*, 67(8). March 2, 2018. Centers for Disease Control and Prevention. Available at <https://www.cdc.gov/mmwr/volumes/67/wr/pdfs/mm6708a1-H.pdf>.

¹⁰ *Id.*

these transactions. The clearest effect is a transfer toward parties paying for health benefits absent the expansion of FEHB benefits, which largely include tribal employers and employees. This transfer is most likely to come initially from reductions in payments to health insurance providers or from offsetting increases in FEHB health insurance premiums. We expect that, due to medical loss ratio¹³ regulations, premiums largely reflect medical costs experienced by those insured by the plan. As a result, we expect that the rule will largely initially result in a transfer from those paying FEHB premiums (including enrollees and the Federal government) in the baseline to entities who experience premium reductions under this rule. As described above, we expect these effects to be quite small. However, we lack data to estimate the magnitude of these effects, and request public comment on data or methods to estimate any potential impacts.

Alternative Regulatory Approaches

OPM is unaware of feasible alternatives to this rule, as this regulation aligns FEHB eligibility with the FY21 CAA, which amended section 409 of the IHCA. Currently, OPM regulations do not include FEHB eligibility for Indian tribes or tribal organizations carrying out programs under the TCSA, and this rule expands eligibility along these lines. We request public comment on alternative approaches to this rule which would generate net benefits for the public.

Regulatory Flexibility Act

I certify that this regulation will not have a significant economic impact on a substantial number of small entities.

Federalism

We have examined this rule in accordance with Executive Order 13132, Federalism, and have determined that this rule will not have any negative impact on the rights, roles and responsibilities of State, local, or Tribal governments.

Civil Justice Reform

This regulation meets the applicable standard set forth in Executive Order 12988.

Unfunded Mandates Reform Act of 1995

This rule will not result in the expenditure by State, local or Tribal governments of more than \$100 million annually. Thus, no written assessment of unfunded mandates is required.

Congressional Review Act

Subtitle E of the Small Business Regulatory Enforcement Fairness Act of 1996 (also known as the Congressional Review Act) (5 U.S.C. 801 *et seq.*) requires rules (as defined in 5 U.S.C. 804) to be submitted to Congress before taking effect. OPM will submit to Congress and the Comptroller General of the United States a report regarding the issuance of this action before its effective date, as required by 5 U.S.C. 801. OMB's Office of Information and Regulatory Affairs has determined that this is not a “major rule” as defined by the Congressional Review Act (5 U.S.C. 804(2)).

Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35)

Notwithstanding any other provision of 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 of 1995 (44 U.S.C. 3501 *et seq.*) (PRA), unless that collection of information displays a currently valid Office of Management and Budget (OMB) Control Number.

This rule involves an OMB approved collection of information subject to the PRA for the FEHB Program, OMB No. 3206–0160, Health Benefits Election Form. The public reporting burden for this collection is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The total burden hour estimate for this form is 9,000 hours. The systems of record notice for this collection is: OPM/Central–23, “FEHB Program Enrollment Records,” available at <https://www.federalregister.gov/d/2021-01259>.

List of Subjects in 5 CFR Part 890

Administrative practice and procedure, Government employees, Health facilities, Health insurance, Health professions, Hostages, Indians, Iraq, Kuwait, Lebanon, Military personnel, Reporting and recordkeeping requirements, Retirement.

Office of Personnel Management.

Alexys Stanley,

Regulatory Affairs Analyst.

Accordingly, OPM amends title 5, Code of Federal Regulations part 890 as follows:

PART 890—FEDERAL EMPLOYEES HEALTH BENEFITS PROGRAM

■ 1. The authority citation for part 890 is revised to read as follows:

Authority: 5 U.S.C. 8913; Sec. 890.102 also issued under sections 11202(f), 11232(e), and 11246 (b) of Pub. L. 105–33, 111 Stat. 251; Sec. 890.111 also issued under section 1622(b) of Pub. L. 104–106, 110 Stat. 521 (36 U.S.C. 5522); Sec. 890.112 also issued under section 1 of Pub. L. 110–279, 122 Stat. 2604 (2 U.S.C. 2051); Sec. 890.113 also issued under section 1110 of Pub. L. 116–92, 133 Stat. 1198 (5 U.S.C. 8702 note); Sec. 890.301 also issued under section 311 of Pub. L. 111–3, 123 Stat. 64 (26 U.S.C. 9801); Sec. 890.302(b) also issued under section 1001 of Pub. L. 111–148, 124 Stat. 119, as amended by Pub. L. 111–152, 124 Stat. 1029 (42 U.S.C. 300gg–14); Sec. 890.803 also issued under 50 U.S.C. 3516 (formerly 50 U.S.C. 403p) and 22 U.S.C. 4069c and 4069c–1; subpart L also issued under section 599C of Pub. L. 101–513, 104 Stat. 2064 (5 U.S.C. 5561 note), as amended; and subpart M also issued under section 721 of Pub. L. 105–261 (10 U.S.C. 1108), 112 Stat. 2061; 25 U.S.C. 1647b.

Subpart N—Federal Employees Health Benefits for Employees of Certain Indian Tribal Employers

■ 2. Amend § 890.1402 in paragraph (a) by revising the definitions of “billing unit,” “paymaster,” and “tribal employer” and adding a definition for “tribally controlled schools” in alphabetical order to read as follows:

§ 890.1402 Definitions and deemed references.

(a) * * *

Billing unit is a subdivision of the tribal employer’s workforce that aligns tribal employees for purposes of administering FEHB enrollment and collection of payment. A billing unit may be either governmental or commercial or a combination of both. So long as a tribal employer purchases FEHB for at least one billing unit that is an Indian Tribe or tribal organization carrying out at least one program under the Indian Self-Determination and Education Assistance Act (ISDEAA) or Tribally Controlled Schools Act of 1988 (TCSA), or an urban Indian organization carrying out at least one program under title V of the Indian Health Care Improvement Act (IHCIA), the tribal employer may purchase FEHB for other billing units without regard to its programs.

* * * * *

Paymaster is the entity or entities designated by OPM as responsible for receiving FEHB premiums from the tribal employer, forwarding premiums to the Employees Health Benefits Fund,

and maintaining enrollment records for all participating tribal employers.

* * * * *

Tribal employer is an Indian tribe or tribal organization (as those terms are defined in 25 U.S.C. chapter 18, “Indian Health Care”) carrying out at least one program under the Indian Self-Determination and Education Assistance Act or the TCSA (25 U.S.C. 2501 *et seq.*); or an urban Indian organization (as that term is defined in 25 U.S.C. chapter 18, “Indian Health Care”) carrying out at least one program under title V of the Indian Health Care Improvement Act. The tribe, tribal organization, or urban Indian organization is a tribal employer provided that it certifies entitlement to purchase FEHB according to the process described in subpart N. FEHB benefits that tribal employers are entitled to purchase for their tribal employees are set forth in this subpart and to the extent there exists any ambiguity or inconsistency between this subpart and other subparts of this part, the terms of this subpart will govern FEHB benefits available for purchase by tribal employers.

Tribally controlled school is a school (as the term is defined in section 2511 of 25 U.S.C. chapter 27, “Tribally Controlled School Grants”) that is operated by an Indian tribe or a tribal organization, enrolling students in kindergarten through grade 12, including a preschool; is not a local educational agency; and is not directly administered by the Bureau of Indian Affairs.

* * * * *

■ 3. Amend § 890.1404 by revising paragraphs (a)(1) and (2), (b)(5) and (9), and (e)(1) to read as follows:

§ 890.1404 Tribal employer election and agreement to purchase FEHB.

(a) * * *

(1) A tribal employer must purchase FEHB for at least one billing unit carrying out programs or activities under the tribal employer’s ISDEAA or IHCIA contract or TCSA grant.

(2) For so long as a tribal employer continues to purchase FEHB for at least one billing unit carrying out programs or activities under a tribal employer’s ISDEAA or IHCIA contract or TCSA grant, the tribal employer may purchase FEHB for one or more billing units without regard to whether they are carrying out programs or activities under the tribal employer’s ISDEAA or IHCIA contract or TCSA grant.

(b) * * *

(5) A certification and documentation demonstrating that the tribal employer

is entitled to purchase FEHB as either: An Indian tribe or tribal organization carrying out at least one program under the Indian Self-Determination and Education Assistance Act or Tribally Controlled Schools Act of 1988; or an urban Indian organization carrying out at least one program under Title V of the Indian Health Care Improvement Act;

* * * * *

(9) Agreement to provide notice to OPM in the event that the tribal employer is no longer carrying out at least one program under the ISDEAA or title V of IHCIA or the Tribally Controlled Schools Act of 1988; and

* * * * *

(e) * * *

(1) An Indian tribe or tribal organization carrying out at least one program under the Indian Self-Determination and Education Assistance Act or under the Tribally Controlled Schools Act of 1988; or

* * * * *

[FR Doc. 2021–19042 Filed 9–2–21; 8:45 am]

BILLING CODE 6325–64–P

DEPARTMENT OF AGRICULTURE

Agricultural Marketing Service

7 CFR Part 800

[Doc. No. AMS–FGIS–20–0001]

RIN 0581–AD94

Fees for Supervision of Official Inspection and Weighing Services Performed by Delegated States and Designated Agencies, Miscellaneous Fees for Other Services, and Removal of Specific Fee References

AGENCY: Agricultural Marketing Service, Department of Agriculture (USDA).

ACTION: Final rule.

SUMMARY: This final rule revises regulations under authority of the United States Grain Standards Act (USGSA) by implementing a standardized formula model for calculating Federal Grain Inspection Service (FGIS) supervision fees. The revision enables FGIS to adjust supervision fees annually in order to maintain an appropriate operating reserve as required by the USGSA. As with other Agricultural Marketing Service (AMS) fee-based programs, AMS will publish annual FGIS fee updates in the **Federal Register** and post updated fee schedules on its website. The revision also eliminates or revises certain registration and duplication fees charged by FGIS.

DATES:

Effective date: October 4, 2021.
Applicability date: October 1, 2021.

FOR FURTHER INFORMATION CONTACT:

Denise Ruggles, FGIS Executive Program Analyst, AMS, USDA; Telephone: (816) 702-3897; Email: *Denise.M.Ruggles@usda.gov*.

SUPPLEMENTARY INFORMATION: The USGSA (7 U.S.C. 71 *et seq.*) authorizes FGIS, a program area within AMS, to supervise grain inspection and weighing services provided by official agencies and to charge and collect reasonable fees to cover costs of such supervision. These fees are charged by official agencies to their customers (grain industry) as part of the overall fee charged for inspection and weighing services. Supervision fees collected by FGIS cover, as nearly as practicable, all operating and administrative costs associated with supervising official agencies.

FGIS regularly reviews user-fees to determine whether fees are adequate and would likely maintain appropriate

operating reserve funds. On July 1, 2016, following such a review (81 FR 41790; June 28, 2016), FGIS suspended the assessment of fees for supervision of official inspection and weighing services performed by delegated States and designated agencies to reduce the operating reserve. This suspension ended on December 31, 2020. FGIS’s operating reserve at that time was adequate to cover six months’ operating expenses as required, but FGIS resumed the assessment of tonnage fees to cover operating costs of supervision.

FGIS is implementing the use of a standardized formula model to determine if user-fee adjustments are necessary to recover costs associated with administering the official agency supervision program. This action is intended to assure FGIS maintains the financial stability necessary to provide inspection and weighing services to the grain industry, which facilitates the sound and orderly marketing of grain in domestic and export markets.

AMS invited comments on the proposed rule identifying changes to the

methodology for establishing FGIS user fees for supervision of official inspection and weighing services performed by delegated agencies and the removal of specific references to user fees (86 FR 12119; March 2, 2021). AMS received two comments in response to the proposed rule that were supportive. Comments indicated that this approach would moderate fee changes and provide for predictable time intervals.

Fees for supervising official agencies were last revised in 2005 (70 FR 50149; August 26, 2005). The fee schedule at 7 CFR 800.71(a)(2) (Schedule B) has not been changed since then. Currently, the FGIS fee for supervision of official agencies is set at \$0.011 per metric ton of domestic U.S. grain shipments inspected or weighed, or both, including land carrier shipments to Canada or Mexico.

Financial data for the supervision of official agencies program for fiscal years (FY) 2016 through 2020 is reviewed in Table 1.

TABLE 1—SUPERVISION OF OFFICIAL AGENCIES FINANCIAL ANALYSIS
 [Millions of dollars]*

	FY 16	FY 17	FY 18	FY 19	FY 20
Revenue	\$1.91	\$0.00	\$0.00	\$0.00	\$0.00
Obligations	1.43	1.78	1.88	1.55	1.81
Annual Surplus or (Deficit)	0.47	(1.78)	(1.88)	(1.55)	(1.81)
Operating Reserve—running balance	8.73	6.95	5.08	3.53	1.73

* Figures may not sum due to rounding and adjustments of prior year obligations.

As illustrated by Table 1, though revenues have been suspended since July 2016, FGIS obligations have generally increased due to inflation and cost of living adjustments. The exception was in FY19, when accounts of the former Grain Inspection, Packers and Stockyards Administration (GIPSA), which included FGIS, were merged with AMS, along with the close-out of obligations. As explained above, the current fee structure generated a recurring annual operating surplus for several years, resulting in a decision to suspend the collection of the fees in 2016 to gradually reduce operating reserves to meet AMS’s target of maintaining funds to cover between three to six months’ expenses. Monthly costs to operate the supervision of official agencies in FY 2020 were \$151,000. Thus, AMS would consider an operating reserve between \$0.45 million and \$0.91 million (3 and 6 times the monthly operating cost, respectively) at the end of FY 2020 to be appropriate. At the end of FY 2020, the operating reserve balance was \$1.73

million, enough to cover 11½ months of expenses.

To prevent accumulating a reserve balance beyond the targeted amount (3 to 6 times the monthly operating cost), AMS is adopting a standardized formula for calculating user fees for each calendar year (CY). AMS expects that reducing fees in this manner will gradually reduce the reserve fund balance, while allowing FGIS to continue making strategic operational expenditures to meet industry expectations and achieve United States Department of Agriculture (USDA) goals.

Calculations

AMS will calculate the supervision tonnage fee using prior year’s actual costs and average yearly tonnage of domestic U.S. grain shipments inspected or weighed, or both, including land carrier shipments to Canada and Mexico during the previous 5 fiscal years.

AMS adds new § 800.71(b)(2)(i) and (ii) to include the following formulas for

calculating fee rates for CY 2021 and succeeding years:

Operating Reserve Adjustment. FGIS will divide the total prior year supervision costs by 2 to determine the 6-months operating reserve goal. From that value, FGIS will subtract the FY operating reserve ending balance to obtain the operating reserve adjustment for determining the supervision tonnage fee.

The operating reserve adjustment for calendar year 2021 is –\$821,925. The calculation, using FY 2020 supervision costs of \$1,807,633, is: \$1,807,633 divided by 2, which equals \$903,817. Subtract the FY 2020 operating reserve ending balance of \$1,725,742 to equal –\$821,925.

Supervision tonnage fee. FGIS will add total prior-year supervision costs and the operating reserve adjustment, then divide the result by the average tonnage for the previous 5-years. If the calculated fee is zero or a negative value, FGIS will suspend collection of supervision tonnage fees for the next calendar year.

The supervision tonnage fee for calendar year 2021 is \$0.004 per ton. The calculation, based on FY 2020 supervision costs of \$1,807,633, is \$1,807,633 plus the operating reserve adjustment of –\$821,925, which equals \$985,670. Divide this adjustment rate by the 5-year average tonnage of 232,398,847, to derive \$0.004 per ton.

Fiscal year	Metric tons
2016	238,996,932
2017	244,355,906
2018	234,298,085
2019	206,693,881
2020	237,649,430
5-year Rolling Average ...	232,398,847

In addition to implementing a new formula for calculating supervision tonnage fees, this final rule also revises:

- Section 801.71(a)(2)—Schedule B—to remove the currently specified fee and to provide that annual supervision fees will be as published on the AMS website.
- The introductory text of § 801.71(b)—Annual review of fees—to convey that weighing and inspection fees, as well as supervision fees, will be recalculated annually.
- Section 801.71(b)(1)—to clarify that tonnage fees calculated in that section pertain only to FGIS inspection and weighing (Schedule A) fees.
- Section 801.71(b)—by redesignating paragraph (b)(2) as paragraph (b)(3) and adding a new paragraph (b)(2) that outlines supervision fee calculations, as described earlier.

Miscellaneous Fees for Other Services

In addition to the above changes related to supervision fees, AMS is implementing the following changes to other fee requirements in § 801.71(d).

This final rule removes the introductory text of § 801.71(d)(1)(i)—Registration certificates and renewals, and consolidates paragraphs (d)(1)(i)(A) and (B) of that section, which currently provide flat fees for registering business operations that buy, handle, weigh, or transport grain for sale in foreign commerce or for such businesses that are also in a control relationship with respect to a business that buys, handles, weighs, or transports grain for sale in interstate commerce. Currently, the registration fee for the former is \$135, and the registration fee for the latter is \$270. This final rule combines the two charges into one. AMS will calculate the export registration fee using the following formula and adjust the fees annually, as necessary.

Registration certificates and renewals. FGIS will multiply the § 800.71(a) Table 1 of Schedule A noncontract hourly rate

by a quantity of five. The fee covers FGIS personnel costs to review applications, fee publication expenses, and administrative expenses. The Schedule A non-contract hourly rate is currently \$63. Thus, the consolidated certificate registration and application fee for 2021 will be \$63 multiplied by a quantity of 5, or \$315. AMS will publish the annual rate in the **Federal Register** and on the AMS website.

This final rule removes § 800.71(d)(1)(ii), which provides charges for providing extra copies of registration certificates, as certificates are now provided electronically for printing by the applicant.

This final rule revises § 800.71(d)(2) to remove the provision of a flat fee for applications to amend an official agency designation. FGIS will instead calculate the rate using the following formula, and the rate will be adjusted annually and published on the AMS website.

Designation amendments. FGIS will calculate the rate using the **Federal Register** publication rate for three columns, plus one hour of noncontract hourly rate from § 800.71(a) Table 1 of Schedule A. The fee covers FGIS personnel costs, administrative expenses, and **Federal Register** publication costs.

The current rate is \$75 per application; AMS calculates the fee will be \$540 for calendar year 2021 using current publication fees. AMS typically receives only one or two requests each year, so the overall cost to official agencies is not expected to be significant. AMS will review the cost to process and publish designation amendments and adjust the fees annually, as necessary.

Finally, this final rule removes § 800.71(d)(3), which provides a flat application fee for operating a scale testing organization. FGIS hasn't approved such an organization in the past 5 years. States that operate as scale testing organizations, in addition to FGIS, provide service in areas that are not in reasonably close proximity to FGIS duty stations. Scale operators pay far less in travel costs by obtaining services provided by their local State scale testing organizations on behalf of FGIS. Additionally, this increases FGIS efficiency by reducing staff travel and allowing staff to be deployment to other mission duties.

Executive Orders 12866 and 13563

Executive Orders 12866—Regulatory Planning and Review, and 13563—Improving Regulation and Regulatory Review, 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, distributive impacts, and equity). Executive Order 13563 emphasizes the importance of quantifying both costs and benefits of reducing costs, harmonizing rules, and promoting flexibility. This rule does not meet the criteria of a significant regulatory action under Executive Order 12866 as supplemented by Executive Order 13563. Therefore, the Office of Management and Budget (OMB) has not reviewed this rule under those orders.

AMS considered several alternatives to changes made by this rule, including reinstating the current fee or applying a standardized formula using one year of supervision tonnage versus the five-year supervision tonnage average.

Ultimately, AMS determined that the proposed approach of recalculating the fee each year using a standard formula based on a five-year supervision tonnage average would provide savings to the industry when the operating reserve balance exceeds FGIS's goal and would limit large fee increases following years where supervision tonnage volumes are significantly less. AMS expects changes made by this rule to benefit the grain industry by adjusting supervision fees as needed annually to reflect actual expenses related to grain inspections supervision and maintaining appropriate operating reserve balances. AMS does not expect the rule to provide any environmental, public health, or safety benefits. AMS has not identified any costs related to this action.

Executive Order 12988

This rule has been reviewed under Executive Order 12988—Civil Justice Reform. This rule is not intended to have retroactive effect. The USGSA provides in Sec. 87g that no State or subdivision thereof may require or impose any requirements or restrictions concerning the inspection, weighing, or description of grain under the Act. This rule does not preempt any State or local laws, regulations, or policies, unless they present an irreconcilable conflict with this rule. No administrative proceedings would be required before parties could file suit in court challenging provisions of this rule.

Executive Order 13175

This rule has been reviewed under E.O. 13175—Consultation and Coordination with Indian Tribal Governments, which requires agencies to consider whether their rulemaking actions would have tribal implications. AMS has determined that this rule is

unlikely to have substantial direct effects on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes.

Regulatory Flexibility Analysis

Pursuant to requirements set forth in the Regulatory Flexibility Act (RFA) (5 U.S.C. 601–602), AMS has considered the economic impact of this action on small entities. The purpose of the RFA is to fit regulatory actions to the scale of businesses subject to such actions in order that small businesses will not be unduly or disproportionately burdened.

This rule sets fees for three different FGIS functions: (1) Fees for FGIS Supervision, (2) fees for registration certificates and renewals for exporters of grain, and (3) fees for amending the designation of official agencies.

AMS has determined that this rule does not have a significant economic impact on a substantial number of small entities because most applicants (grain industry) that apply for these official services and are subjected to AMS supervision fees do not meet the requirements for small entities. This rule will affect entities engaged in shipping grain to and from points within the United States and exporting grain from the United States to Canada and Mexico. There are approximately 9,500 off-farm storage facilities in the United States that could receive grain services from delegated States or designated agencies. AMS estimates 25 percent of these users would be considered small businesses based on criteria established by the Small Business Administration (13 CFR 121.201) (SBA). SBA uses the North American Industry Classification System (NAICS) to categorize various industry businesses. SBA defines small grain retailers and warehouse and storage facilities, NAICS codes 424510 and 493130, respectively, as those whose annual receipts do not exceed \$30,000,000 or who have no more than 200 employees, respectively.

With respect to fees for supervision, these fees are a minor amount compared to the total value of grain shipments. Carrier types shipped by small entities are submitted samples and trucks with a standardized weight of 23.95 metric tons and railcars with a standardized weight of 99.79 metric tons. Supervision fees assessed on these carriers at the current published rate are \$0.26 per truck (2020 corn market-year value of \$2,700) and \$1.10 per railcar (2020 corn market-year value of \$12,600).

The registration certificate and renewal fee applies to persons engaged in the business of buying grain for sale in foreign commerce and in the business of handling, weighing, or transporting grain for sale in foreign commerce. Under provisions of the USGSA, grain exported from the United States must be officially inspected and weighed. Mandatory inspection and weighing services were provided by AMS and official agencies on a fee basis for 97 registered exporters in CY 2020. Eighty-three of the registered entities are owned and managed by multi-national corporations, large cooperatives, or public entities that do not meet the criteria for small entities established by the SBA. In 2020, approximately fourteen small exporters registered with FGIS. As explained, with the registration fees for 2021 calculated to be \$315, FGIS believes the change in registration fees would have a minor effect on the small number of small business that register with FGIS.

Finally, the designation amendment fee applies to an official agency requesting a modification to its designation within the five-year designation period. AMS has 42 designated States and agencies, and 13 of these designated agencies meet the criteria for small entities established by the SBA. As explained earlier, the designation amendment fee for 2021 is calculated to be \$540. FGIS believes the revised designation amendment fee would have a minor impact on small businesses, since it typically receives no more than two modification requests per year.

The adoption of standardized AMS user-fee rate calculations for 2021 and beyond would benefit all inspection applicants, regardless of size, as fees would more closely reflect the current cost of inspections, and the fee calculation process would be more transparent. Through its annual review, AMS would be able to monitor the financial status of the grain supervision program to determine whether further adjustments are necessary.

AMS has determined this rule would not have a significant economic impact on a substantial number of entities as defined under the RFA because fewer than half of the applicants for grain inspection services meet the definition of small entities.

Finally, USDA has not identified any relevant Federal rules that duplicate, overlap, or conflict with this rule.

Paperwork Reduction Act and E-Government Act

In compliance with the Paperwork Reduction Act of 1995 (44 U.S.C.

Chapter 35), the information collection and record keeping requirements for the program providing supervision of official agencies have previously been approved by OMB under control number 0580–0013. No additional reporting, record keeping, or other compliance requirements will be imposed as a result of this rule.

AMS is committed to complying with the E-Government Act (44 U.S.C. 3601 *et seq.*), to promote the use of the internet and other information technologies to provide increased opportunities for citizen access to Government information and services, and for other purposes.

List of Subjects in 7 CFR Part 800

Administrative practice and procedure, Grain.

For reasons set forth in the preamble, AMS amends 7 CFR part 800 as follows:

PART 800—GENERAL REGULATIONS

■ 1. The authority citation for part 800 continues to read as follows:

Authority: 7 U.S.C. 71–87k.

- 2. Amend § 800.71 by:
 - a. Revising paragraph (a)(2);
 - b. Revising paragraph (b) introductory text;
 - c. Revising the first sentence in paragraph (b)(1);
 - d. Redesignating paragraph (b)(2) as paragraph (b)(3);
 - e. Adding new paragraph (b)(2); and
 - f. Revising paragraph (d).

The revisions and addition read as follows:

§ 800.71 Fees assessed by the Service.

(a) * * *

(2) *Schedule B—Fees for Supervision of Official Inspection and Weighing Services Performed by Delegated States and Designated Agencies in the United States.* The Service will assess a supervision fee per metric ton of domestic U.S. grain shipments inspected or weighed, or both, including land carrier shipments to Canada and Mexico. For each calendar year, the Service will calculate Schedule B fees as defined in paragraph (b) of this section. The Service will publish a notice in the **Federal Register** and post Schedule B fees on the Agency's public website.

(b) *Annual review of fees.* For each calendar year, starting with 2021, the Service will review fees included in this section and publish fees each year according to the following:

(1) *Tonnage fees.* Tonnage fees in Schedule A in paragraph (a)(1) of this section will consist of the national tonnage fee and local tonnage fees and

the Service will calculate and round the fee to the nearest \$0.001 per metric ton.

* * *

* * * * *

(2) *Supervision fee.* Supervision fee in Schedule B in paragraph (a)(2) of this section will be set according to the following:

(i) *Operating reserve adjustment.* The operating reserve adjustment is the supervision program costs for the previous fiscal year divided by 2 less the end of previous fiscal year operating reserve balance.

(ii) *Supervision tonnage fee.* The supervision tonnage fee is the sum of the prior fiscal year program costs plus operating reserve adjustment divided by the average yearly tons of domestic U.S. grain shipments inspected or weighed, or both, including land carrier shipments to Canada and Mexico during the previous 5 fiscal years. If the calculated value is zero or a negative value, the Service will suspend the collection of supervision tonnage fees for one calendar year.

* * * * *

(d) *Miscellaneous fees for other services.* For each calendar year, the Service will review fees included in this section and publish fees in the **Federal Register** and on the Agency's public website.

(1) *Registration certificates and renewals.* The fee for registration certificates and renewals will be published annually in the **Federal Register** and on the Agency's public website, and the Service will calculate the fee using the noncontract hourly rate published pursuant to 7 CFR 800.71(a)(1) multiplied by five. If you operate a business that buys, handles, weighs, or transports grain for sale in foreign commerce, or you are also in a control relationship with respect to a business that buys, handles, weighs, or transports grain for sale in interstate commerce, you must complete an application and pay the published fee.

(2) *Designation amendments.* The fee for amending designations will be published annually in the **Federal Register** and on the Agency's public website. The Service will calculate the fee using the cost of publication plus one hour at the noncontract hourly rate. If you submit an application to amend a designation, you must pay the published fee.

Erin Morris,

Associate Administrator, Agricultural Marketing Service.

[FR Doc. 2021-19034 Filed 9-2-21; 8:45 am]

BILLING CODE P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0718; Project Identifier MCAI-2020-00601-R; Amendment 39-21708; AD 2021-18-07]

RIN 2120-AA64

Airworthiness Directives; Leonardo S.p.a. Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Leonardo S.p.a. Model AB412 and AB412 EP helicopters. This AD was prompted by the results of a fatigue review. This AD requires establishing a life limit for certain part-numbered high landing gear aft crosstubes. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD becomes effective September 20, 2021.

The FAA must receive comments on this AD by October 18, 2021.

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 service information identified in this final rule, contact Leonardo S.p.A. Helicopters, Emanuele Bufano, Head of Airworthiness, Viale G.Agusta 520, 21017 C.Costa di Samarate (Va) Italy; telephone +39-0331-225074; fax +39-0331-229046; or at <https://customerportal.leonardocompany.com/en-US/>. You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

Examining the AD Docket

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

searching for and locating Docket No. FAA-2021-0718; 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 European Aviation Safety Agency (now European Union Aviation Safety Agency) (EASA) AD, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Kenneth Cook, Airframe/Structural/Mechanical Engineer, Certification Section, Fort Worth ACO Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5475; email kenneth.a.cook@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2017-0097, dated June 7, 2017 (EASA AD 2017-0097), to correct an unsafe condition for AgustaWestland S.p.A. (formerly Agusta S.p.A., Costruzioni Aeronautiche Giovanni Agusta) Model AB412 and AB412EP helicopters with high skid landing gear assemblies part number (P/N) 412-050-012-(XXX), 412-050-014-(XXX), 412-050-050-(XXX), or 412-050-059-(XXX), where 'XXX' represents any 3-digit combination, installed. EASA advises of the determination that a life limit must be introduced for certain high skid landing gear aft crosstubes following a fatigue review. Failure to comply with the new life limit could lead to the failure of the part, possibly resulting in damage of the helicopter and injuries to passengers.

Accordingly, EASA AD 2017-0097 requires implementation of the new life limit and revision of the Aircraft Maintenance Program (AMP).

FAA's Determination

These helicopters have been approved by EASA and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with the European Union, EASA has notified the FAA about the unsafe condition described in its AD. The FAA is issuing this AD after evaluating all known relevant information and determining that the unsafe condition described previously is likely to exist or develop on other helicopters of these same type designs.

Related Service Information

The FAA reviewed Leonardo Helicopters Emergency Alert Service Bulletin No. 412-151, Revision A, dated June 5, 2017. This service information specifies procedures for establishing a

retirement life (life limit) of 10,000 landings for high landing gear aft crosstube P/Ns 412-050-010-101, 412-050-010-107, 412-050-010-111, and 412-050-045-107. This service information also specifies procedures for inspecting a high landing gear aft crosstube that has already exceeded the new retirement life to defer the initial retirement life replacement.

AD Requirements

For high landing gear aft crosstube P/Ns 412-050-010-101, 412-050-010-107, 412-050-010-111, and 412-050-045-107, this AD requires determining the total number of landings. For purposes of this AD, a landing is counted anytime a helicopter lifts off into the air and then lands again regardless of the duration of the landing and regardless of whether the engine is shutdown. If the total number of landings cannot be determined, this AD requires multiplying the total hours time-in-service accumulated by the high landing gear aft crosstube by 4. If the high landing gear aft crosstube has accumulated or exceeded 10,000 total landings, this AD requires removing the high landing gear aft crosstube from service. This AD also requires creating a component history card or equivalent record to establish a life limit of 10,000 total landings, and thereafter, removing any high landing gear aft crosstube from service before accumulating 10,000 total landings.

Differences Between This AD and the EASA AD

EASA AD 2017-0097 allows deferring the first replacement of a high landing gear aft crosstube that has accumulated 9,900 or more total landings as of the effective date of its AD by passing certain inspections, whereas this AD does not allow that deferral. EASA AD 2017-0097 requires revising the AMP and allows revision of the AMP as terminating action of its AD, whereas this AD does not contain those actions.

Justification for Immediate Adoption 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.

There are no helicopters with these type certificates on the U.S. Registry. Accordingly, notice and opportunity for prior public comment are unnecessary, pursuant to 5 U.S.C. 553(b)(3)(B). In addition, for the foregoing reason(s), 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.

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-2021-0718; Project Identifier MCAI-2020-00601-R" 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 Kenneth Cook, Airframe/Structural/Mechanical Engineer, Certification Section, Fort Worth ACO Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5475; email kenneth.a.cook@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.

Regulatory Flexibility Act

The requirements of the Regulatory Flexibility Act (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 prior notice and comment, RFA analysis is not required.

Costs of Compliance

There are no costs of compliance with this AD because there are no helicopters with these type certificates on the U.S. Registry.

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, 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:

2021-18-07 Leonardo S.p.a.: Amendment 39-21708; Docket No. FAA-2021-0718; Project Identifier MCAI-2020-00601-R.

(a) Effective Date

This airworthiness directive (AD) is effective September 20, 2021.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Leonardo S.p.a. Model AB412 and AB412 EP helicopters, certificated in any category, with a high skid landing gear assembly part number (P/N) 412-050-012-(XXX), 412-050-014-(XXX), 412-050-050-(XXX), or 412-050-059-(XXX), where “(XXX)” represents any 3-digit combination, installed.

(d) Subject

Joint Aircraft Service Component (JASC) Code: 3200, Landing Gear System.

(e) Unsafe Condition

This AD was prompted by the results of a fatigue review. The FAA is issuing this AD to prevent parts from remaining in service beyond their fatigue life. The unsafe condition, if not addressed, could result in failure of a part and subsequent damage to the helicopter and injuries to occupants.

(f) Compliance

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

(g) Required Actions

For high landing gear aft crosstube P/Ns 412-050-010-101, 412-050-010-107, 412-050-010-111, and 412-050-045-107:

(1) Before further flight after the effective date of this AD, determine the total number of landings. For purposes of this AD, a landing is counted anytime a helicopter lifts off into the air and then lands again regardless of the duration of the landing and regardless of whether the engine is shutdown. If the total number of landings cannot be determined, multiply the total hours time-in-service accumulated by the high landing gear aft crosstube by 4. Remove any high landing gear aft crosstube from service that has accumulated or exceeded 10,000 total landings.

(2) Create a component history card or equivalent record to establish a life limit of 10,000 total landings.

(3) Thereafter, remove any high landing gear aft crosstube from service before accumulating 10,000 total landings.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, 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 local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (i)(1) of this AD. Information may be emailed to: 9-AVS-AIR-730-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.

(i) Related Information

(1) For more information about this AD, contact Kenneth Cook, Airframe/Structural/Mechanical Engineer, Certification Section, Fort Worth ACO Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5475; email kenneth.a.cook@faa.gov.

(2) The subject of this AD is addressed in European Aviation Safety Agency (now European Union Aviation Safety Agency) (EASA) AD 2017-0097, dated June 7, 2017. You may view the EASA AD at <https://www.regulations.gov> in Docket No. FAA-2021-0718.

(j) Material Incorporated by Reference

None.

Issued on August 24, 2021.

Gaetano A. Sciortino,

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

[FR Doc. 2021-19032 Filed 9-2-21; 8:45 am]

BILLING CODE 4910-13-P

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

29 CFR Part 1977

[Docket Number: OSHA-2021-0002]

RIN 1218-AD35

Discrimination Against Employees Exercising Rights Under the Williams-Steiger Occupational Safety and Health Act of 1970

AGENCY: Occupational Safety and Health Administration, Labor.

ACTION: Final interpretive rule.

SUMMARY: The Occupational Safety and Health Administration (OSHA) is amending one of the rules interpreting the anti-retaliation provision of the Occupational Safety and Health Act of 1970 (OSH Act or Act) to clarify that the test for showing a nexus between protected activity and adverse action is “but-for” causation.

DATES: This final interpretive rule is effective on September 3, 2021.

FOR FURTHER INFORMATION CONTACT: Rob Swick, Directorate of Whistleblower Protection Programs, Occupational Safety and Health Administration, U.S. Department of Labor; telephone: (202) 693-2199; email: OSHA.DWPP@dol.gov.

SUPPLEMENTARY INFORMATION: OSHA is revising the interpretive rule at 29 CFR 1977.6(b), which addresses causation under the anti-retaliation (colloquially “whistleblower”) provision of the OSH Act, section 11(c), 29 U.S.C. 660(c). For the reasons explained in the following sections, the agency is removing outdated language to clarify that the only means by which the Secretary of Labor (Secretary) may prove a causal connection between protected activity and adverse action under the OSH Act is to show that “but for” the protected activity the employee would not have suffered the adverse action.

I. Background

Congress enacted the OSH Act, to assure so far as possible every working man and woman in the Nation safe and healthful working conditions and to preserve our human resources. 29 U.S.C. 651(b). To achieve this goal, Congress authorized the Secretary, among other things, to set and enforce occupational safety and health standards. The Secretary’s assigned enforcement powers, including the power to inspect workplaces and issue citations and notifications of proposed penalties to employers who violate the standards developed under the OSH Act, have been delegated to OSHA. 29 U.S.C. 657(a), 658, 666; Secretary of Labor’s Order No. 08-2020 (85 FR 58393, September 18, 2020).

In addition, the Act affords employees and their representatives certain rights. For example, section 8(f)(1) of the Act provides employees and representatives of employees who believe that a violation of a safety or health standard that threatens physical harm exists or that an imminent danger exists with the right to request an inspection by giving notice to the Secretary or his authorized representative of such violation or danger. 29 U.S.C. 657(f)(1). Such employee complaints aid the agency in accomplishing the goal of assuring safe

and healthful working conditions by alerting the agency to potential hazards that may not have been otherwise discovered and, thus, allowing those hazards to be corrected.

Congress also included an anti-retaliation (colloquially “whistleblower”) provision in the Act to protect individual employees from retaliation for reporting safety deficiencies or participating in OSH Act proceedings. 29 U.S.C. 660(c)(1). This provision, which is included in section 11(c)(1), provides that no person may discharge or otherwise discriminate—in other words, take an adverse action—against any employee “because” such employee has filed any complaint or instituted or caused to be instituted any proceeding under or related to the Act, or has testified or was about to testify in any such proceeding, or because of the exercise by such employee on behalf of himself or herself or others of any right afforded by the Act. 29 U.S.C. 660(c)(1).

Section 11(c)(2) contains the remedies for any such retaliation. Specifically, section 11(c)(2) provides that if an employee believes that they have been discharged, or otherwise discriminated against, in violation of section 11(c)(1), such an employee may file a complaint with the Secretary. 29 U.S.C. 660(c)(2). The Secretary, upon receipt of such a complaint, “shall cause such investigation to be made as he deems appropriate,” and if upon investigation, the Secretary determines that section 11(c) has been violated, the Secretary shall bring suit in district court against any person who discharges or discriminates against any employee for the exercise of protected rights under the OSH Act. 29 U.S.C. 660(c)(2). Section 11(c)(2) also provides district courts with jurisdiction over such actions and empowers them for cause shown to “order all appropriate relief, including rehiring or reinstatement of the employee to his or her former position with back pay.” 29 U.S.C. 660(c)(2).

In 1973, OSHA issued rules implementing and interpreting section 11(c). 38 FR 2681 (Jan. 29, 1973). The rules were published in 29 CFR part 1977. Their purpose was to make available in one place interpretations of section 11(c) which guide the Secretary in carrying out the provision unless and until otherwise directed by authoritative decisions of the courts, or concluding, upon reexamination of an interpretation, that it is incorrect. 29 CFR 1977.2.

As noted above, section 11(c) protects employees from retaliation, *i.e.*, adverse action, for engaging in certain

delineated activities. See 29 CFR 1977.3 (listing activities protected by section 11(c)). Those activities are known as “protected activities.” However, as discussed in 29 CFR 1977.6(a), adverse actions taken by an employer may be predicated upon “nondiscriminatory grounds” and such actions would not necessarily violate section 11(c). Or, put another way, section 11(c) of the OSH Act does not prohibit an employer from discharging or disciplining an employee for engaging in “unprotected activities,” *i.e.*, discharge or discipline for “legitimate reasons” or “non-prohibited considerations.” See 29 CFR 1977.6(a).

Section 1977.6(b) recognizes that an employer’s adverse action against an employee may have more than one cause. For example, an employer’s termination of an employee may be motivated in part by the employee’s complaint about an unsafe workplace condition and in part by the employee’s poor work performance. As stated in section 1977.6(b), an employer’s mixed motivation for an adverse action does not necessarily invalidate an employee’s section 11(c) complaint. See 29 CFR 1977.6(b) (“[T]o establish a violation of section 11(c), [a]n employee’s engagement in protected activity need not be the sole consideration behind discharge or other adverse action.”).

Section 1977.6(b) provided two ways in which a causal connection between protected activity and adverse action could be established: (1) If protected activity was a substantial reason for the adverse action; or (2) if the adverse action would not have taken place “but for” engagement in protected activity. In support of this two-pronged test, the regulation cited two court of appeals decisions finding violations of the whistleblower provision of the Fair Labor Standards Act, 29 U.S.C. 215(a)(3), prohibiting discharge or other discrimination against an employee “because” such employee has filed a complaint under or related to that statute or engaged in related protected activities. *Mitchell v. Goodyear Tire & Rubber Co.*, 278 F.2d 562, 565 (8th Cir. 1960) (employee would not have been fired “but for” his complaint to the Wage-Hour Division); *Goldberg v. Bama Mfg. Corp.*, 302 F.2d 152 (5th Cir. 1962).

Since the issuance of the section 11(c) interpretive rules in 1973, the test under other statutes for determining whether an adverse action occurred “because of” a protected activity, *i.e.*, the causation test, has gone through a number of changes. In 2009, the Supreme Court considered the causation test under the Age Discrimination in Employment Act (ADEA), which makes it unlawful for an employer to take adverse action against

an employee “because of such individual’s age.” 29 U.S.C. 623(a); *Gross v. FBL Financial Services, Inc.*, 557 U.S. 167 (2009). In so doing, the Court explained that the ordinary meaning of the ADEA’s requirement that an employer took adverse action “because of” age is that age was the “reason” that the employer decided to act. Therefore, the Court held that to establish a disparate treatment claim under the plain language of the ADEA, the plaintiff had to prove that age was the “but for” cause of the employer’s adverse action; the burden of persuasion does not shift to the employer to show that it would have taken the same action regardless of age. *Gross*, 557 U.S. at 175–77, 180.

The *Gross* decision was followed in *Univ. of Tex. Sw. Med. Ctr. v. Nassar*, 570 U.S. 338 (2013). In that case, the Supreme Court interpreted the anti-retaliation provision of Title VII, which bans discrimination against an employee “because” he or she has opposed any practice made unlawful by Title VII or engaged in related activities. In the decision, the Court relied first on the default rule in tort law which applies absent contrary statutory language, *i.e.*, that a plaintiff must show that but for the defendant’s conduct the harm would not have occurred. *Nassar*, 570 U.S. at 348, 350. The Court then reiterated what it had held in *Gross*—that the ordinary meaning of the word “because of” means that the plaintiff must prove but-for causation. *Id.* at 350. It emphasized that although *Gross* concerned an interpretation of the ADEA, it had some persuasive force because of its textual basis and the concern in both cases with the meaning of the word “because.” *Id.* at 351. Therefore, the Court held that because there was no meaningful difference between the text in the ADEA and that in the Title VII anti-retaliation provision, the proper conclusion, as in *Gross*, is that the Title VII anti-retaliation provision requires a showing of but-for causation. *Id.* at 352.

The Supreme Court has continued to apply the “but for” formulation as the proper test for causation for a variety of statutes in which causation is an element. For example, most recently, in *Bostock v. Clay County, Georgia*, 140 S Ct. 1731, 1739 (2020), the Supreme Court held that the phrase “because of” means but-for causation and then offered more direction on the meaning of the but-for causation standard. The dispute in *Bostock* arose under Title VII of the Civil Rights Act of 1964, which makes it unlawful for an employer to fail or refuse to hire or to discharge any individual, or otherwise to discriminate

against any individual, “because of” such individual’s race, color, religion, sex, or national origin. 42 U.S.C. 2000e–2(a)(1). Citing *Nassar*, the Supreme Court reiterated that Title VII’s “because of” test incorporates the “simple” and “traditional” standard of but-for causation. *Bostock*, 140 S Ct. at 1738. The Court explained that but-for causation is established whenever a particular outcome would not have happened “but for” the purported cause. *Id.* at 1739 (citing *Gross*, 557 U.S. at 176). Put another way, the Court added, the but-for causation test “directs us to change one thing at a time and see if the outcome changes. If it does, we have found a but-for cause.” *Id.* at 1739. Importantly, the Court made clear that events *often* have multiple but-for causes. *Id.* The but-for causation test does not require that the prohibited factor be the sole or primary reason for the adverse action. *Id.*

Federal courts of appeals have followed *Nassar* and *Gross* in applying the but-for causation test under other statutes using the word “because.” See, e.g., *Lestage v. Coloplast Corp.*, 982 F.3d 37, 46 (1st Cir. 2020) (joining the Third, Fourth, Fifth, and Eleventh Circuit Courts of Appeals in holding that the False Claims Act’s prohibition against discriminating against an employee “because of” that employee’s protected conduct is a but-for standard); *Natofsky v. City of New York*, 921 F.3d 337, 347–50, 348 (2d Cir. 2019), cert. denied, 140 S Ct. 2668 (2020) (holding that the Rehabilitation Act incorporates by reference the Americans with Disabilities Act’s (ADA) “but-for” causation standard; “*Gross* and *Nassar* dictate our decision here.”); *Acosta v. Brain*, 910 F.3d 502, 514 (9th Cir. 2018) (assuming, without deciding, that the but-for causation standard applies to cases under section 510 of the Employee Retirement Income Security Act, which uses the word “because”).

As noted above, section 11(c)(1) of the OSH Act provides that “[n]o person shall discharge or in any manner discriminate against any employee because such employee has” engaged in certain protected activities. 29 U.S.C. 660(c)(1). After the *Nassar* decision, OSHA recognized that the correct causation standard under this provision would be “but-for.” Therefore, OSHA included the but-for causation standard in the 2016 revision to the *Whistleblower Investigations Manual (WIM)*.¹ See <https://www.whistleblowers.gov/manual>.

Specifically, the agency revised the *WIM* to require that in a section 11(c) case OSHA must have reasonable cause to believe that the employer would not have carried out the adverse action “but for” the protected activity (Chapter 3 par. V.B.i.).

Similarly, OSHA included the but-for causation standard in the 2018 *OSHA Fact Sheet, Filing Whistleblower Complaints under Section 11(c) of the OSH Act of 1970*. See <https://www.osha.gov/Publications/OSHA3812.pdf>. The *Fact Sheet* states that a person taking adverse action against an employee may be found to have violated section 11(c) if the employee would not have experienced the adverse action “but for” protected activity. OSHA’s *Investigator’s Desk Aid to the Occupational Safety and Health Act (OSH Act) Whistleblower Provision*, issued in 2019, also states that the Secretary has the burden of proving but-for causation in a section 11(c) case. See <https://www.osha.gov/sites/default/files/11cDeskAid.pdf>.

Discussion of Update to 29 CFR 1977.6(b)

This final interpretive rule updates OSHA’s 1973 section 11(c) interpretive rule at 29 CFR 1977.6(b) to bring it in line with the Supreme Court’s holdings in *Gross*, *Nassar*, and *Bostock*. Prior to this rule, the provision had not yet been updated to reflect the newer causation test compelled by the Supreme Court; until the revision in this rule, the interpretive rule stated in part that if protected activity was merely a “substantial reason” for the adverse action, section 11(c) has been violated. That interpretation is not in alignment with *Gross*, *Nassar*, and *Bostock*, and it is inconsistent with OSHA’s policy documents stating (on the basis of *Nassar*) that but-for causation must be shown to prove a section 11(c) violation.

To bring the interpretive rule in line with Supreme Court precedent and OSHA’s current interpretation, the agency is revising § 1977.6(b) in three ways. First, and most importantly, this rule revises the second sentence of the provision by removing the “substantial reason” language. As explained above, that sentence previously provided two ways in which a causal connection between protected activity and adverse action could be established in mixed motive cases: (1) If protected activity was a substantial reason for the adverse action; or (2) if the adverse action would not have taken place “but for” engagement in protected activity. By removing the “substantial reason” option, OSHA is clarifying that to

prevail in a section 11(c) case the Secretary must show that but for the protected activity the employee would not have suffered the adverse action.

Second, this rule deletes the citations to the two cases that appeared after the previous second sentence (*Mitchell v. Goodyear Tire & Rubber Co.*, 278 F.2d 562, 565 (8th Cir. 1960) and *Goldberg v. Bama Mfg. Corp.*, 302 F.2d 152 (5th Cir. 1962)) and the parenthetical accompanying the reference to *Mitchell* and replaces those cases with citations to *Bostock* (*Bostock v. Clay County, Georgia*, U.S., 140 S Ct. 1731, 1739 (2020)) and *Nassar* (*Univ. of Tex. Sw. Med. Ctr. v. Nassar*, 570 U.S. 338 (2013)). Deleting the references to the older cases should reduce the chance of any confusion about the appropriate causation standard. In addition, the updated citations should help employers and other stakeholders easily access information about the relevant causation standard should they wish to know more.

Third, this rule amends the first sentence of § 1977.6(b) by adding the words “or primary” before the word “consideration.” Prior to this change, that sentence stated: “At the same time, to establish a violation of section 11(c), the employee’s engagement in protected activity need not be the sole consideration behind discharge or other adverse action.” Adding “or primary” further emphasizes the Supreme Court’s holdings and reflects the language in *Bostock* that the protected factor need not be the primary reason for the adverse action. See *Bostock*, 140 S Ct. at 1739.

In addition, OSHA is making one clarifying change to the last sentence of 29 CFR 1977.6(b), which is unrelated to the issues regarding the but-for causation standard. The previous version of that sentence stated that the issue as to whether a “discharge” was because of protected activity will have to be determined on the basis of the facts in the particular case. This rule revises that sentence to add the words “or other adverse action” to reflect the full scope of section 11(c)’s prohibition against retaliation.

OSHA notes that these changes do not affect the interpretation in 29 CFR 1977.6(b) that the employee’s engagement in protected activity need not be the sole consideration for the adverse action in order for a violation of section 11(c) to be established. That language is consistent with *Bostock*. See 140 S Ct. at 1739. Likewise, this revision does not affect any of the whistleblower provisions of other statutes enforced by OSHA that have special language on the

¹ The *WIM* outlines procedures, and other information relative to the handling of retaliation complaints under the various whistleblower statutes delegated to OSHA.

proof of causation in clarifying the word “because.”²

II. Paperwork Reduction Act

This rule does not require any collection of information within the meaning of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*).

III. Administrative Procedure Act

The notice and comment rulemaking procedures of 5 U.S.C. 553, a provision of the Administrative Procedure Act (APA), do not apply “to interpretative rules, general statements of policy, or rules of agency organization, procedure, or practice.” 5 U.S.C. 553(b)(A). This rule is an interpretive rule compelled by Supreme Court case law. Therefore, publication in the **Federal Register** of a notice of proposed rulemaking and request for comments was not required. Furthermore, because this rule is interpretive, rather than substantive, the normal requirement of 5 U.S.C. 553(d) that a rule be effective 30 days after publication in the **Federal Register** is inapplicable.

IV. State Plans

Pursuant to section 18 of the Act, 29 U.S.C. 667, a State may assume responsibility for the promulgation and enforcement of occupational safety and health standards relating to any issue with respect to which a Federal standard has been promulgated if OSHA approves a plan submitted by the State. To be approved, the State Plan must provide for standards, and the enforcement of those standards, which are at least as effective as Federal OSHA standards and enforcement. 29 U.S.C. 667(c)(2). One of the mandatory criteria for “at least as effective” enforcement is a provision, similar to section 11(c), for necessary and appropriate protection to an employee against discharge or discrimination because the employee has filed a complaint, testified, or otherwise acted to exercise rights under the Act for himself or herself or others. 29 CFR 1902.4(c)(2)(v) and 1956.11(c)(2)(v). This provision must be enforced at least as effectively as Federal OSHA enforces section 11(c). 29 CFR 1902.3(d) (provisions of a State

Plan must be enforced as effectively as Federal OSHA enforces analogous provisions); 29 CFR 1956.10(d) (similar provision for State Plans which cover only State and local government employees).

OSHA is revising the interpretive rule regarding the causal connection between an employee’s protected activity and the discharge or other adverse action needed to establish a violation of section 11(c) of the OSH Act. This revised interpretive rule (interpreting the word “because” in section 11(c) to mean “but for” causation) is narrower than OSHA’s prior interpretive rule (which merely required that the protected activity be a “substantial reason” for the adverse action). A State Plan, acting under State law, is not obligated to follow the causation test adopted by the United States Supreme Court in interpreting Federal statutes. Thus, a State Plan would not be required to adopt this change in order to remain at least as effective as Federal OSHA. The State’s test for establishing causation under the occupational safety and health anti-retaliation provision must not be less effective than the Federal “but for” causation test that this rule establishes. Thus, the State Plan test cannot further narrow the causation requirement beyond “but for” causation.

Of the 28 States and territories with OSHA-approved State Plans, 22 cover State and local government, as well as private-sector, employees: Alaska, Arizona, California, Hawaii, Indiana, Iowa, Kentucky, Maryland, Michigan, Minnesota, Nevada, New Mexico, North Carolina, Oregon, Puerto Rico, South Carolina, Tennessee, Utah, Vermont, Virginia, Washington, and Wyoming. The remaining five states and one territory cover only State and local government employees: Connecticut, Illinois, Maine, New Jersey, New York, and the Virgin Islands.

V. Federalism

The agency reviewed this rule in accordance with the most recent Executive order on Federalism, Executive Order 13132, which requires that Federal agencies, to the extent possible, refrain from limiting State policy options, consult with States before taking actions that would restrict States’ policy options, and take such actions only when clear constitutional authority exists and the problem is of national scope (64 FR 43255). The final rule involves an interpretive regulation issued under sections 8 and 11 of the OSH Act (29 U.S.C. 657, 660) and not an “occupational safety and health standard” issued under section 6 of the

OSH Act (29 U.S.C. 655). Therefore, pursuant to section 18 of the OSH Act (29 U.S.C. 667(a)), the rule does not preempt state law. The effect of the final rule on State Plans is discussed in section IV, State Plans.

VI. Executive Orders 12866 and 13563; Unfunded Mandates Reform Act of 1995

The Department has concluded that this rule is not a “significant regulatory action” within the meaning of section 3(f)(4) of Executive Order 12866, as reaffirmed by Executive Order 13563, because it is not likely to: (1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; (2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; (3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or (4) raise novel legal or policy issues arising out of legal mandates, the President’s priorities, or the principles set forth in Executive Order 12866. Therefore, no regulatory impact analysis has been prepared.

OSHA has also determined that this interpretive rule will not impose costs of more than \$100 million per year and is not a significant regulatory action within the meaning of section 202 of the Unfunded Mandates Reform Act of 1995 (UMRA), 2 U.S.C. 1532 and does not meet the definition of a “Federal intergovernmental mandate” within the meaning of section 421(f) of the UMRA (2 U.S.C. 658(5)).

VII. Regulatory Flexibility Analysis

The notice and comment rulemaking procedures of section 553 of the APA do not apply “to interpretative rules, general statements of policy, or rules of agency organization, procedure, or practice.” 5 U.S.C. 553(b)(A). Rules that are exempt from APA notice and comment requirements at 5 U.S.C. 553 are also exempt from the Regulatory Flexibility Act (RFA) (see 5 U.S.C. 604(a); Small Business Administration Office of Advocacy, *A Guide for Government Agencies: How to Comply with the Regulatory Flexibility Act*, at 9; also found at <https://www.sba.gov/advocacy/guide-government-agencies-how-comply-regulatory-flexibility-act>). This is a rule of agency interpretation within the meaning of 5 U.S.C. 553 and therefore is exempt from both the notice and comment rulemaking procedures of

² OSHA enforces other whistleblower provisions under which a violation is proved if it has been shown by a preponderance of the evidence that protected activity was a contributing factor in the adverse action, but relief may not be ordered if the respondent demonstrates by clear and convincing evidence that the adverse action would have been taken in the absence of the protected activity. An example of one of these provisions is the whistleblower provision of the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (AIR21). The specific language on causation is set forth at 49 U.S.C. 42121(b)(2)(B)(iii) and (iv).

the APA and the requirements of the RFA.

List of Subjects in 29 CFR Part 1977

Administrative practice and procedure, Employment, Investigations, Safety, Whistleblowing.

Authority and Signature

James S. Frederick, Acting Assistant Secretary for Occupational Safety and Health, authorized the preparation of this document under the authority granted by Secretary’s Order 08–2020 (May 15, 2020).

Signed at Washington, DC.

James S. Frederick,

Acting Assistant Secretary for Occupational Safety and Health.

For the reasons stated in the preamble, OSHA amends part 1977 of chapter XVII of title 29 as follows:

PART 1977—[AMENDED]

- 1. Revise the authority citation for part 1977 to read as follows:

Authority: 29 U.S.C. 657, 660; 5 U.S.C. 553; and Secretary of Labor’s Order No. 08–2020 (85 FR 58393), 9–83 (48 FR 35736), or 12–71 (36 FR 8754), as applicable.

- 2. In § 1977.6, revise paragraph (b) to read as follows:

§ 1977.6 Unprotected activities distinguished.

* * * * *

(b) At the same time, to establish a violation of section 11(c), the employee’s engagement in protected activity need not be the sole or primary consideration behind discharge or other adverse action. If the discharge or other adverse action would not have taken place “but for” engagement in protected activity, section 11(c) has been violated. See *Bostock v. Clay County, Ga.*, 140 S Ct. 1731, 1739 (2020); *Univ. of Tex. Sw. Med. Ctr. v. Nassar*, 570 U.S. 338 (2013). Ultimately, the issue as to whether a discharge or other adverse action was because of protected activity will have to be determined on the basis of the facts in the particular case.

[FR Doc. 2021–19071 Filed 9–2–21; 8:45 am]

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DEPARTMENT OF HOMELAND SECURITY

Coast Guard

33 CFR Part 100

[Docket Number USCG–2021–0505]

RIN 1625–AA08

Special Local Regulation; Chesapeake Bay, Between Sandy Point and Kent Island, MD

AGENCY: Coast Guard, DHS.

ACTION: Temporary final rule.

SUMMARY: The Coast Guard is establishing a temporary special local regulation for certain waters of the Chesapeake Bay. This action is necessary to provide for the safety of life on these navigable waters located between Sandy Point, Anne Arundel County, MD, and Kent Island, Queen Anne’s County, MD, during a paddling event on September 26, 2021. This regulation prohibits persons and vessels from entering the regulated area unless authorized by the Captain of the Port Maryland-National Capital Region or the Coast Guard Event Patrol Commander.

DATES: This rule is effective from 7 a.m. to 1 p.m. on September 26, 2021.

ADDRESSES: To view documents mentioned in this preamble as being available in the docket, go to <https://www.regulations.gov>, type USCG–2021–0505 in the “SEARCH” box and click “SEARCH.” Next, in the Document Type column, select “Supporting & Related Material.”

FOR FURTHER INFORMATION CONTACT: If you have questions on this rule, call or email Mr. Ron Houck, U.S. Coast Guard Sector Maryland-National Capital Region; telephone 410–576–2674, email D05-DG-SectorMD-NCR-MarineEvents@uscg.mil.

SUPPLEMENTARY INFORMATION:

I. Table of Abbreviations

CFR Code of Federal Regulations
 COTP Captain of the Port
 DHS Department of Homeland Security
 FR Federal Register
 NPRM Notice of proposed rulemaking
 PATCOM Patrol Commander
 § Section
 U.S.C. United States Code

II. Background Information and Regulatory History

ABC Events, Inc. of Arnold, MD, notified the Coast Guard that from 8 a.m. to noon on September 26, 2021, it will be conducting the Bay Bridge Paddle on the Chesapeake Bay, under and between the north and south

bridges that consist of the William P. Lane, Jr. (US–50/301) Memorial Bridges, located between Sandy Point, Anne Arundel County, MD and Kent Island, Queen Anne’s County, MD. In response, on July 15, 2021, the Coast Guard published a notice of proposed rulemaking (NPRM) titled “Special Local Regulation; Chesapeake Bay, Between Sandy Point and Kent Island, MD” (86 FR 37270). There we stated why we issued the NPRM, and invited comments on our proposed regulatory action related to this paddle racing event. During the comment period that ended August 16, 2021, we received no comments.

Under 5 U.S.C. 553(d)(3), the Coast Guard finds that good cause exists for making this rule effective less than 30 days after publication in the **Federal Register**. Due to the date of the event, it would be impracticable to make the regulation effective 30 days after publication in the **Federal Register**. Delaying the effective date of this rule would be impracticable and contrary to the public interest because immediate action is needed to respond to the potential safety hazards associated with the “Bay Bridge Paddle” event.

III. Legal Authority and Need for Rule

The Coast Guard is issuing this rule under authority in 46 U.S.C. 70041. The Captain of the Port Maryland-National Capital Region (COTP) has determined that potential hazards associated with the paddle races will be a safety concern for anyone intending to participate in this event or for vessels that operate within specified waters of the Chesapeake Bay between Sandy Point and Kent Island, MD. These hazards include numerous event participants crossing designated navigation channels and interfering with vessels operating within those channels, as well as operating within approaches to the Sandy Point State Park public boat launch facility and marina. The purpose of this rule is to protect event participants, non-participants and transiting vessels before, during, and after the scheduled event.

IV. Discussion of Comments, Changes, and the Rule

As noted above, we received no comments on our NPRM published July 15, 2021. There are no changes in the regulatory text of this rule from the proposed rule in the NPRM.

This rule establishes special local regulations from 7 a.m. to 1 p.m. on September 26, 2021. The regulated area will cover all navigable waters of the Chesapeake Bay, adjacent to the

shoreline at Sandy Point State Park and between and adjacent to the spans of the William P. Lane Jr. Memorial Bridges, from shoreline to shoreline, bounded to the north by a line drawn from the western shoreline at latitude 39°01'05.23" N, longitude 076°23'47.93" W; thence eastward to latitude 39°01'02.08" N, longitude 076°22'40.24" W; thence southeastward to eastern shoreline at latitude 38°59'13.70" N, longitude 076°19'58.40" W; and bounded to the south by a line drawn parallel and 500 yards south of the south bridge span that originates from the western shoreline at latitude 39°00'17.08" N, longitude 076°24'28.36" W; thence southward to latitude 38°59'38.36" N, longitude 076°23'59.67" W; thence eastward to latitude 38°59'26.93" N, longitude 076°23'25.53" W; thence eastward to the eastern shoreline at latitude 38°58'40.32" N, longitude 076°20'10.45" W, located between Sandy Point and Kent Island, MD.

The duration of the special local regulations and size of the regulated area are intended to ensure the safety of life on these navigable waters before, during, and after the paddle races, scheduled from 8 a.m. to noon on September 26, 2021. The COTP and the Coast Guard Event PATCOM will have authority to forbid and control the movement of all vessels and persons, including event participants, in the regulated area. When hailed or signaled by an official patrol, a vessel or person in the regulated area will be required to immediately comply with the directions given by the COTP or Event PATCOM. If a person or vessel fails to follow such directions, the Coast Guard may expel them from the area, issue them a citation for failure to comply, or both.

Except for Bay Bridge Paddle participants and vessels already at berth, a vessel or person will be required to get permission from the COTP or Event PATCOM before entering the regulated area. Vessel operators will be able to request permission to enter and transit through the regulated area by contacting the Event PATCOM on VHF-FM channel 16. Vessel traffic will be able to safely transit the regulated area once the Event PATCOM deems it safe to do so. A vessel within the regulated area must operate at safe speed that minimizes wake. A person or vessel not registered with the event sponsor as a participant or assigned as official patrols will be considered a non-participant. Official patrols are any vessel assigned or approved by the Commander, Coast Guard Sector Maryland-National Capital Region with a commissioned, warrant,

or petty officer on board and displaying a Coast Guard ensign.

If permission is granted by the COTP or Event PATCOM, a person or vessel will be allowed to enter the regulated area or pass directly through the regulated area as instructed. Official patrols enforcing this regulated area can be contacted on VHF-FM channel 16 and channel 22A.

V. Regulatory Analyses

We developed this rule after considering numerous statutes and Executive orders related to rulemaking. Below we summarize our analyses based on a number of these statutes and Executive orders, and we discuss First Amendment rights of protestors.

A. Regulatory Planning and Review

Executive Orders 12866 and 13563 direct agencies to assess the costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits. This rule has not been designated a "significant regulatory action," under Executive Order 12866. Accordingly, this rule has not been reviewed by the Office of Management and Budget (OMB).

This regulatory action determination is based on the size and duration of the regulated area, which will impact a small designated area of the Chesapeake Bay for 6 hours. The Coast Guard will issue a Broadcast Notice to Mariners via VHF-FM marine channel 16 about the status of the regulated area. Moreover, the rule will allow vessels to seek permission to enter the regulated area, and vessel traffic will be able to safely transit the regulated area once the Event PATCOM deems it safe to do so.

B. Impact on Small Entities

The Regulatory Flexibility Act of 1980, 5 U.S.C. 601–612, as amended, requires Federal agencies to consider the potential impact of regulations on small entities during rulemaking. The term "small entities" comprises small businesses, not-for-profit organizations that are independently owned and operated and are not dominant in their fields, and governmental jurisdictions with populations of less than 50,000. The Coast Guard received no comments from the Small Business Administration on this rulemaking. The Coast Guard certifies under 5 U.S.C. 605(b) that this rule will not have a significant economic impact on a substantial number of small entities.

While some owners or operators of vessels intending to transit the regulated area may be small entities, for the

reasons stated in section V.A above, this rule will not have a significant economic impact on any vessel owner or operator.

Under section 213(a) of the Small Business Regulatory Enforcement Fairness Act of 1996 (Pub. L. 104–121), we want to assist small entities in understanding this rule. If the rule would affect your small business, organization, or governmental jurisdiction and you have questions concerning its provisions or options for compliance, please call or email the person listed in the **FOR FURTHER INFORMATION CONTACT** section.

Small businesses may send comments on the actions of Federal employees who enforce, or otherwise determine compliance with, Federal regulations to the Small Business and Agriculture Regulatory Enforcement Ombudsman and the Regional Small Business Regulatory Fairness Boards. The Ombudsman evaluates these actions annually and rates each agency's responsiveness to small business. If you wish to comment on actions by employees of the Coast Guard, call 1–888–REG–FAIR (1–888–734–3247). The Coast Guard will not retaliate against small entities that question or complain about this rule or any policy or action of the Coast Guard.

C. Collection of Information

This rule will not call for a new collection of information under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520).

D. Federalism and Indian Tribal Governments

A rule has implications for federalism under Executive Order 13132, Federalism, if it has 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. We have analyzed this rule under that Order and have determined that it is consistent with the fundamental federalism principles and preemption requirements described in Executive Order 13132.

Also, this rule does not have tribal implications under Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, because it does not have a substantial direct effect on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes.

E. Unfunded Mandates Reform Act

The Unfunded Mandates Reform Act of 1995 (2 U.S.C. 1531–1538) requires Federal agencies to assess the effects of their discretionary regulatory actions. In particular, the Act addresses actions that may result in the expenditure by a State, local, or tribal government, in the aggregate, or by the private sector of \$100,000,000 (adjusted for inflation) or more in any one year. Though this rule will not result in such an expenditure, we do discuss the effects of this rule elsewhere in this preamble.

F. Environment

We have analyzed this rule under Department of Homeland Security Directive 023–01, Rev. 1, associated implementing instructions, and Environmental Planning COMDTINST 5090.1 (series), which guide the Coast Guard in complying with the National Environmental Policy Act of 1969 (42 U.S.C. 4321–4370f), and have determined that this action is one of a category of actions that do not individually or cumulatively have a significant effect on the human environment. This rule involves implementation of regulations within 33 CFR part 100 applicable to organized marine events on the navigable waters of the United States that could negatively impact the safety of waterway users and shore side activities in the event area for 6 hours. It is categorically excluded from further review under paragraph L61 of Appendix A, Table 1 of DHS Instruction Manual 023–01–001–01, Rev. 1. A Memorandum for the Record supporting this determination is available in the docket. For instructions on locating the docket, see the **ADDRESSES** section of this preamble.

G. Protest Activities

The Coast Guard respects the First Amendment rights of protesters. Protesters are asked to call or email the person listed in the **FOR FURTHER INFORMATION CONTACT** section to coordinate protest activities so that your message can be received without jeopardizing the safety or security of people, places or vessels.

List of Subjects in 33 CFR Part 100

Marine safety, Navigation (water), Reporting and recordkeeping requirements, Waterways.

For the reasons discussed in the preamble, the Coast Guard amends 33 CFR part 100 as follows:

PART 100—SAFETY OF LIFE ON NAVIGABLE WATERS

■ 1. The authority citation for part 100 continues to read as follows:

Authority: 46 U.S.C. 70041; 33 CFR 1.05–1.

■ 2. Add § 100.T05–0505 to read as follows:

§ 100.T05–0505 Bay Bridge Paddle, Chesapeake Bay, Between Sandy Point and Kent Island, MD.

(a) *Regulated area.* The regulations in this section apply to the following area: All navigable waters of the Chesapeake Bay, adjacent to the shoreline at Sandy Point State Park and between and adjacent to the spans of the William P. Lane Jr. Memorial Bridges, from shoreline to shoreline, bounded to the north by a line drawn from the western shoreline at latitude 39°01'05.23" N, longitude 076°23'47.93" W; thence eastward to latitude 39°01'02.08" N, longitude 076°22'40.24" W; thence southeastward to eastern shoreline at latitude 38°59'13.70" N, longitude 076°19'58.40" W; and bounded to the south by a line drawn parallel and 500 yards south of the south bridge span that originates from the western shoreline at latitude 39°00'17.08" N, longitude 076°24'28.36" W; thence southward to latitude 38°59'38.36" N, longitude 076°23'59.67" W; thence eastward to latitude 38°59'26.93" N, longitude 076°23'25.53" W; thence eastward to the eastern shoreline at latitude 38°58'40.32" N, longitude 076°20'10.45" W, located between Sandy Point and Kent Island, MD. The coordinates are based on datum NAD 1983.

(b) *Definitions.* As used in this section—

Captain of the Port (COTP) Maryland-National Capital Region means the Commander, U.S. Coast Guard Sector Maryland-National Capital Region or any Coast Guard commissioned, warrant or petty officer who has been authorized by the COTP to act on his behalf.

Coast Guard Event Patrol Commander (Event PATCOM) means a commissioned, warrant, or petty officer of the U.S. Coast Guard who has been designated by the Commander, Coast Guard Sector Maryland-National Capital Region.

Official patrol means any vessel assigned or approved by Commander, Coast Guard Sector Maryland-National Capital Region with a commissioned, warrant, or petty officer on board and displaying a Coast Guard ensign.

Participant means all persons and vessels registered with the event sponsor as participating in the “Bay

Bridge Paddle” event, or otherwise designated by the event sponsor as having a function tied to the event.

(c) *Special local regulations.* (1) Except for participants and vessels already at berth, all non-participants are prohibited from entering, transiting through, anchoring in, or remaining within the regulated area described in paragraph (a) of this section unless authorized by the COTP Maryland-National Capital Region or Event PATCOM.

(2) To seek permission to enter, contact the COTP Maryland-National Capital Region at telephone number 410–576–2693 or on Marine Band Radio, VHF–FM channel 16 (156.8 MHz) or the Event PATCOM on Marine Band Radio, VHF–FM channel 16 (156.8 MHz). Those in the regulated area must comply with all lawful orders or directions given to them by the COTP Maryland-National Capital Region or Event PATCOM.

(3) Official patrols will direct non-participants while within the regulated area. Official patrols enforcing the regulated area can be contacted on VHF–FM channel 16 and channel 22A.

(4) The COTP Maryland-National Capital Region will provide notice of the regulated area through advanced notice via Fifth Coast Guard District Local Notice to Mariners, broadcast notice to mariners, and on-scene official patrols.

(d) *Enforcement officials.* The Coast Guard may be assisted with marine event patrol and enforcement of the regulated area by other federal, state, and local agencies.

(e) *Enforcement period.* This section will be enforced from 7 a.m. to 1 p.m. on September 26, 2021.

Dated: August 30, 2021.

David E. O’Connell,

Captain, U.S. Coast Guard, Captain of the Port Maryland-National Capital Region.

[FR Doc. 2021–19102 Filed 9–2–21; 8:45 am]

BILLING CODE 9110–04–P

DEPARTMENT OF EDUCATION

34 CFR Part 600

[Docket ID ED–2018–OPE–0076]

RIN 1840–AD38

Distance Education and Innovation; Correction

AGENCY: Office of Postsecondary Education, Department of Education.

ACTION: Correcting amendments.

SUMMARY: On September 2, 2020, the Department of Education (Department) published in the **Federal Register** a final

rule to amend the general, establishing eligibility, maintaining eligibility, and losing eligibility sections of the Institutional Eligibility regulations issued under the Higher Education Act of 1965, as amended (HEA), related to distance education and innovation, as well as the Student Assistance General Provisions regulations issued under the HEA (Distance Education and Innovation Rule). This document corrects the text in the regulations.

DATES: This correction is effective on September 3, 2021.

FOR FURTHER INFORMATION CONTACT: Gregory Martin at (202) 453-7535 or Gregory.Martin@ed.gov.

If you use a telecommunications device for the deaf (TDD) or a text telephone (TTY), call the Federal Relay Service (FRS), toll free, at 1-800-877-8339.

SUPPLEMENTARY INFORMATION: The Department's Distance Education and Innovation Rule, published in the **Federal Register** on September 2, 2020 (85 FR 54742), contained an error in the amendatory language that resulted in the deletion of 34 CFR 600.20(f), (g), and (h). This correction restores those paragraphs.

Waiver of Proposed Rulemaking and Negotiated Rulemaking

In accordance with the Administrative Procedure Act, 5 U.S.C. 553, the Department generally offers interested parties the opportunity to comment on proposed regulations. However, the actions in this document merely correct a technical error, and thus, the Department has determined that publication of a proposed rule is unnecessary under 5 U.S.C. 553(b)(B).

In addition, under section 492 of the HEA (20 U.S.C. 1098a), all regulations proposed by the Department for programs authorized under title IV of the HEA are subject to negotiated rulemaking requirements. Section 492(b)(2) of the HEA provides that negotiated rulemaking may be waived for good cause when doing so would be "impracticable, unnecessary, or contrary to the public interest." There is likewise good cause to waive the negotiated rulemaking requirement in this case, since, as explained above, notice and comment rulemaking is unnecessary.

Accessible Format: On request to the program contact person listed under **FOR FURTHER INFORMATION CONTACT**, individuals with disabilities can obtain this document in an accessible format. The Department will provide the requestor with an accessible format that may include Rich Text Format (RTF) or text format (txt), a thumb drive, an MP3

file, braille, large print, audiotape, or compact disc, or other accessible format.

Electronic Access to This Document: The official version of this document is the document published in the **Federal Register**. You may access the official edition of the **Federal Register** and the Code of Federal Regulations at www.govinfo.gov. At this site you can view this document, as well as all other documents of this Department published in the **Federal Register**, in text or Portable Document Format (PDF). To use PDF you must have Adobe Acrobat Reader, which is available free at the site.

You may also access documents of the Department published in the **Federal Register** by using the article search feature at www.federalregister.gov. Specifically, through the advanced search feature at this site, you can limit your search to documents published by the Department.

List of Subjects in 34 CFR Part 600

Colleges and universities, Grant programs—education, Loan programs—education, Reporting and recordkeeping requirements, Student aid, Vocational education.

Michelle Asha Cooper,

Acting Assistant Secretary for Postsecondary Education.

Accordingly, the Secretary corrects 34 CFR part 600 by making the following correcting amendment:

PART 600—INSTITUTIONAL ELIGIBILITY UNDER THE HIGHER EDUCATION ACT OF 1965, AS AMENDED

■ 1. The authority citation for part 600 continues to read as follows:

Authority: 20 U.S.C. 1001, 1002, 1003, 1088, 1091, 1094, 1099b, and 1099c, unless otherwise noted.

■ 2. Section 600.20 is amended by adding paragraphs (f) through (h) and a parenthetical OMB approval note to read as follows:

§ 600.20 Notice and application procedures for establishing, reestablishing, maintaining, or expanding institutional eligibility and certification.

* * * * *

(f) *Disbursement rules related to applications.* (1)(i) Except as provided under paragraph (f)(1)(ii) of this section and 34 CFR 668.26, if an institution submits an application under paragraph (b)(2)(i) of this section because its participation period is scheduled to expire, after that expiration date the institution may not disburse title IV, HEA program funds to students attending that institution until the

institution receives the Secretary's notification that the institution is again eligible to participate in those programs.

(ii) An institution described in paragraph (f)(1)(i) of this section may disburse title IV, HEA program funds to its students if the institution submits to the Secretary a materially complete renewal application in accordance with the provisions of 34 CFR 668.13(b)(2), and has not received a final decision from the Department on that application.

(2)(i) Except as provided under paragraph (f)(2)(ii) of this section and 34 CFR 668.26, if a private nonprofit, private for-profit, or public institution submits an application under paragraph (b)(2)(ii) or (iii) of this section because it has undergone or will undergo a change in ownership that results in a change of control or a change in status, the institution may not disburse title IV, HEA program funds to students attending that institution after the change of ownership or status until the institution receives the Secretary's notification that the institution is eligible to participate in those programs.

(ii) An institution described in paragraph (f)(2)(i) of this section may disburse title IV, HEA program funds to its students if the Secretary issues a provisional extension of certification under paragraph (g) of this section.

(3) If an institution must apply to the Secretary under paragraphs (c)(1) through (4) of this section, the institution may not disburse title IV, HEA program funds to students attending the subject location, program, or branch until the institution receives the Secretary's notification that the location, program, or branch is eligible to participate in the title IV, HEA programs.

(4) If an institution applies to the Secretary under paragraph (c)(5) of this section to convert an eligible location to a branch campus, the institution may continue to disburse title IV, HEA program funds to students attending that eligible location.

(5) If an institution does not apply to the Secretary to obtain the Secretary's approval of a new location, program, increased level of program offering, or branch, and the location, program, or branch does not qualify as an eligible location, program, or branch of that institution under this part and 34 CFR part 668, the institution is liable for all title IV, HEA program funds it disburses to students enrolled at that location or branch or in that program.

(g) *Application for provisional extension of certification.* (1) If a private nonprofit institution, a private for-profit institution, or a public institution

participating in the title IV, HEA programs undergoes a change in ownership that results in a change of control as described in § 600.31, the Secretary may continue the institution's participation in those programs on a provisional basis, if the institution under the new ownership submits a "materially complete application" that is received by the Secretary no later than 10 business days after the day the change occurs.

(2) For purposes of this section, a private nonprofit institution, a private for-profit institution, or a public institution submits a materially complete application if it submits a fully completed application form designated by the Secretary supported by—

(i) A copy of the institution's State license or equivalent document that—as of the day before the change in ownership—authorized or will authorize the institution to provide a program of postsecondary education in the State in which it is physically located;

(ii) A copy of the document from the institution's accrediting association that—as of the day before the change in ownership—granted or will grant the institution accreditation status, including approval of any non-degree programs it offers;

(iii) Audited financial statements of the institution's two most recently completed fiscal years that are prepared and audited in accordance with the requirements of 34 CFR 668.23; and

(iv) Audited financial statements of the institution's new owner's two most recently completed fiscal years that are prepared and audited in accordance with the requirements of 34 CFR 668.23, or equivalent information for that owner that is acceptable to the Secretary.

(h) *Terms of the extension.* (1) If the Secretary approves the institution's materially complete application, the Secretary provides the institution with a provisional Program Participation Agreement (PPA). The provisional PPA extends the terms and conditions of the program participation agreement that were in effect for the institution before its change of ownership.

(2) The provisional PPA expires on the earlier of—

(i) The date on which the Secretary signs a new program participation agreement;

(ii) The date on which the Secretary notifies the institution that its application is denied; or

(iii) The last day of the month following the month in which the change of ownership occurred, unless the provisions of paragraph (h)(3) of this section apply.

(3) If the provisional PPA will expire under the provisions of paragraph (h)(2)(iii) of this section, the Secretary extends the provisional PPA on a month-to-month basis after the expiration date described in paragraph (h)(2)(iii) of this section if, prior to that expiration date, the institution provides the Secretary with—

(i) A "same day" balance sheet showing the financial position of the institution, as of the date of the ownership change, that is prepared in accordance with Generally Accepted Accounting Principles (GAAP) published by the Financial Accounting Standards Board and audited in accordance with Generally Accepted Government Auditing Standards (GAGAS) published by the U.S. General Accounting Office;

(ii) If not already provided, approval of the change of ownership from the State in which the institution is located by the agency that authorizes the institution to legally provide postsecondary education in that State;

(iii) If not already provided, approval of the change of ownership from the institution's accrediting agency; and

(iv) A default management plan unless the institution is exempt from providing that plan under 34 CFR 668.14(b)(15).

(Approved by the Office of Management and Budget under control number 1845-0012)

[FR Doc. 2021-19141 Filed 9-2-21; 8:45 am]

BILLING CODE 4000-01-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R09-OAR-2021-0366; FRL-8797-02-R9]

Air Plan Approval; California; San Diego County Air Pollution Control District

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is taking final action to

approve a revision to the San Diego County Air Pollution Control District (SDCAPCD or "District") portion of the California State Implementation Plan (SIP). This revision concerns emissions of volatile organic compounds (VOCs) from gasoline transfers into underground stationary storage tanks at gasoline dispensing facilities. We are approving a local rule that regulates these emission sources under the Clean Air Act (CAA or "Act").

DATES: This rule will be effective on October 4, 2021.

ADDRESSES: The EPA has established a docket for this action under Docket ID No. EPA-R09-OAR-2021-0366. 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 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: Rebecca Newhouse, EPA Region IX, 75 Hawthorne St., San Francisco, CA 94105. By phone: (415) 972-3004 or by email at newhouse.rebecca@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 June 7, 2021,¹ the EPA proposed to approve the following rule into the California SIP.

¹ 86 FR 30232.

Local agency	Rule #	Rule title	Adopted	Submitted
SDCAPCD	61.3.1	Transfer of Gasoline into Stationary Underground Storage Tanks.	March 1, 2006	August 9, 2017. ²

We proposed to approve this rule because we determined that it complies with the relevant CAA requirements. Our proposed action contains more information on the rule 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 comments.

III. EPA Action

No comments were submitted. Therefore, as authorized in section 110(k)(3) of the Act, the EPA is fully approving this rule into the California SIP. Additionally, we find that SDCAPCD has rectified the deficiency identified in our December 3, 2020, partial disapproval³ of the District's reasonably available control technology (RACT) analysis for the 2008 8-hr ozone National Ambient Air Quality Standard ("2008 RACT SIP") with respect to the source category covering the "Design Criteria for Stage I Vapor Control Systems—Gasoline Service Stations" (EPA-450/R-75-102) Control Techniques Guidelines ("Stage I Gasoline Transfer CTG"). This action terminates the sanctions and Federal Implementation Plan (FIP) clocks associated with our partial disapproval of the District's 2008 RACT SIP for the Stage I Gasoline Transfer CTG.⁴ This action also satisfies the District's RACT obligation for this source category with respect to the 2008 8-hr ozone NAAQS.

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 SDCAPCD rule described in the amendments to 40 CFR part 52 set forth

² The District supplemented its submittal by providing additional proof of public notice, submitted by CARB to the EPA on December 28, 2020. Letter dated December 28, 2020, from Richard W. Corey, Executive Officer, CARB, to John W. Busterud, Regional Administrator, EPA, Region IX, transmitting the proof of public notice in The Daily Transcript, and Minute Order No.1 from the SDCAPCD Board hearing on October 14, 2020.

³ 85 FR 77996.

⁴ This action does not stop or otherwise impact the sanctions and FIP clocks associated with our partial disapproval of other CTG source categories identified in our partial approval and partial disapproval of the District's 2008 RACT SIP. See id.

below. 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 November 2, 2021. 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, Incorporation by reference, Intergovernmental relations, Ozone, Reporting and recordkeeping

requirements, Volatile organic compounds.

Dated: August 27, 2021.

Elizabeth Adams,

Acting Regional Administrator, Region IX.

For the reasons stated in the preamble, the Environmental Protection Agency amends part 52, chapter I, title 40 of the Code of Federal Regulations 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 F—California

■ 2. Section 52.220 is amended by adding paragraph (c)(503)(i)(B)(2) to read as follows:

§ 52.220 Identification of plan.

* * * * *

- (c) * * *
- (503) * * *
- (i) * * *
- (B) * * *

(2) Rule 61.3.1, “Transfer of Gasoline into Stationary Underground Storage Tanks,” adopted on March 1, 2006.

* * * * *

§ 52.237 [Amended]

■ 3. Section 52.237 is amended by removing and reserving paragraph (b)(2)(i)(A).

[FR Doc. 2021–19031 Filed 9–2–21; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 62

[EPA–R02–OAR–2018–0564, FRL 8921–02–Region 2]

Approval and Promulgation of State Plans for Designated Facilities; New York

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is approving the state plan submitted by New York State to implement and enforce Emission Guidelines (EG) for existing large municipal waste combustor (MWC) units. The state plan is consistent with the amended EG promulgated by the EPA on May 10, 2006. New York’s plan establishes emission limits and other

requirements for the purpose of reducing emissions of lead, mercury, cadmium, organics, hydrogen chloride, and other air pollutants from large MWC units throughout the state. New York submitted its plan to fulfill the requirements of certain sections of the Clean Air Act.

DATES: This rule is effective on October 4, 2021. The incorporation by reference of certain materials listed in the rule is approved by the Director of the Federal Register as of October 4, 2021.

ADDRESSES: The EPA has established a docket for this action under Docket ID No. EPA–R02–OAR–2018–0564. All documents in the docket are listed on the <http://www.regulations.gov> website. Although listed in the index, some information is not publicly available, e.g., confidential business information 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 www.regulations.gov, or please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section for additional available information.

FOR FURTHER INFORMATION CONTACT: Fausto Taveras, Air Programs Branch, 290 Broadway, 25th Floor, New York, New York 10007–1866, (212) 637–3378, or by email at Taveras.Fausto@epa.gov.

SUPPLEMENTARY INFORMATION: The following table of contents describes the format for the **SUPPLEMENTARY INFORMATION** section:

- I. What action is the EPA taking?
- II. What are the details of the EPA’s action?
- III. What comments were received in response to the EPA’s proposed action?
- IV. What is the EPA’s conclusion?
- V. Incorporation by Reference
- VI. Statutory and Executive Order Reviews

I. What action is the EPA taking?

The EPA is approving New York’s revised state plan, submitted on July 12, 2013, for the control of air emissions from existing large municipal waste combustor (MWC) units throughout the state, except for any existing large MWC units located in Indian Nation Land. In accordance with the Clean Air Act (“CAA” or the “Act”), New York previously submitted a state plan on December 15, 1997, as supplemented on June 22, 1998, which was approved by the EPA on August 4, 1998. *See* 63 FR 41427. New York also submitted a revised state plan on October 7, 1998, as supplemented on November 5, 1998, which was approved by the EPA on February 9, 1999. *See* 64 FR 6237. New

York submitted its July 12, 2013 revised plan to fulfill the requirements of sections 111(d) and 129 of the CAA. The revised state plan adopts and implements the Emission Guidelines (EG) amended by the EPA on May 10, 2006 applicable to existing large MWC units and establishes revised emission limits and other requirements for units constructed on or before September 20, 1994. *See* 71 FR 27324 (May 10, 2006); 40 CFR 60.32b(a). New York’s revised state plan regulates all the existing units designated as large MWCs by the amended EG with a combustion capacity greater than 250 tons per day of municipal solid waste for which construction commenced on or before September 20, 1994. This approval, once effective, will render New York’s revised large MWC rules included in the state plan federally enforceable.

II. What are the details of the EPA’s action?

On July 12, 2013,¹ the New York State Department of Environmental Conservation (NYSDEC) submitted to the EPA its sections 111(d) and 129 state plan to implement the EPA’s amended EG for existing large MWC units located in New York state. New York has incorporated by reference the applicable requirements of the amended EG in Part 200 of Title 6 of the New York Codes, Rules and Regulations (6 NYCRR), entitled, “General Provisions.” The amended regulation became effective on October 20, 2007. New York will enforce the requirements under Part 201, entitled “Permits and Registration.” By incorporating the requirements of the amended EG into Part 200, NYSDEC has the authority to include them as applicable requirements in the permits of subject emission sources. As a result, the Part 200 requirements are enforceable by New York and become federally enforceable once the state plan is approved by the EPA.

New York’s revised state plan includes all of the EPA’s required elements as described in the amended EG and 40 CFR subpart B, as summarized herein:

- (1) A demonstration of the state’s legal authority to implement the CAA sections 111(d) and 129 state plan;

¹ In an email dated December 6, 2017, the New York State Department of Environmental Conservation (NYSDEC) provided a copy of the New York State Office of Attorney General opinion dated June 9, 1980, finding that New York state administrative agencies are authorized to incorporate by reference federal statutes and regulations that are applicable to the state, and that such action is not prohibited by the New York State Constitution.

(2) State rules adopting the amended EG (6 NYCRR Part 200) as the mechanism for implementing and enforcing the state plan;

(3) An inventory of seven known large MWC facilities, including eighteen large MWC units, along with an inventory of their air pollutant emissions (*see* section C of New York's state plan);

(4) Emission limits, emission standards, operator training and qualification requirements, and operating limits that are at least as protective as the amended EG;

(5) Enforceable compliance schedules as indicated in the amended EG. Compliance with revised emission limits (*see* 40 CFR 60.39b) was required as expeditiously as practicable, but not later than April 28, 2009, except as noted in 40 CFR 60.39b(g)(2) for a facility that was planning an extensive emission control system upgrade that petitioned the Administrator for a longer compliance schedule. If approved by the Administrator, the longer compliance schedule may have been extended no later than May 10, 2011. If no plan for implementing the amended EG was approved by the EPA, all MWC units that meet the applicability standards set forth in 40 CFR 60.32b must have been in compliance with all requirements of the amended EG no later than May 10, 2011 (*see* 40 CFR 60.39b(h)).

(6) Testing, monitoring, reporting, and recordkeeping requirements for the designated facilities;

(7) Records of the public hearing on the revised state plan; and,

(8) Provisions for annual state progress reports to the EPA on implementation of the revised state plan.

The EPA reviewed New York's revised state plan for approval against the following criteria: 40 CFR 60.23 through 60.26, "Subpart B—Adoption and Submittal of State Plans for Designated Facilities," "Subpart Cb—Emissions Guidelines and Compliance Times for Large Municipal Waste Combustors That are Constructed on or Before September 20, 1994," and 40 CFR part 62 subpart A, "General Provisions" for "Approval and Promulgation of State Plans for Designated Facilities and Pollutants."

On September 10, 2018 (*see* 83 FR 45589), the EPA proposed to determine that New York's revised state plan for large MWC units includes all the required state plan elements described in the amended EG and, therefore, the EPA proposed approval of New York's July 12, 2013 state plan submittal.

III. What comments were received in response to the EPA's proposed action?

In response to the EPA's September 10, 2018 (*see* 83 FR 45589) proposed rulemaking on New York's state plan submission for existing large MWCs, the EPA received two comments during the 30-day public comment period. The first public comment, posted on October 9, 2018, supports the EPA's proposed rulemaking to approve New York's state plan. Also, the EPA has determined that the second public comment, posted on October 17, 2018, is outside the scope of our proposed action and fails to identify any material issue necessitating a response. The second public comment does not raise any issues germane to the EPA's proposed action. For these reasons, the EPA will not provide a specific response to the second public comment. The specific public comments may be viewed under Docket ID Number EPA-R02-OAR-2018-0564 on the <http://www.regulations.gov> website.

IV. What is the EPA's conclusion?

The EPA has determined that New York's revised state plan meets all the applicable approval criteria as discussed above and, therefore, the EPA is approving New York state's CAA sections 111(d) and 129 revised state plan for existing large municipal waste combustor units.

V. Incorporation by Reference

In accordance with the requirements of 1 CFR 51.5, the EPA is finalizing regulatory text that includes the incorporation by reference of Table 2 of subdivision 200.10(b) at Part 200 of Title 6 NYCRR (effective October 20, 2007) which is part of the CAA section 129 plan applicable to existing large MWCs in New York. The regulatory provision at 6 NYCRR section 200.10(b), entitled, "Delegated Federal New Source Performance Standards of 40 CFR 60," incorporates by reference the Emission Guidelines (EG) for existing large MWCs, promulgated by the EPA at 40 CFR part 60 subpart Cb, and establishes emission standards and compliance times for the control of lead, mercury, cadmium, organics, hydrogen chloride, and other air pollutants from certain MWCs that commenced construction on or before September 20, 1994. The EPA has made, and will continue to make, Table 2 of subdivision 200.10(b) at Part 200 of Title 6 NYCRR generally available electronically through www.regulations.gov, Docket No. EPA-R02-OAR-2018-0564 and in hard copy at the EPA Region 2 office (please contact the person identified in the **FOR**

FURTHER INFORMATION CONTACT section of this preamble for more information). Therefore, these materials have been approved by EPA for inclusion in the state plan, have been incorporated by reference by EPA into that plan, and are fully federally enforceable under the CAA as of the effective date of the final rulemaking.

VI. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a CAA section 111(d)/129 plan submission that complies with the provisions of the Act and applicable federal regulations. *See* 42 U.S.C. 7411(d); 40 CFR part 60 subparts B and Cb; and 40 CFR part 62 subpart A; and 40 CFR 62.04. Thus, in reviewing CAA section 111(d)/129 plan submissions, the EPA's role is to approve state choices, provided that they meet the criteria of the Act and implementing regulations. Accordingly, this action, as finalized, merely approves state law that meets federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action, as finalized:

- Is not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, Oct. 4, 1993) and Executive Order 13563 (76 FR 3821, Jan. 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, Aug. 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 CAA; 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, Feb. 16, 1994).

In addition, this final rule 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, Nov. 9, 2000).

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, which was included as part of 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 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 CAA, 42 U.S.C. 7607(b)(1), petitions for judicial review of this action must be filed in the United States Court of Appeals for the Second Circuit by November 2, 2021. 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), 42 U.S.C. 7607(b)(2).)

List of Subjects in 40 CFR Part 62

Environmental protection, Administrative practice and procedure, Air pollution control, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping requirements, Sulfur oxides, Waste treatment and disposal.

Dated: August 26, 2021.
Walter Mugdan,
Acting Regional Administrator, Region 2.

For the reasons stated in the preamble, the Environmental Protection Agency amends 40 CFR part 62 as set forth below:

PART 62—APPROVAL AND PROMULGATION OF STATE PLANS FOR DESIGNATED FACILITIES AND POLLUTANTS

■ 1. The authority citation for part 62 continues to read as follows:

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

Subpart HH—New York

■ 2. Amend § 62.8103, by adding paragraphs (d) through (g) to read as follows:

§ 62.8103 Identification of plan.

* * * * *

(d) Identification of plan: On July 12, 2013, the New York State Department of Environmental Conservation (NYSDEC) submitted to the Environmental Protection Agency (EPA) a Clean Air Act section 111(d)/129 revised plan, and the associated Table 2 of subdivision 200.10(b) at Part 200 of Title 6 NYCRR, addressing 40 CFR part 60 subpart Cb, “Emissions Guidelines and Compliance Times for Large Municipal Waste Combustors That are Constructed on or Before September 20, 1994,” as amended on May 10, 2006. The plan includes the regulatory provisions cited in paragraph (g) of this section, which the EPA incorporates by reference.

(e) Identification of sources: The plan applies to all existing facilities in New York with a municipal waste combustion capacity greater than 250 tons per day of municipal solid waste for which construction commenced on or before September 20, 1994, and which are subject to 40 CFR part 60 subpart Cb.

(f) Effective date: The effective date of the plan for October 4, 2021.

(g) Incorporation by reference:
 (1) The material incorporated by reference in this section was approved by the Director of the Federal Register Office in accordance with 5 U.S.C. 552(a)(1) and 1 CFR part 51. The material is available from the sources identified elsewhere in this paragraph. It may be inspected or obtained from the EPA Region 2 Office, 290 Broadway, 25th Floor, New York, New York 10007–1866, 212–637–3378. It may be inspected 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: *www.archives.gov/federal-register/cfr/ibr-locations.html*.
 (2) State of New York, Department of State, Albany, New York 12231; *https://dos.ny.gov/state-register*.
 (i) 6 NYCRR sec. 200.10(b)—Cb: Official Compilation of (New York) Codes, Rules and Regulations; Title 6—Environmental Conservation; Part 200—General Provisions; Section 200.10—Federal standards and requirements; Paragraph (b)—Table 2—Delegated Federal New Source Performance Standards of 40 CFR 60, entry Cb, Large Municipal Waste Combustors That are Constructed on or Before September 20, 1994; effective September 4, 2019 (original effective date: October 20, 2007)
 (ii) [Reserved]

[FR Doc. 2021–19005 Filed 9–2–21; 8:45 am]
BILLING CODE 6560–50–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 25

[**IB Docket No. 06–160; FCC 19–93; FR ID 17010**]

Processing Applications in the Digital Broadcast Satellite Service

AGENCY: Federal Communications Commission.
ACTION: Final rule.

SUMMARY: In this Report and Order, the Federal Communications Commission (FCC) amends its rules to establish a licensing and regulatory framework for space stations in the Digital Broadcast Satellite Service in the 12.2–12.7 GHz and 17.3–17.8 GHz frequency bands that harmonizes the rules regulating DBS with those regulating geostationary-satellite orbit Fixed-Satellite Service systems.

DATES: Effective October 4, 2021, except for instructions 3 (47 CFR 25.108(c)(5) and (6)), 5 (47 CFR 25.114(a)(3)) and 7 (47 CFR 25.140(b)(6)). The FCC will publish a document in the **Federal Register** announcing the effective date for those sections.

The incorporation by reference of certain publications listed in the rule is approved by the Director of the Federal Register as of October 4, 2021, except for the material referenced in 47 CFR 25.140. The FCC will publish a document in the **Federal Register** announcing the approval date of the material in that section.

FOR FURTHER INFORMATION CONTACT: Sean O’More, International Bureau, Satellite Division, 202–418–2453, *sean.omore@fcc.gov*.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Report and Order, FCC 19–93, adopted September 26, 2019, and released September 27, 2019. The full text of the Report and Order is available at https://apps.fcc.gov/edocs_public/attachmatch/FCC-19-93A1.pdf. To request materials in accessible formats for people with disabilities, send an email to FCC504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202–418–0530 (voice), 202–418–0432 (TTY).

Paperwork Reduction Act

This document contains new and modified information collection requirements. The Commission, as part of its continuing effort to reduce paperwork burdens, invited the general public and the Office of Management and Budget to comment on the information collection requirements contained in this document, as required by the Paperwork Reduction Act of 1995. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, we sought specific comment on how we might further reduce the information collection burden for small business concerns with fewer than 25 employees.

Congressional Review Act

The Commission has determined, and the Administrator of the Office of Information and Regulatory Affairs, Office of Management and Budget concurs, that these rules are “non-major under the Congressional Review Act, 5 U.S.C. 804(2). The Commission will send a copy of this Report & Order to Congress and the Government Accountability Office pursuant to 5 U.S.C. 801(a)(1)(A).

Synopsis

In this Order, the Commission establishes a licensing and regulatory framework for DBS satellite systems analogous to that which currently exists for geostationary (GSO) Fixed-Satellite Service (FSS) systems. First, the Commission will process requests for new DBS service on the same “first-come, first-served” basis—including an optional, two-step application process—that governs GSO FSS licensing. Second, the Commission applies the milestone and bond requirements for the geostationary Fixed-Satellite Service to DBS. Third, the Commission extends the license terms of non-broadcast DBS space stations from 10 to 15 years. Fourth, the Commission lifts the “freeze” on new DBS applications that has been in place since 2006, when the Commission last proposed changes to the DBS licensing regime in a 2006 Notice of Proposed Rulemaking (2006

Notice). Finally, the Commission clarifies that requests for new DBS at orbital locations less than nine degrees apart will be accepted, but that any new DBS systems at such reduced-spacing orbital locations must not increase interference to DBS systems at the internationally-planned nine-degree orbital locations.

While the Commission currently has no DBS license applications before it, clarification of the rules and harmonization of those rules with the recently-updated rules governing the licensing of GSO FSS will facilitate the licensing of new DBS systems and may encourage interest in new DBS systems.

License Application Processing Procedures. The Commission adopts rules for processing requests to provide new DBS service to U.S. consumers. These rules apply to any future request to provide DBS service to the United States using the 12.2–12.7 GHz band (space-to-Earth) and associated feeder links in the 17.3–17.8 GHz band (Earth-to-space), including channels not currently licensed at orbit locations assigned to the United States under the International Telecommunication Union (ITU) Region 2 BSS and feeder-link Plans (Region 2 Plan), as well as DBS service from space stations located at orbital locations not assigned to the United States in the ITU Region 2 BSS and feeder-link Plans.

The Commission will treat requests to provide DBS using a “first-come, first-served” licensing approach used for GSO-like FSS and to eliminate DBS competitive bidding procedures. Based on the court holding in *Northpoint* and the record in response to the 2006 Notice, the Commission concludes that DBS licenses cannot be auctioned at this time.

DBS is similar to GSO FSS, except for certain technical features required to protect DBS consumers from interference while using small receive-only antennas, and therefore DBS is well suited to using the same processing procedure as used for GSO FSS. Comments received in response to the *Second NPRM* in this proceeding supported use of “first-come, first-served” procedures for DBS.

Application Processing Framework. The Commission applies the streamlined procedures we recently adopted for FSS space stations in the *Part 25 Streamlining Order*.

Applications for authority to construct, deploy and operate a space station to provide DBS service, or requests for U.S. market access to provide DBS service to earth stations in the United States using a non-U.S. licensed space station under section

25.137 of the Commission's rules, must provide the technical information required by section 25.114 of the Commission's rules. Of particular applicability to DBS service, the following technical information must be provided under section 25.114: (1) Whether the space station is to be operated on a broadcast or non-broadcast basis; and (2) information and analyses in the event that the technical characteristics of the proposed system differ from those in the Appendix 30 BSS Plans, the Appendix 30A feeder link Plans, Annex 5 to Appendix 30 or Annex 3 to Appendix 30A of the ITU Radio Regulations.

Milestone and Bond. The Commission will apply sections 25.164 (Milestones) and 25.165 (Surety Bonds) to authorizations and grants of U.S. market access to provide DBS service. The Commission's milestone and bond requirements are intended to deter warehousing by satellite operators before a proposed space station has been launched and begun operations. In this instance, warehousing refers to the retention of preemptive rights to use spectrum and orbital resources by an entity that does not intend to bear the cost and risk of constructing, launching, and operating an authorized space station, is not fully committed to doing so, or finds out after accepting the license that it is unable to fulfill the associated obligations. Such milestone requirements extend not only to U.S. licensees, but also to operators of non-U.S. licensed space stations that have been granted access to the U.S. market.

In 2015, the Commission substantially streamlined the milestone and bond provisions contained in sections 25.164 and 25.165 of the Commission rules. Specifically, the Commission eliminated all of the space station construction milestones, except the requirements to bring a space station into operation at the assigned location within a specified period of time. Also, in order to provide better incentives against spectrum warehousing, the Commission modified the space station bond requirement to increase liability over time.

License Term. The Commission extends the license term for DBS space stations not licensed as broadcast facilities to 15 years from the current term of 10 years. Currently, licenses for DBS space stations licensed as broadcast facilities are issued for a period of 8 years, and licenses for DBS space stations not licensed as broadcast facilities are issued for 10 years. The 8-year term for broadcast stations is established by the Communications Act. Because all current DBS licensees offer subscription services, all existing DBS

operators are classified as non-broadcast licensees and their license terms were extended to 10 years. Subsequently, the Telecommunications Act of 1996 granted the Commission authority to establish license terms longer than 10 years for non-broadcast stations.

The Commission concludes that issuing non-broadcast DBS space station licenses for 15 years would better reflect the useful life of new DBS satellites, as our extension of the license term for such DBS space stations from 5 to 10 years did in 1995. There are no technical or engineering considerations that render the operating life of a DBS satellite shorter than the operating life of a non-DBS satellite, such as those used to provide GSO FSS, and DBS satellites generally are able to provide service beyond their initial 10-year license terms. It would also make DBS space station license terms consistent with the terms of most other space stations.

Optional Two-Step FCC/ITU License Application Process. The Commission adopted an optional two-step application process for GSO FSS applicants in 2015. Under that two-step application process, an applicant for a GSO FSS license using frequencies in “unplanned” bands must submit a draft Coordination Request filing to the Commission using a simplified application form—Form 312 (Main Form)—pay the full license application fee and post a \$500,000 bond in order to establish and perfect a queue position. This first-step application submission establishes a place in the space station application processing queue as of the time of filing of the simplified Form 312 with the Commission. As a second step, the prospective licensee must file a complete license application within two years of submission of the Coordination Request materials or forfeit the value of the bond and lose the queue status gained by the prior Coordination Request filing. This two-step application process is completely optional, and, as an alternative, applicants may file a full application without first submitting a draft Coordination Request or posting the corresponding \$500,000 bond. The Commission adopted a similar two-step application process for GSO FSS operation in “planned” frequency bands subject to Appendix 30B of the ITU Radio Regulations. The Commission extends the two-step process for GSO FSS operations in unplanned bands to DBS operations in planned bands, and, in this respect, will treat ITU filings to modify an existing frequency assignment in the Region 2 Plan, to include a new frequency assignment in

the Region 2 Plan, or to include a new or modified frequency assignment in the List of the Regions 1 and 3 Plan in the same manner as a Coordination Request filing for GSO FSS operation in non-planned bands.

Unlike Coordination Requests in non-planned bands, however, the Commission will review a proposed filing under Appendices 30 and 30A prior to forwarding the filing to the ITU to ensure that it is compatible with other U.S. filings. This review is necessary to protect the rights of existing U.S. filings from being unduly eroded under the relevant ITU protection criteria by another U.S. filing. Accordingly, the party requesting a planned-band filing must either submit the results of an analysis demonstrating that the proposed operation will not “affect” any other U.S. filing under the relevant ITU criteria or, if another filing would be deemed affected, submit a letter signed by the affected operator (which may be the same as the operator requesting the new filing) that it consents to the new filing. This review is consistent with our conclusions above regarding the processing of all requests for DBS service. The Commission likewise requires applicants for DBS licenses using the two-step procedure to submit the application filing fee and a bond of \$500,000 with their applications and ITU filings. As noted above, in the FSS licensing framework, an applicant submission with the Commission under the first step of the optional two-step procedure must be accompanied by the application fee and a \$500,000 bond. The purpose of the application-stage bond is to deter speculation during the two-year period of queue priority before the applicant must submit a completed application. The Commission finds that these considerations also apply to DBS licensees.

Non-U.S. Licensed Systems. With the exception of the two-step processing procedure discussed above, the Commission also applies procedures and requirements proposed for DBS service license applications to requests to access the United States market by non-U.S. licensed space stations under our DISCO II framework. The Commission notes that the Commission decided in the DISCO II proceeding that entities wishing to serve the United States with a non-U.S. satellite, including DBS satellites, must file the same information as applicants for a U.S. space station license, whether or not that satellite is already licensed by another administration. Consequently, operators of non-U.S. licensed DBS space station seeking U.S. market access

and entities filing earth station applications to access non-U.S. licensed DBS space stations must file the same information required under section 25.114 of the Commission’s rules.

The Commission further notes that the United States took an exemption from the World Trade Organization’s Basic Telecommunication Agreement for “one-way satellite transmission of DTH and DBS television services and digital audio services.” Thus, in order to serve the United States, foreign-licensed DBS systems must be found acceptable under the Effective Competitive Opportunities analysis the Commission adopted in our DISCO II proceeding in 1997 (ECO-Sat). The Commission does not intend to revisit any of these considerations. Foreign DBS systems requesting market access to serve the United States will be considered on the same first-come, first-served basis as applications for authority to provide DBS services.

Reduced Spacing for DBS Space Stations. The Commission concludes that the public interest would be served by granting requests for new DBS service via space stations at orbital locations less than nine degrees apart, but that the public interest would not be served by adopting specific rules, different from those contained in Appendices 30 and 30A of the ITU Radio Regulations, for accommodating requests for new DBS systems at reduced-spacing orbital locations. Instead, such requests can be processed using the “first-come, first-served” procedures for DBS service.

The Commission concludes that the potential benefits of adopting additional rules requiring existing DBS service providers to accommodate operations at reduced orbital spacing are outweighed by the potential harms to existing subscribers to DBS service. As an initial matter, it is not clear that access to additional DBS orbital locations is needed to introduce new video programming services since DBS subscribership is dropping in the United States as the marketplace for the distribution of video programming over the internet continues to grow and other opportunities exist to provide new video programming services in the United States in several frequency bands already allocated for satellite services. These include the 17/24 GHz BSS “reverse” band, which is specifically allocated for the provision of video programming, as well as frequency bands allocated for Ka-band GSO FSS. Furthermore, the proposals made by proponents for additional rules may require changes to the equipment currently used to provide DBS services

to subscribers—such as requiring larger customer receive antennas and changes to space station designs—or would require existing DBS providers and their subscribers to accept more interference and service unavailability than is the case today.

However, the record does show that it is possible to accommodate the provision of new DBS services at reduced orbital spacings under existing rules. Specifically, our rules already allow us to consider requests for new DBS service at reduced orbital spacings if entities making such a request can coordinate their proposed operations with other U.S. DBS operators and secure agreements with other operators already having assignments in the ITU Region 2 Plans (or with prior requests for Plan modifications). The Commission will address such requests under these existing rules rather than adopt new rules.

This approach protects current DBS consumers from interference and degradation of their video reception, while at the same time allowing potential new DBS operators to demonstrate—through careful system design, advancing technology, and coordination with existing DBS systems—that new DBS systems can operate at orbital spacings of less than nine degrees without causing harmful interference to existing systems and their customers. It will also ensure that operations at reduced orbital separations will lead to the same levels of interference observed between two DBS systems operating nine degrees apart, with co-frequency, co-coverage operation, and nominal Appendix 30 power density levels. The Commission recognizes that this will require mitigation measures by future operators at reduced orbital spacings, such as reduced power density levels or non-fully overlapping coverages, but concludes that such measures are more easily and appropriately implemented by future entrants than retroactively imposed on existing DBS operators and their subscribers.

The Commission notes that the ITU Appendix 30 and 30A ITU rules do not govern the relationship between two DBS systems operating under U.S. ITU filings, but will use the same ITU criteria to be used to determine compatibility between a new DBS application with respect to a DBS system already in the processing queue or previously authorized, even when both systems are or will be operating under U.S. ITU filings. If any of the frequency assignments of the system already in the queue or previously authorized is affected, according to the

ITU criteria, the new DBS application can still be considered compatible with this system by submission of a letter signed by the affected operator indicating that it consents to the new application.

DBS Licensing “Freeze”. The Commission imposed a “freeze” on requests for new DBS systems in 2005. Having resolved the issues that caused the Commission to impose that freeze, we lift the freeze and will begin accepting new applications for DBS licenses after the effective date of rules adopted in this Report and Order. New applications or requests for U.S. market access will be accepted only after a date specified in a public notice, which the International Bureau will release after the rules have become effective.

Final Regulatory Flexibility Analysis

As required by the Regulatory Flexibility Act of 1980, as amended (RFA), an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *Second Notice of Proposed Rulemaking (Second Notice)* released in November 2018 in this proceeding. The Commission sought written public comment on the proposals in the *Second Notice*, including comments on the IRFA. No comments were filed addressing the IRFA. This present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.

A. Need for, and Objectives of, the Proposed Rules

The Report and Order modifies the Commission’s rules and policies for licensing space stations in the Digital Broadcasting Satellite (DBS) Service. These changes, among other things, provide a licensing system under which new licenses for DBS satellites in reduced spacing orbital slots would be processed according to the Commission’s rules for geostationary orbit space stations in the Fixed-Satellite Service.

B. Legal Basis

The action is authorized under sections 4(i), 303, and 309 of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 303, 309.

C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules May Apply

The RFA directs agencies to provide a description of, and, where feasible, an estimate of, the number of small entities that may be affected by adoption of proposed rules. The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,”

and “small governmental jurisdiction.” In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act. A small business concern is one which: (1) Is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA). Below, we describe and estimate the number of small entity licensees that may be affected by adoption of the proposed rules.

Satellite Telecommunications and All Other Telecommunications

The rules adopted in this Report and Order affect some providers of satellite telecommunications services. Satellite telecommunications service providers include satellite and earth station operators. Since 2007, the SBA has recognized two census categories for satellite telecommunications firms: “Satellite Telecommunications” and “Other Telecommunications.” Under both categories, a business is considered small if it had \$32.5 million or less in annual receipts.

The first category of Satellite Telecommunications “comprises establishments primarily engaged in providing point-to-point telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or reselling satellite telecommunications.” For this category, Census Bureau data for 2007 show that there were a total of 512 satellite communications firms that operated for the entire year. Of this total, 482 firms had annual receipts of under \$25 million.

The second category of Other Telecommunications is comprised of entities “primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation. This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems. Establishments providing internet services or voice over internet protocol (VoIP) services via client-supplied telecommunications connections are also included in this industry.” For this category, Census Bureau data for 2007 show that there

were a total of 2,383 firms that operated for the entire year. Of this total, 2,346 firms had annual receipts of under \$25 million. We anticipate that some of these “Other Telecommunications firms,” which are small entities, are earth station applicants/licenseses that might be affected if our proposed rule changes are adopted.

We anticipate that our rule changes may have an impact on earth station and space station applicants and licensees. Space station applicants and licensees, however, rarely qualify under the definition of a small entity. Generally, space stations cost hundreds of millions of dollars to construct, launch, and operate. Consequently, we do not anticipate that any space station operators are small entities that would be affected by our proposed actions.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities

The Report and Order makes several rule changes that would affect compliance requirements for earth station and space station operators. Most proposed changes, however, are directed at space station applicants and licensees. As noted above, these parties rarely qualify as small entities.

For example, we allow additional use of certain frequencies within the 17.2–17.7 GHz band, subject to compliance with technical limits designed to protect other users of the bands.

We adopt modified rules for satellite system implementation to provide additional flexibility to operators. In total, the rules adopted in the Report and Order are designed to achieve the Commission’s mandate to regulate in the public interest while imposing the lowest necessary burden on all affected parties, including small entities.

E. Steps Taken To Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered

The RFA requires an agency to describe any significant, specifically small business, alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): “(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rules for such small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.”

The NPRM proposing the rules adopted in the Report and Order sought comment from all interested parties. Specifically, small entities were encouraged to bring to the Commission’s attention any specific concerns they may have with the proposals outlined in the NPRM. No commenter addressed the impact of the rules proposed in the NPRM and adopted in the Report and Order.

In this NPRM, the Commission sought comment on means to minimize negative economic impacts on applicants and licensees, including small entities, by permitting DBS space stations in orbital locations between the currently authorized orbital locations. No commenter addressed means to minimize negative impacts on applicants and licensees, including small entities.

F. Federal Rules That May Duplicate, Overlap, or Conflict With the Proposed Rules

None.

Incorporation by Reference

This final rule incorporates by reference two elements of the ITU Radio Regulations, Edition of 2012, into part 25 for specific purposes:

(1) ITU Radio Regulations, Volume 2: Appendices, Appendix 30, “Provisions for all services and associated Plans and List for the broadcasting-satellite service in the frequency bands 11.7–12.2 GHz (in Region 3), 11.7–12.5 GHz (in Region 1) and 12.2–12.7 GHz (in Region 2),” Edition of 2012, <http://www.itu.int/pub/R-REG-RR-2012>. This Appendix establishes an international plan defining frequency assignments to space stations for each country operating in the broadcasting-satellite service in the 11.7–12.5 GHz (Region 1), 12.2–12.7 GHz (Region 2), and 11.7–12.2 GHz bands, including procedures to modify the plan to introduce new frequency assignments.

(2) ITU Radio Regulations, Volume 2: Appendices, Appendix 30A, “Provisions and associated Plans and List for feeder links for the broadcasting-satellite service (11.7–12.5 GHz in Region 1, 12.2–12.7 GHz in Region 2 and 11.7–12.2 GHz in Region 3) in the frequency bands 14.5–14.8 GHz and 17.3–18.1 GHz in Regions 1 and 3, and 17.3–17.8 GHz in Region 2,” Edition of 2012, <http://www.itu.int/pub/R-REG-RR-2012>. This Appendix establishes an international plan defining frequency assignments for feeder links to space stations for each country operating in the fixed-satellite service in 14.5–14.8 GHz and 17.3–18.1 GHz in Regions 1 and 3, and 17.3–17.8 GHz in Region 2

bands, including procedures to modify the plan to introduce new frequency assignments.

(3) The materials above are available for free download at <http://www.itu.int/pub/R-REG-RR-2012>. In addition, copies of all of the materials are available for purchase from the ITU through the contact information provided in revised § 25.108, and are available for public inspection at the Commission address noted in the rule as well.

List of Subjects in 47 CFR Part 25

Administrative practice and procedure, Earth stations, Incorporation by reference, Satellites.

Federal Communications Commission.

Katura Jackson,

Federal Register Liaison Officer, Office of the Secretary.

The Federal Communications Commission amends 47 CFR part 25, as follows:

PART 25—SATELLITE COMMUNICATIONS

■ 1. The authority citation for part 25 continues to read as follows:

Authority: 47 U.S.C. 154, 302, 303, 307, 309, 310, 319, 332, 605, and 721 unless otherwise noted.

§ 25.108 [Amended]

■ 2. In § 25.108:

■ a. In paragraph (a),

■ i. Remove the words “this paragraph (a)” and add, in their place, “this section”; and

■ ii. Remove the phrase “call 202–741–6030” and add, in its place, “email fr.inspection@nara.gov; and

■ b. At the end of paragraph (c)(5), remove the phrase “§§ 25.117(h) and 25.118(e)” and add, in its place, “§§ 25.110(b), 25.117(h), and 25.118(e)”.

§ 25.108 [Amended]

■ 3. Delayed indefinitely, in § 25.108, at the end of paragraphs (c)(5) and (6), remove the phrase “25.117(h), and 25.118(e)” and add, in its place, “25.117(h), 25.118(e), and 25.140(b)”.

■ 4. Amend § 25.110 by revising paragraphs (b)(3) introductory text and (b)(3)(iii) and adding paragraph (b)(3)(iv) to read as follows:

§ 25.110 Filing of applications, fees, and number of copies.

* * * * *

(b)(3) A license application for 17/24 GHz BSS space station operation, for GSO FSS space station operation, or for GSO space station operation subject to the provisions in Appendices 30 and 30A of the ITU Radio Regulations

(incorporated by reference, see § 25.108) may be submitted in two steps, as follows:

* * * * *

(iii) An application for GSO space station operation subject to the provisions in Appendices 30 and 30A of the ITU Radio Regulations (incorporated by reference, see § 25.108) may be initiated by submitting to the Commission, in accordance with the applicable provisions of part 1, subpart Y of this chapter, a draft ITU filing to: modify an existing frequency assignment in the Region 2 Plan; to include a new frequency assignment in the Region 2 Plan; or to include a new or modified frequency assignment in the List of the Regions 1 and 3 Plan, accompanied by a simplified Form 312 and a declaration of acceptance of ITU cost-recovery responsibility in accordance with § 25.111(d). The simplified Form 312, Main Form submission must include the information required by items 1–17, 43, 45, and 46. In addition, the applicant must submit the results of an analysis demonstrating that no U.S. filing under Appendix 30 and 30A would be deemed affected by the proposed operation under the relevant ITU criteria or, for any affected filings, a letter signed by the affected operator that it consents to the new filing.

(iv) An application initiated pursuant to paragraphs (b)(3)(i), (ii), or (iii) of this section will be considered completed by the filing of an FCC Form 312 and the remaining information required in a complete license application, including the information required by § 25.114, within two years of the date of submission of the initial application materials.

* * * * *

■ 5. Delayed indefinitely, amend § 25.114 by revising paragraph (a)(3) to read as follows:

§ 25.114 Applications for space station authorizations.

(a) * * *

(3) For an application filed pursuant to the two-step procedure in § 25.110(b)(3), the filing pursuant to § 25.110(b)(3)(iv) must be submitted on FCC Form 312, Main Form and Schedule S, with attached exhibits as required by paragraph (d) of this section, and must constitute a comprehensive proposal.

* * * * *

■ 6. Amend § 25.121 by revising paragraph (a)(1) to read as follows:

§ 25.121 License term and renewals.

(a) * * * (1) Except for licenses for SDARS space stations and terrestrial repeaters, DBS and 17/24 GHz BSS space stations licensed as broadcast facilities, and licenses for which the application was filed pursuant to §§ 25.122 and 25.123, licenses for facilities governed by this part will be issued for a period of 15 years.

* * * * *

■ 7. Delayed indefinitely, amend § 25.140 by revising the section heading and adding paragraph(b)(6) to read as follows:

§ 25.140 Further requirements for license applications for GSO space station operation in the FSS and the 17/24 GHz BSS.

* * * * *

(b) * * *

(6) In addition to the information required by § 25.114, an applicant for a GSO space station operating in the frequencies of the ITU Appendices 30 and 30A (incorporated by reference, see § 25.108) must provide a statement that the proposed operation will take into account the applicable requirements of these Appendices of the ITU Radio Regulations and a demonstration that it is compatible with other U.S. ITU filings

under Appendices 30 and 30A or, for any affected filings, a letter signed by the affected operator indicating that it consents to the new application.

* * * * *

§ 25.148 [Amended]

■ 8. Amend § 25.148 by removing and reserving paragraphs (b), (d), and (e).

■ 9. Amend § 25.164 by revising paragraph (a) to read as follows:

§ 25.164 Milestones.

(a) The recipient of an initial license for a GSO space station, other than a SDARS space station, granted on or after August 27, 2003, must launch the space station, position it in its assigned orbital location, and operate it in accordance with the station authorization no later than five years after the grant of the license, unless a different schedule is established by this chapter or the Commission.

* * * * *

■ 10. Amend § 25.165 by revising paragraph (a) introductory text to read as follows:

§ 25.165 Surety bonds.

(a) For all space station licenses issued after September 20, 2004, other than licenses for SDARS space stations, space stations licensed in accordance with § 25.122 or § 25.123, and replacement space stations as defined in paragraph (e) of this section, the licensee must post a bond within 30 days of the grant of its license. Space station licensed in accordance with § 25.122 or § 25.123 must post a bond within one year plus 30 days of the grant of the license. Failure to post a bond will render the license null and void automatically.

* * * * *

[FR Doc. 2021–18043 Filed 9–2–21; 8:45 am]

BILLING CODE 6712-01-P

Proposed Rules

Federal Register

Vol. 86, No. 169

Friday, September 3, 2021

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 HOMELAND SECURITY

Office of the Secretary

6 CFR Part 5

[Docket No. DHS–2021–0029]

Privacy Act of 1974: Implementation of Exemptions; U.S. Department of Homeland Security/Office of the Immigration Detention Ombudsman–001 Office of the Immigration Detention Ombudsman System of Records

AGENCY: Office of the Immigration Detention Ombudsman, U.S. Department of Homeland Security.

ACTION: Notice of proposed rulemaking.

SUMMARY: The U.S. Department of Homeland Security (DHS) is giving concurrent notice of a newly established system of records pursuant to the Privacy Act of 1974 for the “DHS/Office of the Immigration Detention Ombudsman (OIDO)–001 Office of the Immigration Detention Ombudsman System of Records” and this proposed rulemaking. In this proposed rulemaking, the Department proposes to exempt portions of the system of records from one or more provisions of the Privacy Act because of criminal, civil, and administrative enforcement requirements.

DATES: Comments must be received on or before October 4, 2021.

ADDRESSES: You may submit comments, identified by docket number DHS–2021–0029, by one of the following methods:

- *Federal e-Rulemaking Portal:* <http://www.regulations.gov>. Follow the instructions for submitting comments.
- *Fax:* 202–343–4010.
- *Mail:* Lynn Parker Dupree, Chief Privacy Officer, Privacy Office, U.S. Department of Homeland Security, Washington, DC 20528.

Instructions: All submissions received must include the agency name and docket number for this document. All comments received will be posted

without change to <http://www.regulations.gov>, including any personal information provided.

Docket: For access to the docket to read background documents or comments received, go to <http://www.regulations.gov>.

FOR FURTHER INFORMATION CONTACT: For general and privacy questions, please contact: Lynn Parker Dupree, (202) 343–1717, Privacy@hq.dhs.gov, Chief Privacy Officer, Privacy Office, U.S. Department of Homeland Security, Washington, DC 20528–0655.

SUPPLEMENTARY INFORMATION:

I. Background

The U.S. Department of Homeland Security (DHS) Office of the Immigration Detention Ombudsman (OIDO) is giving notice that it proposes to establish a new DHS system of records notice (SORN) titled, “DHS/OIDO–001 Office of the Immigration Detention Ombudsman System of Records.” OIDO is an independent component within DHS tasked with reviewing and resolving individual complaints and providing independent oversight of immigration detention facilities, including conducting announced and unannounced inspections, reviewing contract terms for immigration detention facilities and services, and making recommendations and reporting to Congress on findings. OIDO is creating this system of records to collect and maintain records related to individual complaints from or about individuals in immigration detention regarding potential violations of law, individual rights, standards of professional conduct, contract terms, or policy related to immigration detention by any officer or employee of CBP or ICE, or any contracted, subcontracted, or cooperating entity personnel.

Consistent with DHS’s information sharing mission, information stored in the DHS/OIDO–001 Office of the Immigration Detention Ombudsman System of Records may be shared with other DHS Components that have a need to know the information to carry out their national security, law enforcement, immigration, intelligence, or other homeland security functions. In addition, DHS/OIDO may share information with appropriate federal, state, local, tribal, territorial, foreign, or international government agencies

consistent with the routine uses set forth in this system of records notice.

A full description of this new SORN can be found in the **Federal Register**.

II. Privacy Act

The fair information practice principles found in the Privacy Act underpin the statutory framework governing the means by which Federal Government agencies collect, maintain, use, and disseminate individuals’ records. The Privacy Act applies to information that is maintained in a “system of records.” A “system of records” is a group of any records under the control of an agency from which information is retrieved by the name of the individual or by some identifying number, symbol, or other identifying particular assigned to the individual. In the Privacy Act, an individual is defined as U.S. citizens and lawful permanent residents. Additionally, the Judicial Redress Act (JRA) provides a statutory right to covered persons to make requests for access and amendment to covered records, as defined by the JRA, along with judicial review for denials of such requests. In addition, the JRA prohibits disclosures of covered records, except as otherwise permitted by the Privacy Act.

The Privacy Act allows government agencies to exempt certain records from the access and amendment provisions. If an agency claims an exemption, however, it must issue a Notice of Proposed Rulemaking to make clear to the public the reasons why a particular exemption is claimed.

DHS is claiming exemptions from certain requirements of the Privacy Act for DHS/OIDO–001 Office of the Immigration Detention Ombudsman System of Records. Information covered by this system of records notice relates to official DHS national security and law enforcement missions, and exemptions are needed to protect information relating to DHS activities from disclosure to subjects or others related to these activities. Specifically, the exemptions are required to preclude subjects of these activities from frustrating these processes; to avoid disclosure of activity techniques; ensure DHS’s ability to obtain information from third parties and other sources; and to protect the privacy of third parties. Disclosure of information to the subject of the inquiry could also undermine the entire investigative process.

In appropriate circumstances, when compliance would not appear to interfere with or adversely affect the law enforcement purposes of this system and the overall law enforcement process, the applicable exemptions may be waived on a case-by-case basis.

A system of records notice for DHS/OIDO–001 Office of the Immigration Detention Ombudsman System of Records is also published in this issue of the **Federal Register**.

List of Subjects in 6 CFR Part 5

Freedom of information; Privacy.

For the reasons stated in the preamble, DHS proposes to amend chapter I of title 6, Code of Federal Regulations, as follows:

PART 5—DISCLOSURE OF RECORDS AND INFORMATION

■ 1. The authority citation for part 5 continues to read as follows:

Authority: 6 U.S.C. 101 *et seq.*; Pub. L. 107–296, 116 Stat. 2135; 5 U.S.C. 301.

Subpart A also issued under 5 U.S.C. 552.

Subpart B also issued under 5 U.S.C. 552a.

■ 2. In appendix C to part 5, add paragraph 86 to read as follows:

Appendix C to Part 5—DHS Systems of Records Exempt From the Privacy Act

* * * * *

86. The DHS/OIDO–001 Office of the Immigration Detention Ombudsman System of Records consists of electronic and paper records and will be used by DHS and its components. The DHS/OIDO–001 Office of the Immigration Detention Ombudsman System of Records is a repository of information held by DHS in connection with its several and varied missions and functions, including, but not limited to the enforcement of civil and criminal laws, and investigations, inquiries, and proceedings there under. The DHS/OIDO–001 Office of the Immigration Detention Ombudsman System of Records contains information that is collected by, on behalf of, in support of, or in cooperation with DHS and its components and may contain personally identifiable information collected by other federal, state, local, tribal, foreign, or international government agencies.

The Secretary of Homeland Security, pursuant to 5 U.S.C. 552a(k)(2) and (k)(5), has exempted this system from the following provisions of the Privacy Act: 5 U.S.C. 552a(c)(3); (d); (e)(1), (e)(4)(G), (e)(4)(H), (e)(4)(I); and (f). Where a record received from another system has been exempted in that source system under 5 U.S.C. 552a(j)(2), (k)(2), or (k)(5), DHS will claim the same exemptions for those records that are claimed for the original primary systems of records from which they originated and claims any additional exemptions set forth here.

Exemptions from these particular subsections are justified, on a case-by-case basis to be determined at the time a request is made, for the following reasons:

(a) From subsection (c)(3) (Accounting for Disclosures) because release of the accounting of disclosures could alert the subject of an investigation of an actual or potential criminal, civil, or regulatory violation to the existence of that investigation and reveal investigative interest on the part of DHS as well as the recipient agency. Disclosure of the accounting would therefore present a serious impediment to law enforcement efforts and efforts to preserve national security. Disclosure of the accounting would also permit the individual who is the subject of a record to impede the investigation, to tamper with witnesses or evidence, and to avoid detection or apprehension, which would undermine the entire investigative process. When an investigation has been completed, information on disclosures made may continue to be exempted if the fact that an investigation occurred remains sensitive after completion.

(b) From subsection (d) (Access and Amendment to Records) because access to the records contained in this system of records could inform the subject of an investigation of an actual or potential criminal, civil, or regulatory violation to the existence of that investigation and reveal investigative interest on the part of DHS or another agency. Access to the records could permit the individual who is the subject of a record to impede the investigation, to tamper with witnesses or evidence, and to avoid detection or apprehension. Amendment of the records could interfere with ongoing investigations and law enforcement activities. Further, permitting amendment to counterintelligence records after an investigation has been completed would impose an unmanageable administrative burden. In addition, permitting access and amendment to such information could disclose security-sensitive information that could be detrimental to homeland security.

(c) From subsection (e)(1) (Relevancy and Necessity of Information) because in the course of investigations into potential violations of federal law, the accuracy of information obtained or introduced occasionally may be unclear, or the information may not be strictly relevant or necessary to a specific investigation. In the interests of effective law enforcement, it is appropriate to retain all information that may aid in establishing patterns of unlawful activity.

(d) From subsections (e)(4)(G), (e)(4)(H), and (e)(4)(I) (Agency Requirements) and (f) (Agency Rules), because portions of this system are exempt from the individual access provisions of subsection (d) for the reasons noted above, and therefore DHS is not required to establish requirements, rules, or procedures with respect to such access. Providing notice to individuals with respect to existence of records pertaining to them in the system of records or otherwise setting up procedures pursuant to which individuals may access and view records pertaining to themselves in the system would undermine investigative efforts and reveal the identities

of witnesses, and potential witnesses, and confidential informants.

Lynn Parker Dupree,
Chief Privacy Officer, U.S. Department of Homeland Security.

[FR Doc. 2021–18797 Filed 9–2–21; 8:45 am]

BILLING CODE 9112–AS–P

DEPARTMENT OF AGRICULTURE

Food Safety and Inspection Service

9 CFR Chapter III

[Docket No. FSIS–2020–0036]

RIN 0583–AD89

Labeling of Meat or Poultry Products Comprised of or Containing Cultured Animal Cells

AGENCY: Food Safety and Inspection Service, USDA.

ACTION: Advance notice of proposed rulemaking.

SUMMARY: The Food Safety and Inspection Service (FSIS) is publishing this advance notice of proposed rulemaking (ANPR) to request comments pertaining to the labeling of meat and poultry products comprised of or containing cultured cells derived from animals subject to the Federal Meat Inspection Act or the Poultry Products Inspection Act. Issues raised in the comments submitted in response to this ANPR will inform future rulemaking to establish labeling requirements for these products. This ANPR also discusses how FSIS will generally evaluate labels for these products if they are submitted before the Agency completes rulemaking.

DATES: Submit comments on or before November 2, 2021.

ADDRESSES: FSIS invites interested persons to submit comments on this document. Comments may be submitted by one of the following methods:

- *Federal eRulemaking Portal:* This website provides the ability to type short comments directly into the comment field on this web page or attach a file for lengthier comments. Go to <https://www.regulations.gov>. Follow the on-line instructions at that site for submitting comments.

- *Mail:* Send to Docket Clerk, U.S. Department of Agriculture, Food Safety and Inspection Service, 1400 Independence Avenue SW, Mailstop 3758, Washington, DC 20250–3700.

- *Hand- or courier-delivered submittals:* Deliver to 1400 Independence Avenue SW, Jamie L. Whitten Building, Room 350–E, Washington, DC 20250–3700.

Instructions: All items submitted by mail or electronic mail must include the Agency name and docket number FSIS–2020–0036. Comments received in response to this docket will be made available for public inspection and posted without change, including any personal information, to <https://www.regulations.gov>.

Docket: For access to background documents or comments received, call (202) 720–5627 to schedule a time to visit the FSIS Docket Room at 1400 Independence Avenue SW, Washington, DC 20250–3700.

FOR FURTHER INFORMATION CONTACT: Rachel Edelstein, Assistant Administrator, Office of Policy and Program Development by telephone at (202) 205–0495.

SUPPLEMENTARY INFORMATION:

I. Background

This ANPR concerns the labeling of meat and poultry products produced using animal cell culture technology, including how these products are to be identified and described specifically in regard to their nature, source, or characteristics. Animal cell culture technology is a process that involves taking a small number of cells from living animals and growing them in a controlled environment to create food, among other things. Scientists typically start with a sample of cells from the tissue of an animal, some of which are selected, screened, and stored for future use. Later, some of these stored cells are retrieved and placed in a controlled environment with appropriate nutrients and other factors to support growth and cellular multiplication. After the cells have multiplied, additional inputs such as growth factors, new surfaces for cell attachment, and additional nutrients are added to the controlled environment to enable the cells to differentiate into various cell types. Once produced, the harvested cells can be processed, packaged, and marketed in the same, or similar, manner as slaughtered¹ meat and poultry products. This ANPR refers to such foods as “cultured” meat and poultry products or as products compromised of or containing “cultured” animal cells. The use of this term, however, is not intended to establish or suggest nomenclature for labeling purposes.

Many companies, both domestic and foreign, are currently developing cultured products derived from the cells of food animals amenable to the Federal Meat Inspection Act (FMIA; 21 U.S.C.

601 et. seq.) (cattle, sheep, swine, goats, and fish of the order Siluriformes, e.g., catfish) or the Poultry Products Inspection Act (PPIA; 21 U.S.C. 451 et seq.) (chickens, turkeys, ducks, geese, guineas, ratites, and squabs). Human food products derived from these species (hereinafter “meat and poultry products”) fall under FSIS jurisdiction. Under the FMIA and PPIA (hereinafter “the Acts”), FSIS regulates the labeling of all meat and poultry products under its jurisdiction to ensure such products are not misbranded (21 U.S.C. 607(d) and 457(c)). FSIS is now seeking comments to inform future regulatory requirements for the labeling of cultured meat and poultry products intended to prevent misbranding.

A. FSIS Authority Over the Labeling of Cultured Meat and Poultry Products

FSIS is the federal agency that, under the authority of the Acts, protects public health by ensuring that meat and poultry products are wholesome, not adulterated, and properly marked, labeled, and packaged. To that end, FSIS issues and enforces federal regulations to ensure, among other things, that meat and poultry products in commerce within the United States are not misbranded (21 U.S.C. 607(d) and 457(c)). With limited exceptions, U.S. states or territories may not impose requirements within the scope of the Acts—such as labeling requirements—that are in addition to, or different from, the requirements established by the Acts or their implementing regulations (21 U.S.C. 678 and 476e).

B. Relevant Misbranding Provisions Under the Acts

Under the Acts, a meat or poultry product is misbranded under a number of circumstances. In general, it is misbranded if its labeling is false or misleading in any particular (21 U.S.C. 601(n)(1) and 453(h)(1)). It is also misbranded if it is offered for sale under the name of another food (21 U.S.C. 601(n)(2) and 453(h)(2)) or if it is an imitation of another food, but not labeled as such (21 U.S.C. 601(n)(3) and 453(h)(3)).

A product is also misbranded if it purports to be or is represented as a food for which a standard of identity has been prescribed, without conforming to the standard (21 U.S.C. 601(n)(7) and 453(h)(7)). FSIS has authority to establish standards of identity for meat and poultry products to help ensure such products have the characteristics expected by consumers (21 U.S.C. 607(c) and 457(b)). Standards of identity establish specific names, terms, and information to be used on

product labels. Standards may also require the presence of certain expected ingredients in products, regulate the minimum or maximum amount of ingredients in products, or specify how products are formulated, processed, or prepared.

If a product is not covered by a standard of identity, it is misbranded unless its label bears the common or usual name of the food, if there is one, and the common or usual name of its ingredients (21 U.S.C. 601(n)(9) and 453(h)(9)). Common or usual names are generally established by common usage but, in some cases, they may be established by regulation. In the absence of either a standard of identity or appropriate common or usual name, the product must be identified by a descriptive name (9 CFR 317.2(e) and 381.117(a)).

Words or statements that are required to appear on product labeling must be in terms likely to be understood by the ordinary individual under customary conditions of purchase and use (21 U.S.C. 601(n)(6) and 453(h)(6)). In some instances, FSIS may require qualifying language to appear on product labels when necessary to ensure product names are not misleading. For example, a product identified as a “turkey-ham,” must be qualified with the statement “cured turkey thigh meat” (9 CFR 381.171).

C. FSIS Evaluation of Product Labels

To prevent misbranded products from entering commerce, the Acts require FSIS to approve meat and poultry product labels before they may be used in commerce (21 U.S.C. 607(d) and 457(c)). To that end, FSIS implements a prior approval program for labels used on meat and poultry products (9 CFR part 412). Under the program, labels that bear only mandatory labeling features², otherwise comply with the Agency’s labeling regulations, and bear only claims that are defined in the regulations or are factual statements not considered a special statement or claim, are deemed “generically approved” and, thus, not subject to FSIS review before entering commerce. These labels are, however, subject to periodic compliance verification by FSIS inspectors in the field (FSIS Directive 7221.1, *Prior Labeling Approval*).

FSIS must review and approve all other labels before they are used on products intended for distribution in

² There are up to eight mandatory label features for each product label: (1) Product name, (2) inspection legend and establishment number, (3) handling statement, (4) net weight statement, (5) ingredients statement, (6) address line, (7) nutrition facts, and (8) safe handling instructions.

¹ This ANPR refers to all meat or poultry products not produced using animal cell culture technology as “slaughtered” meat and poultry products.

commerce. This includes labels that display special statements or claims.³ Special statements or claims include those not defined by regulation or policy, organic claims, health claims, ingredient and processing method claims, structure-function claims, animal-raising claims, and instructional or disclaimer statements concerning pathogens (9 CFR 412.1(e)).⁴ Establishments must provide FSIS with documentation and data to support special statements and claims for Agency review, or the labels will not be approved.

The labels for cell cultured products under FSIS jurisdiction will be subject to premarket review under the same process as other special statements or claims. This will ensure that labeling for products developed using cell culture technology are not false or misleading, that labeling requirements are applied consistently as these novel products enter the marketplace, and that the label provides the necessary product information for consumers to make informed purchasing decisions. FSIS has provided for generic approval of labeling features, statements, and claims based on demonstrated prevalent industry understanding of the effective application of those features, statements, or claims and consumer understanding of labeling statements. No widespread industry understanding of the labeling requirements for cell cultured meat and poultry products currently exists. Similarly, consumers have not yet had experience reading these types of labels.

B. Evaluating the Need for New Labeling Requirements

FSIS has established numerous labeling requirements for meat and poultry products in response to, among other things, the advent of new methods of production. In assessing the labeling of meat and poultry products developed using new methods or technologies, the Agency typically focuses on the biological, chemical, nutritional, and organoleptic characteristics of the finished product. The statutory and regulatory definitions of meat and poultry are also pertinent.

Pursuant to 9 CFR 301.2, the term “meat” refers to the muscle of amenable

livestock that is skeletal or found in the tongue, diaphragm, heart, or esophagus, with or without the bone, skin, sinew, nerve, and blood vessels, which normally accompany such tissue and are not separated from it in the process of dressing. Meat does not include the muscle found in the lips, snout, or ears, or significant portions of bone or related components, or any amount of brain, trigeminal ganglia, spinal cord, or dorsal root ganglia.⁵ Any part of amenable livestock that is capable of use as human food, but does not qualify as “meat,” is a “meat byproduct.” Any article capable of use as human food that is made wholly or in part from any meat or other portion of amenable livestock is a “meat food product” (21 U.S.C. 601(j)).

Regarding poultry, the PPIA and its implementing regulations define the term “poultry product” as any poultry carcass or part thereof; or any product which is made wholly or in part from any poultry carcass or part thereof (21 U.S.C. 453(f); 9 CFR 381.1). The term “poultry food product” refers to any product capable of use as human food which is made in part from any poultry carcass or part thereof (9 CFR 381.1).

If a new method of production or processing alters the biological, chemical, nutritional, or organoleptic properties of meat or poultry to the extent that the resulting product no longer aligns with consumers’ expectations, FSIS establishes new label requirements to ensure consumers’ expectations are met. For example, in 1995, FSIS evaluated the need to establish new labeling requirements for mechanically separated poultry (MSP) (60 FR 55962, November 3, 1995). FSIS found that this novel method of deriving poultry products using the mechanical separation process resulted in a product whose physical form, texture, and ingredients, e.g., bone content, differ materially from those of other boneless poultry products produced by hand deboning techniques. FSIS therefore established a new standard of identity for MSP (9 CFR 381.173) to ensure consumer expectations are met.

Conversely, in 2004, FSIS evaluated the need to establish new labeling requirements for meat derived using advanced meat recovery (AMR) systems

(69 FR 1874, January 12, 2004). There, FSIS found that AMR product was comparable to meat derived by hand deboning in terms of its composition, appearance, and texture so long as it was produced in accordance with the regulations. FSIS therefore did not need to establish new labeling regulations for AMR products to meet consumer expectations. Instead, the Agency set compositional criteria for AMR products and modified the definition of “meat” to make it clear that boneless meat products, such as AMR products, may not include a significant portion of bone or related components (9 CFR 318.24).

C. FDA–FSIS Joint Agreement Regarding Oversight of Human Food Produced Using Animal Cell Technology Derived From Cell Lines of USDA–Amenable Species

On March 7, 2019, the Food and Drug Administration (FDA) and FSIS signed a formal agreement to jointly oversee the production of human food products comprised of or containing cultured cells derived from cell lines of those species covered under the Acts.⁶ The agreement describes each agency’s intended role with respect to the oversight of such products. In summary, FDA will oversee the collection, growth and differentiation of livestock and poultry cells until cell harvest. A transition from FDA to FSIS oversight will occur during the cell harvest stage. FSIS will then oversee the processing, packaging, and labeling of the resulting meat and poultry products made using animal cell culture technology.

FDA will continue to have the sole responsibility to regulate foods for animals, as well as for those foods for humans comprised of or containing cultured animal cells from species under FDA’s jurisdiction, i.e., those not amenable to the FMIA or PPIA, such as seafood species other than Siluriformes fish.⁷ In the formal agreement, FSIS and FDA have agreed to develop joint principles for product labeling and claims to ensure that FDA and FSIS regulated products are labeled consistently and transparently and work developing those principles is continuing. On October 7, 2020, FDA published a Request for Information

³ Other types of labels that require prior review include labels for religious exempt products, labels for export with deviations from domestic labeling requirements, and labels for temporary approval (9 CFR 412.1(c)).

⁴ On September 14, 2020, FSIS published the *Prior Label Approval System: Expansion of Generic Label Approval* proposed rule, which proposes amendments to the generic labeling and special statements and claims provisions of 9 CFR part 412. (85 FR 56538).

⁵ Specified risk materials (SRMs) are inedible and must be removed from all cattle presented for slaughter in accordance with 9 CFR 310.22. SRMs include the brain, skull, eyes, trigeminal ganglia, spinal cord, vertebral column (excluding the vertebrae of the tail, the transverse processes of the thoracic and lumbar vertebrae, and the wings of the sacrum), and dorsal root ganglia from cattle 30 months of age and older (9 CFR 310.22(a)(1)). SRMs also include the distal ileum of the small intestine and the tonsils from all cattle (9 CFR 310.22(a)(2)).

⁶ Formal agreement between the U.S. Department of Health and Human Services Food and Drug Administration and U.S. Department of Agriculture Office of Food Safety Regarding Oversight of Human Food Produced Using Animal Cell Technology Derived from Cell Lines of USDA–amenable Species, March 7, 2019, available at https://www.fsis.usda.gov/sites/default/files/media_file/2020-07/Formal-Agreement-FSIS-FDA.pdf.

⁷ FDA also has jurisdiction over products with 3% or less raw meat or less than 2% cooked meat or poultry meat.

(RFI), similar to this ANPR, soliciting comments on the labeling of seafood products under their jurisdiction and made using animal cell culture technology (*Labeling of Foods Comprised of or Containing Cultured Seafood Cells; Request for Information*; 85 FR 63277). FSIS will consider comments submitted in response to FDA's RFI as it develops rules governing the labeling of cell cultured products, to the extent they are relevant to the development of joint labeling principles and the regulation of meat and poultry.

D. United States Cattlemen's Association Petition

The United States Cattlemen's Association (USCA) filed a petition dated February 9, 2018, with FSIS regarding the labeling of cultured meat.⁸ The petition requests that FSIS limit the definition of "beef" to products derived from cattle born, raised, and harvested in the traditional manner, and thereby prohibit foods comprised of or containing cultured animal cells from being labeled as "beef." The petition similarly requests that FSIS limit the definition of "meat" to the tissue or flesh of animals that have been harvested in the traditional manner, and thereby prohibit foods comprised of or containing cultured animal cells from being labeled as "meat."

FSIS received over 6000 comments⁹ on the petition from trade associations, consumer advocacy groups, businesses operating in the meat, poultry, and cultured food product markets, and consumers. Most comments opposed the petition overall; however, nearly all generally agreed that cultured meat and beef should be labeled in a manner that indicates how it was produced and differentiates it from slaughtered meat products.

Several commenters, both for and against the petition, discussed the nature and source of cultured meat to support their arguments. Generally, commenters in support of the petition argued that cultured meat will not have the same characteristics as slaughtered meat or beef and, thus, should not be marketed as such. Commenters opposed to the petition, however, noted that cultured meat is derived from the same species as slaughtered meat and beef and can be produced with substantially similar characteristics as such products.

⁸ Petition 18-01 Submitted by the U.S. Cattlemen's Association, February 9, 2018, available at <https://www.fsis.usda.gov/federal-register/petitions/petition-limit-definition-beef-traditional-sources>.

⁹ Public comments on Petition 18-01 are available at <https://www.regulations.gov/document/FSIS-2018-0016-0001/comment>.

Many commenters opposed to the petition also argued that the terms "meat" and "beef" were necessary to inform consumers of the texture, shape, and function of certain cultured meat products.

Commenters in support of the petition typically favored the creation of a standard of identity to differentiate slaughtered meat and beef from cultured products. Some livestock industry organizations that opposed the petition overall, also supported the creation of a standard of identity for cultured meat products. However, most opposed to the petition argued that standards of identity are not warranted, based on their assertions that cultured products, like slaughtered products, fall within the statutory and regulatory definitions of "meat" or "meat food product" under the FMIA.

Finally, some commenters expressed concern that the petition, if granted, would hamper innovation and, thereby, hurt the meat industry. A few others opposed the petition contending that the regulation of cultured meat labeling would violate the First Amendment.

E. Public Meeting on Animal Cell Culture Technology

FSIS and FDA held a joint public meeting in October 2018 to discuss the potential hazards, oversight considerations, and labeling of cultured food products derived from livestock and poultry tissue (83 FR 46476). The aforementioned USCA petition was also a topic of discussion. Transcripts of the meeting are available on the FSIS website.¹⁰

FSIS received approximately 315 comments on the joint public meeting, many of which were concerned with the labeling of cultured meat and poultry products. Comments expressed divergent views on whether cultured meat products should be labeled "meat." Many felt the term would be misleading, arguing that cultured products are not produced in the same manner as, nor share substantially similar characteristics with, traditional meat. Some, however, felt it would be misleading *not* to refer to cultured products as "meat," arguing that such products are derived from the same amenable livestock and can be produced to have the same characteristics as slaughtered meat products.

Many on both sides of the issue agreed that the product name and other

¹⁰ USDA and FDA Joint Public Meeting on the Use of Cell Culture Technology to Develop Products Derived from Livestock and Poultry, October 23-24, 2018, available at <https://www.fsis.usda.gov/news-events/events-meetings/usda-and-fda-joint-public-meeting-use-cell-culture-technology-develop>.

information on cultured meat and poultry product labels should indicate they were made using animal cell culture technology. Some also asked FSIS to establish standards of identity for cultured products. A few commenters, however, opposed such requirements, reasoning that animal cell culture technology does not alter the basic characteristics of the foods and that a standard of identity or other new labeling rules would stifle innovation in the cultured foods industry. A few comments were also concerned that new labeling requirements would unnecessarily put cultured products at a competitive disadvantage to slaughtered products.

Commenters were also concerned with the regulation of special statements and claims on cell cultured products labels. Many comments asked FSIS to subject such claims to the same prior label approval process and oversight as slaughtered products. Others asked FSIS to establish specific guidance for such claims to ensure they are truthful and supported by sound science. A few advocated that animal cell culture technology companies be allowed to make special statements and claims about the environmental, food safety, and other benefits of their products, so long as they provide evidence to support such assertions.

F. Harvard Law School Animal Law & Policy Clinic Petition

FSIS also has received a petition from the Harvard Law School Animal Law & Policy Clinic dated June 9, 2020, concerning the labeling of products made using animal cell culture technology.¹¹ The petition requests that FSIS adopt a labeling approach for cultured meat and poultry products that respects First Amendment commercial speech protections. The petition specifically requests that FSIS establish a labeling approach that does not require new standards of identity and does not ban the use of common or usual meat or poultry terms or other product terms specified in regulatory standards of identity. The petition asserts that FSIS should wait until the Agency has a better understanding of the compositional and safety characteristics of finished products made using animal cell culture technology, and until it has had the opportunity to review proposed labels, before establishing speech restrictions that could raise constitutional

¹¹ Petition 20-03 Submitted by Harvard Law School Animal Law & Policy Clinic, June 9, 2020, available at <https://www.fsis.usda.gov/policy/petitions/>.

questions. To date, FSIS received one comment from a non-profit organization, conveying broad support for the petition.

G. U.S. Government Accountability Office Report

The U.S. Government Accountability Office (GAO) recently completed a review to, in part, understand how much information on the commercial production of cultured meat and poultry is available to federal regulators, including FSIS.¹² It found that federal regulators lack specific information on the technology being used, eventual commercial production methods, and composition of the final products. FSIS hopes to receive such information in response to this ANPR, so that it can make informed decisions regarding the labeling of these products.

II. Issues for Comment

FSIS invites comment on the issues discussed in this ANPR to help inform future rulemaking on the labeling of products made using animal cell-culture technology. Specifically, FSIS seeks responses to the questions listed below. Please explain the reasoning behind your responses in detail. Also, provide any data, studies, or other evidence that supports your response. To help FSIS review comments efficiently, please identify the question to which you are responding by its associated number and letter (e.g., “2a”) or whether you are commenting on a topic not listed below.

1. Should the product name of a meat or poultry product comprised of or containing cultured animal cells differentiate the product from slaughtered meat or poultry by informing consumers the product was made using animal cell culture technology? If yes, what criteria should the agency consider or use to differentiate the products? If no, why not?

2. What term(s), if any, should be in the product name of a food comprised of or containing cultured animal cells to convey the nature or source of the food to consumers? (e.g., “cell cultured” or “cell cultivated.”)

a. How do these terms inform consumers of the nature or source of the product?

b. What are the benefits or costs to industry and consumers associated with these terms?

c. If meat or poultry products comprised of or containing cultured animal cells were to be labeled with the term “culture” or “cultured” in their product names or standards of identity (e.g., “cell culture[d]”), would labeling differentiation be necessary to distinguish these products from other types of foods where the term “culture” or

“cultured” is used (such as “cultured celery powder”)?

3. If a meat or poultry product were comprised of both slaughtered meat or poultry and cultured animal cells, what unique labeling requirements, if any, should be required for such products?

4. What term(s), if used in the product name of a food comprised of or containing cultured animal cells, would be potentially false or misleading to consumers? For each term, please provide your reasoning.

5. What term(s), if used in the product name of a food comprised of or containing cultured animal cells, would potentially have a negative impact on industry or consumers? For each term, please provide your reasoning.

6. Should names for slaughtered meat and poultry products established by common usage (e.g., Pork Loin), statute, or regulation be included in the names or standards of identity of such products derived from cultured animal cells?

a. If so, is additional qualifying language necessary? What qualifying terms or phrases would be appropriate?

b. Do these names, with or without qualifying language, clearly distinguish foods comprised of or containing cultured animal cells from slaughtered products?

7. Should terms that specify the form of meat or poultry products (such as “fillet”, “patty”, or “steak”) be allowed to be included in or to accompany the name or standard of identity of foods comprised of or containing cultured animal cells?

a. Under what circumstances should these terms be used?

b. What information would these terms convey to consumers?

8. Should FSIS establish a regulatory standard of identity under its authorities in the FMIA and the PPIA (21 U.S.C. 607(c) and 457(b)) for foods comprised of or containing cultured animal cells?

a. If so, what would be the standard and how might compliance with the standard be verified?

b. If so, what would be the labeling terminology for products that do and do not meet a formal standard of identity? What would be the anticipated categories of use? For example, mechanically separated poultry that does not meet the standards of identity outlined in 9 CFR 381.173 may be diverted for production in broths and bases, as well as reaction flavors, *i.e.*, flavors produced by the heating of the protein source in the presence of a reducing sugar.

c. If so, what are the benefits and costs to industry if the standard of identity is established? Please provide quantitative and qualitative feedback in your response and explain the basis of any quantitative estimates.

d. If so, what are the consumer benefits and costs to the standard of identity recommended?

9. What nutritional, organoleptic (e.g., appearance, odor, taste), biological, chemical, or other characteristics, material to consumers’ purchasing and consumption decisions, vary between slaughtered meat or poultry products and those comprised of or containing cultured animal cells?

10. Should any of the definitions for “meat”, “meat byproduct”, or “meat food

product” found in 9 CFR 301.2 be amended to specifically include or exclude foods comprised of or containing cultured animal cells?

11. Should any of the definitions for “poultry product” or “poultry food product” found in 9 CFR 381.1 be amended to specifically include or exclude foods comprised of or containing cultured animal cells?

12. Should FSIS-regulated broths, bases, and reaction flavors produced from cultured animal cells be required to declare the source material in the product name, ingredient sub-listing, or elsewhere on the label?

13. Should the presence of cultured animal cells in further processed products regulated by FSIS, such as a lasagna made with cell cultured beef cells as an ingredient, be qualified on the product label? If so, how should this be qualified?

14. What label claims are likely to appear on FSIS-regulated products comprised of or containing cultured animal cells? Should FSIS develop new regulations or guidance on such claims to ensure they are neither false nor misleading?

III. Request for Economic Data and Consumer Research

Along with the above questions about the costs and benefits of labeling options for cell cultured meat and poultry, FSIS seeks economic data and consumer research to help increase its understanding of the animal cell culture technology industry and related issues regarding labeling and consumer perceptions of food made using this technology. FSIS is particularly interested in information regarding: (1) The impact of the labeling of cell cultured meat and poultry on consumers’ perception of and willingness to pay for cultured meat and poultry products; (2) the expected price per pound of cultured meat and poultry products; (for example, FSIS has reviewed recent studies that discuss consumer perception¹³ and willingness to pay¹⁴ for cultured meat products); (2) the expected price per pound of cultured meat and poultry products; (3) the number of domestic and the number of international animal cell culture technology companies estimated to enter the U.S. market (for example, FSIS is aware of eight domestic companies who belong to the Alliance for Meat, Poultry and Seafood Innovation (AMPS

¹³ Kantor, Bella Nichole, Kantor, Jonathan. *Public Attitudes and Willingness to Pay for Cultured Meat: A Cross-Sectional Experimental Study*. *Frontiers in Sustainable Food Systems*. Volume 5 (2021) pg 26. Accessed on June 22, 2021: <https://www.frontiersin.org/articles/10.3389/fsufs.2021.594650/full>.

¹⁴ Rolland NCM, Markus CR, Post MJ. *The Effect of Information Content on Acceptance of Cultured Meat in a Tasting Context*. *PLOS ONE* 15(4): e0231176(2020) Accessed on June 22, 2021: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0231176>.

¹² U.S. Government Accountability Office, *Food Safety: FDA and USDA Could Strengthen Existing Efforts to Prepare for Oversight of Cell-Cultured Meat*, April 2020, available at: <https://www.gao.gov/products/gao-20-325>.

Innovation) trade association); (4) the expected average annual volume per company, broken down by species or product type; (5) the expected number of labels per company, broken down by species or product type; (6) company size by expected revenue and number of employees; (7) data on the consumer benefits from labels that clearly identify or differentiate cultured meat and poultry products (e.g., saved research costs); and (8) information on naming conventions that would discourage consumer purchases or producer innovations and the associated economic impact. FSIS also seeks consumer research related to labeling nomenclature for products made using animal cell culture technology.

IV. Label Evaluation Prior to Rulemaking

Should any establishment wish to distribute a cultured meat or poultry product in commerce prior to related labeling rulemaking being completed, the establishment would need to submit the product label to FSIS for review. To learn about the process for submitting labels to FSIS, please see the "Labeling and Label Approval" web page.¹⁵ As discussed above, labels for cultured product are not eligible for generic approval at this time because neither industry nor consumers have experience with cultured products or their labels. Therefore, FSIS will need to review and approve cultured meat and poultry product labels before they are used in commerce to ensure they are not false or misleading. During label review, FSIS will ensure the labels clearly differentiate cell cultured product from slaughtered meat and poultry products and will ensure the labels bear all mandatory features required by the regulations for meat and poultry products. Labels approved for cell cultured meat and poultry products prior to the conclusion of this rulemaking may need to be changed for compliance with the requirements of final regulations.

V. USDA Non-Discrimination Statement

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender

expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at <https://www.usda.gov/oascr/how-to-file-a-program-discrimination-complaint> and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) *Mail*: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue SW, Washington, DC 20250-9410; (2) *fax*: (202) 690-7442; or (3) *email*: program.intake@usda.gov.

USDA is an equal opportunity provider, employer, and lender.

VI. Additional Public Notification

Public awareness of all segments of rulemaking and policy development is important. Consequently, FSIS will announce this **Federal Register** publication online through the FSIS web page located at: <https://www.fsis.usda.gov/federal-register>.

FSIS also will announce and provide a link to it through the FSIS *Constituent Update*, which is used to provide information regarding FSIS policies, procedures, regulations, **Federal Register** notices, FSIS public meetings, and other types of information that could affect or would be of interest to our constituents and stakeholders. The *Constituent Update* is available on the FSIS web page. Through the web page, FSIS is able to provide information to a much broader, more diverse audience. In addition, FSIS offers an email subscription service which provides automatic and customized access to selected food safety news and information. This service is available at

<https://www.fsis.usda.gov/subscribe>. Options range from recalls to export information, regulations, directives, and notices. Customers can add or delete subscriptions themselves and have the option to password protect their accounts.

Paul Kiecker,
Administrator.

[FR Doc. 2021-19057 Filed 9-2-21; 8:45 am]

BILLING CODE 3410-DM-P

FARM CREDIT ADMINISTRATION

12 CFR Part 615

RIN 3052-AD44

Bank Liquidity Reserve

AGENCY: Farm Credit Administration.

ACTION: Advance notice of proposed rulemaking; extension of comment period.

SUMMARY: The Farm Credit Administration (FCA or we) is extending the comment period on its Advance Notice of Proposed Rulemaking (ANPRM) that seeks comment from the public about whether and how FCA should revise its liquidity regulatory framework for Farm Credit System (System) banks. FCA is extending the comment period for an additional 60 days, until November 27, 2021, so interested parties will have additional time to provide comments on the ANPRM.

DATES: The comment period for the Advance Notice of Proposed Rulemaking on Bank Liquidity Reserves, published on June 30, 2021 (86 FR 34645), is extended from September 28, 2021, to November 27, 2021.

ADDRESSES: For accuracy and efficiency reasons, please submit comments by email or through FCA's website. We do not accept comments submitted by facsimiles (fax), as faxes are difficult for us to process and achieve compliance with section 508 of the Rehabilitation Act of 1973. Please do not submit your comment multiple times via different methods. You may submit comments by any of the following methods:

- *Email:* Send us an email at reg-comm@fca.gov.

- *FCA website:* <http://www.fca.gov>. Click inside the "I want to . . ." field near the top of the page; select "comment on a pending regulation" from the dropdown menu; and click "Go." This takes you to an electronic public comment form.

- *Mail:* Kevin J. Kramp, Director, Office of Regulatory Policy, Farm Credit

¹⁵ FSIS Labeling and Label Approval web page, <https://www.fsis.usda.gov/inspection/compliance-guidance/labeling>.

Administration, 1501 Farm Credit Drive, McLean, VA 22102-5090.

You may review copies of comments we receive on our website at <http://www.fca.gov>. Once you are on the website, click inside the "I want to . . ." field near the top of the page; select "find comments on a pending regulation" from the dropdown menu; and click "Go." This will take you to the Comment Letters page where you can select the regulation for which you would like to read the public comments.

We will show your comments as submitted, including any supporting data provided, but for technical reasons we may omit items such as logos and special characters. Identifying information that you provide, such as phone numbers and addresses, will be publicly available. However, we will attempt to remove email addresses to help reduce internet spam. You may also review comments at our office in McLean, Virginia. Please call us at (703) 883-4056 or email us at reg-comm@fca.gov to make an appointment.

FOR FURTHER INFORMATION CONTACT:

Technical information: Ryan Leist, LeistR@fca.gov, Senior Accountant, or Jeremy R. Edelstein, EdelsteinJ@fca.gov, Associate Director, Finance and Capital Markets Team, Office of Regulatory Policy, Farm Credit Administration, McLean, VA 22102-5090, (703) 883-4414, TTY (703) 883-4056, or ORPMailbox@fca.gov; or

Legal information: Richard Katz, KatzR@fca.gov, Senior Counsel, Office of General Counsel, Farm Credit Administration, McLean, VA 22102-5090, (703) 883-4020, TTY (703) 883-4056.

SUPPLEMENTARY INFORMATION: On June 30, 2021, FCA published an ANPRM in the **Federal Register** seeking public comment on whether and how we should amend our liquidity regulations for System banks so they can better withstand crises that adversely impact liquidity and pose risks to their viability. The comment period is currently scheduled to close on September 28, 2021. See 86 FR 34645. On July 28, 2021, FCA received a request to extend the comment period for an additional 60 days. FCA is granting this request, and accordingly, the comment period is extended until November 27, 2021.

Dated: August 30, 2021.

Dale Aultman,

Secretary, Farm Credit Administration Board.

[FR Doc. 2021-18984 Filed 9-2-21; 8:45 am]

BILLING CODE 6705-01-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R03-OAR-2021-0307; FRL-8894-01-R3]

Air Plan Approval; Pennsylvania; Allegheny County Area Fine Particulate Matter Clean Data Determination

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to determine that the Allegheny County, Pennsylvania nonattainment area has clean data for the 2012 annual fine particulate matter (PM_{2.5}) National Ambient Air Quality Standard (NAAQS). This proposed clean data determination (CDD) under EPA's Clean Data Policy is based upon quality-assured, quality-controlled, and certified ambient air quality monitoring data showing that the area has attained the 2012 PM_{2.5} NAAQS based on 2018–2020 data available in EPA's Air Quality System (AQS) database. Based on the proposed clean data determination, EPA is also proposing to determine that the requirements for Pennsylvania to make submissions to meet certain Clean Air Act (CAA or the Act) requirements related to attainment of the NAAQS for this area are not applicable for as long as the area continues to attain the 2012 annual PM_{2.5} NAAQS. This action is being taken under the CAA.

DATES: Written comments must be received on or before October 4, 2021.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-R03-OAR-2021-0307 at <https://www.regulations.gov>, or via email to gordon.mike@epa.gov. For comments submitted at *Regulations.gov*, follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from *Regulations.gov*. For either manner of submission, 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. 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, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section. For 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>.

FOR FURTHER INFORMATION CONTACT:

Brian Rehn, Planning & Implementation Branch (3AD30), Air & Radiation Division, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103. The telephone number is (215) 814-2176. Mr. Rehn can also be reached via electronic mail at rehn.brian@epa.gov.

SUPPLEMENTARY INFORMATION:

Throughout this document, wherever "we", "us" or "our" are used, it is intended to refer to the EPA.

Table of Contents

- I. Background
- II. Clean Data Determination for the Allegheny County, Pennsylvania 2012 PM_{2.5} NAAQS Nonattainment Area
- III. Proposed Action
- IV. Statutory and Executive Order Reviews

I. Background

On December 14, 2012, EPA promulgated a revised primary annual PM_{2.5} NAAQS to provide increased protection of public health from fine particle pollution (2012 PM_{2.5} NAAQS).¹ In that action, EPA strengthened the primary annual PM_{2.5} standard, lowering the level from 15.0 micrograms per cubic meter (µg/m³) to 12.0 µg/m³, and retained the 24-hour PM_{2.5} NAAQS at a level of 35 µg/m³. The 2012 annual PM_{2.5} NAAQS is attained when the 3-year average of the annual arithmetic means does not exceed 12.0 µg/m³.² Effective April 15, 2015, EPA established air quality designations, as required by section 107(d)(1) of the CAA, for the 2012 annual PM_{2.5} NAAQS.³ In that action, EPA designated the Allegheny County Area in Pennsylvania as Moderate nonattainment for the 2012 annual PM_{2.5} NAAQS.

On August 24, 2016, EPA issued the Fine Particulate Matter National Ambient Air Quality Standards: State Implementation Plan Requirements (PM_{2.5} SIP Requirements Rule).⁴ The PM_{2.5} SIP Requirements Rule is codified at 40 CFR part 51, subpart Z and

¹ 78 FR 3086, January 15, 2013.

² See 40 CFR 50.18 and 40 CFR part 50, appendix N.

³ 80 FR 2206 (January 15, 2015).

⁴ 81 FR 58010, effective October 24, 2016.

provides rules for the implementation of current and future PM_{2.5} NAAQS.

On April 6, 2018, EPA issued a finding of failure to submit under section 110(k) of the CAA finding that several states, including Pennsylvania, failed to submit specific moderate area SIP elements for the 2012 annual PM_{2.5} NAAQS required under subpart 4 of part D of Title I of the CAA.⁵ In particular, Pennsylvania was late in submitting the following specific moderate area SIP elements for the Allegheny County Area: An attainment demonstration; control strategies, including reasonably available control measures (RACM) and reasonably available control technologies (RACT); a reasonable further progress (RFP) plan; quantitative milestones; and contingency measures. That finding triggered the sanctions clock under section 179 of the CAA, as well as an obligation under section 110(c) of the CAA for EPA to promulgate a Federal Implementation Plan (FIP) no later than two years from the effective date of the finding, if Pennsylvania did not submit, and EPA had not approved, the required SIP element submission(s).

Pennsylvania submitted the required Allegheny County Area PM_{2.5} Plan on September 30, 2019. On November 1, 2019, EPA determined the submitted PM_{2.5} Plan for the Allegheny County Area to be technically and administratively complete, per the requirements in accordance with CAA section 110(k) and 40 CFR part 51, appendix V. This completeness determination corrected the deficiency identified in EPA's April 6, 2018 (83 FR 14759) document finding that Pennsylvania failed to submit certain nonattainment area planning requirements for the Allegheny County Area for the 2012 PM_{2.5} NAAQS, turning off the sanctions clock (but not the FIP clock) triggered by the April 6, 2018 finding. On May 14, 2021 (86 FR 26388), EPA approved most required elements of the Allegheny County Area PM_{2.5} Plan, except for the contingency measures element of the plan, which EPA conditionally approved. That action terminated EPA's FIP obligation for all CAA required nonattainment plan elements except for the contingency measures element. As to the contingency measures element of the Allegheny County Area PM_{2.5} Plan, EPA's May 14, 2021 conditional approval action suspended EPA's FIP obligation for the duration of the conditional approval. Upon EPA's approval of a SIP submission fulfilling the State commitment that had provided

the basis for the conditional approval, EPA's FIP obligation with respect to the contingency measures element of the Allegheny County Area Plan will be terminated.

In accordance with the requirements of 40 CFR 51.1015, EPA may issue a clean data determination for a specific area if we determine the area has attained the relevant NAAQS based on three years of quality-assured, certified air quality monitoring data.⁶ Over the past two decades, EPA has consistently applied its Clean Data Policy interpretation to attainment related provisions of subparts 1, 2, and 4 of the CAA. EPA codified portions of the longstanding Clean Data Policy approach in the PM_{2.5} SIP Requirements Rule (40 CFR 51.1015(a)) for the implementation of current and future PM_{2.5} NAAQS.⁷ For a complete discussion of the history of EPA's Clean Data Policy and our longstanding interpretation of that policy under the CAA, please refer to the August 24, 2016 PM_{2.5} SIP Requirements Rule (81 FR 58010).

As provided in 40 CFR 51.1015, so long as an area continues to meet the NAAQS, finalization of a CDD suspends the requirements for a nonattainment area to submit an attainment demonstration, associated RACM and RACT, an RFP plan, quantitative milestones, contingency measures, and any other SIP planning requirements related to the attainment of the 2012 annual PM_{2.5} NAAQS. The requirement to submit a projected attainment inventory as part of an attainment demonstration or RFP plan is also suspended by this determination. As discussed in the 2016 PM_{2.5} SIP Requirements Rule, the nonattainment base year emissions inventory required by section 172(c)(3) of the CAA is not suspended by this determination because the base inventory is a requirement independent of planning for an area's attainment.⁸ Additionally, as discussed in the PM_{2.5} SIP Requirements Rule (and required by sections 110(a)(2)(C); 172(c)(5); 173; 189(a), and 189(e) of the CAA), nonattainment New Source Review (NNSR) requirements are not suspended by a CDD because this requirement is independent of the area's attainment planning.⁹

⁶ Per the requirements for determining whether an area has attained the annual PM_{2.5} NAAQS at 40 CFR 50.18(c) and 40 CFR Appendix N to part 50.

⁷ See 81 FR 58010, 58161 (August 24, 2016).

⁸ See 81 FR 58009 at 58028 and 58127–8 (August 24, 2016) and 80 FR 15340 at 15441–2 (March 23, 2015).

⁹ See 81 FR 58010 at 58107 and 58127 (August 24, 2016).

By extension, the requirement to submit a motor vehicle emissions budget (MVEB) for the attainment year for the purposes of transportation conformity is also suspended. A MVEB is that portion of the total criteria pollutant emissions associated with allowable highway and transit vehicle use, as defined in the submitted or approved control strategy implementation plan revision or maintenance plan, for a certain date. The MVEB serves as a cap on highway mobile source section emissions for the purpose of meeting RFP milestones or demonstrating attainment or maintenance of the NAAQS. For purposes of the transportation conformity regulations, the control strategy implementation plan revision is the implementation plan which contains specific strategies for controlling the emissions of, and reducing ambient levels of, pollutants in order to satisfy CAA requirements for demonstrations of RFP and attainment. Given that MVEBs are required to support RFP and attainment demonstration requirements in the attainment plan, suspension of the RFP and attainment demonstration requirements through a CDD also suspends the requirement to submit MVEBs for attainment and RFP milestone years. Suspension of planning requirements under the clean data policy (pursuant to 40 CFR 51.1015) does not preclude the state from submitting suspended elements of its moderate area attainment plan for EPA approval for the purposes of strengthening the state's SIP, nor does issuance of a CDD compel the state to withdraw previously submitted or SIP-approved elements of its moderate area attainment plan.

A CDD is not equivalent to a redesignation under CAA section 107(d)(3), and the state must still meet the statutory requirements for redesignation in order to be redesignated to attainment. In accordance with 40 CFR 51.1015(a)(1) and (2), a CDD suspends the aforementioned SIP obligations until the area is redesignated to attainment (after which time such requirements are permanently discharged); or until EPA determines that the area has re-violated the PM_{2.5} NAAQS. In the event the area re-violates the NAAQS, the state shall once again be required to submit all required attainment plan elements for the Moderate nonattainment area, by a deadline established by EPA through publication in the **Federal Register** of the determination that the area is once

⁵ 83 FR 14759 (April 6, 2018).

again violating the 2012 annual PM_{2.5} NAAQS.

II. Clean Data Determination for the Allegheny County, Pennsylvania 2012 PM_{2.5} NAAQS Nonattainment Area

Under EPA regulations at 40 CFR 50.18 and part 50, appendix N, the 2012 annual PM_{2.5} NAAQS is met when the 3-year average of PM_{2.5} annual mean mass concentrations for each eligible monitoring site is less than or equal to

12.0 µg/m³. Three years of valid, annual means are required to produce a valid annual PM_{2.5} NAAQS design value. A year of data meets data completeness requirements when quarterly data capture rates for all four quarters are at least 75 percent from eligible monitoring sites.¹⁰ By a letter to EPA dated March 08, 2021, Allegheny County Health Department (ACHD) certified its 2020 ambient air quality

monitoring data. EPA issued final 2018–2020 design values on May 24, 2021.¹¹ There are nine PM_{2.5} eligible Federal Reference Method (FRM) or Federal Equivalent Method (FEM) monitoring sites in the Allegheny County nonattainment area. Table 1 in this document shows the Allegheny County Area design values for the 2012 annual PM_{2.5} NAAQS for the years 2018–2020 at all area monitoring sites.

TABLE 1—2018–2020 ANNUAL PM_{2.5} VALUES FOR THE ALLEGHENY COUNTY, PENNSYLVANIA AREA

Monitor name	Monitor ID	Weighted mean (µg/m ³)			Complete quarters			Certified annual design value 2018–2020 (µg/m ³)
		2018	2019	2020	2018	2019	2020	
Avalon	420030002	9.61	9.89	8.57	4	4	4	9.4
Lawrenceville	420030008	8.97	8.97	7.66	4	4	4	8.5
South Fayette	420030067	8.12	7.65	6.56	4	4	4	7.4
North Park	420030093	* 7.2	6.81	* 5.74	3	4	3	* 6.6
Harrison	420031008	9.25	8.64	7.32	4	4	4	8.4
North Braddock	420031301	10.17	9.85	9.03	4	4	4	9.7
Clairton	420033007	8.80	7.87	7.34	4	4	4	8.0
Liberty	420030064	11.52	12.16	9.76	4	4	4	11.1
Parkway East	420031376	10.25	10.79	8.97	4	4	4	10.0

* North Park has incomplete data sets for 2018 and 2020.

TABLE 2—DATA CAPTURE RATES (%) AND CREDITABLE SAMPLES BY QUARTER (Q) FOR THE NORTH PARK MONITOR [420030093]

	2018				2019				2020			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Creditable Samples	15	15	16	5	14	15	15	14	15	14	15	2
Capture Rate	100	100	100	33	93	100	94	93	100	93	94	13

As shown in Table 1 in this document, for monitors in the Allegheny County area, all but the North Park monitoring location have complete 2018–2020 reporting data capture rates of at least 75%. At the North Park monitoring site, the fourth quarter in 2018 and the fourth quarter in 2020 for the North Park monitor [Monitor ID 420030093] had a data capture rate of 33% and 13%, respectively. The North Park monitor data was incomplete in fourth quarter 2018 because of a roof replacement taking place at the monitor location and North Park was approved for shut down in the third quarter of 2020 in ACHD’s “Annual Monitoring Plan for Calendar Year 2021.”

Consistent with the requirements contained in 40 CFR part 58, EPA has reviewed the PM_{2.5} ambient air quality monitoring data for the monitoring period from 2018 through 2020 for the Allegheny County nonattainment area, as recorded in the AQS database, and

has determined the data meet the quality assurance requirements set forth in 40 CFR part 58. In this respect, the data has been deemed usable by EPA for regulatory compliance purposes. As shown in Table 1 in this document, each quarter from 2018 through 2020 is complete, with all four quarters reporting data capture rates of at least 75 percent (with the exception of the North Park monitor, as noted above). The highest certified annual design value for 2018–2020 is 11.1 µg/m³, with all nine ambient monitors below the 2012 annual PM_{2.5} NAAQS of 12.0 µg/m³. Therefore, the Allegheny County nonattainment area has attained the 2012 annual PM_{2.5} NAAQS in accordance with the requirements in 40 CFR 50.18 and appendix N.

III. Proposed Action

Pursuant to the PM_{2.5} Clean Data Policy codified at 40 CFR 51.1015, EPA proposes to determine that based on

three years of certified, valid monitoring data between 2018 and 2020, the Allegheny County nonattainment area has attained the 2012 annual PM_{2.5} NAAQS. Pursuant to 40 CFR 51.1015(a), and based upon our proposed clean data determination that the Allegheny County Area has attained the NAAQS, EPA proposes to determine that the CAA requirements to submit attainment-related SIP revisions arising from classification of the Area as Moderate nonattainment under subpart 4 of part D, of title I of the Act for the 2012 annual PM_{2.5} NAAQS are not applicable for so long as the area continues to attain the 2012 annual PM_{2.5} NAAQS. In particular, if EPA finalizes this determination, it will suspend the requirements for the area to submit an attainment demonstration, RACM and RACT, RFP plan, quantitative milestones, contingency measures, and any other SIP requirements related to the attainment

¹⁰ See 40 CFR part 50, appendix N.

¹¹ See EPA’s Air Quality Design Values web page, at <https://www.epa.gov/air-trends/air-quality-design-values>.

of the 2012 annual PM_{2.5} NAAQS, so long as the area continues to meet the NAAQS, until the area is redesignated to attainment. If this proposed CDD action is finalized, the FIP clock triggered by the EPA's April 6, 2018 finding of failure to submit will be suspended for these plan elements for as long as the CDD remains in effect.¹²

EPA's May 14, 2021 conditional approval of the contingency measures element of the Allegheny County Area PM_{2.5} Plan suspended EPA's FIP obligation with respect to this element of the plan for the duration of the conditional approval. If EPA approves a SIP submission fulfilling the State commitment that had provided the basis for the conditional approval, the FIP obligation triggered by EPA's April 6, 2018 finding of failure to submit will be terminated. Alternatively, if the State fails to fulfill its commitment and EPA converts the conditional approval to a disapproval, the conditional approval would no longer provide a basis for suspending EPA's FIP obligation, because the State would have failed to correct the deficiency identified in EPA's April 6, 2018 finding of failure to submit.¹³ If, however, EPA finalizes our proposed CDD for the area, the CDD would provide an independent basis for continued suspension of the FIP obligation, for so long as the area continues to attain the 2012 PM_{2.5} NAAQS. If the area then violates the NAAQS and EPA rescinds the CDD, the CDD would also no longer provide a basis for suspending EPA's FIP obligation, and EPA would have an immediate obligation to promulgate a FIP addressing the contingency measure requirement for the 2012 PM_{2.5} NAAQS in the Allegheny County area.

This proposed clean data determination does not constitute a redesignation to attainment of the NAAQS. The Allegheny County Area will remain designated nonattainment for the 2012 annual PM_{2.5} NAAQS until such time that EPA determines the Allegheny County nonattainment area meets the CAA requirements for redesignation to attainment, including an approved maintenance plan, pursuant to CAA sections 107 and 175A. EPA is soliciting public comments on this proposed action, which we will consider prior to taking final action.

¹² See 83 FR 14759.

¹³ 83 FR 14759 (April 6, 2018) (noting that "EPA is obligated to promulgate a federal implementation plan (FIP) to address any outstanding SIP requirements, if a state does not submit, and EPA does not approve, a state's submission within 24 months of the effective date of these findings").

IV. Statutory and Executive Order Reviews

This rulemaking action makes a clean data determination for attainment of the 2012 PM_{2.5} NAAQS based on air quality and does not impose additional requirements. For that reason, this clean data determination:

- 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 CAA; and
- Does not provide 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, this proposed clean data determination for the Allegheny County Area for the 2012 annual PM_{2.5} NAAQS does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the State, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Particulate matter, and

Reporting and recordkeeping requirements.

Dated: August 26, 2021.

Diana Esher,

Acting Regional Administrator, Region III.

[FR Doc. 2021-19019 Filed 9-2-21; 8:45 am]

BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R08-OAR-2021-0005; FRL-8683-04-Region 8]

Approval and Promulgation of Implementation Plans; North Dakota; Revisions To Permitting Regulations Unrelated to Regional Haze; Correction

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule; correction.

SUMMARY: The Environmental Protection Agency (EPA) published a proposed rule in the **Federal Register** on August 2, 2021. The revisions contain amendments to the State of North Dakota's Air Pollution Control Regulations and to the State's Legal Authority. The August 2, 2021 published rule had the incorrect docket number. This published rule corrects the docket number for the August 2, 2021 rulemaking.

DATES: Written comments must be received on or before October 4, 2021.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-R08-OAR-2021-0005, to the Federal Rulemaking Portal: <https://www.regulations.gov>. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from www.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 <http://www2.epa.gov/dockets/commenting-epa-dockets>.

Docket: All documents in the docket are listed in the www.regulations.gov index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available electronically in www.regulations.gov. To reduce the risk of COVID-19 transmission, for this action we do not plan to offer hard copy review of the docket. Please email or call the person listed in the **FOR FURTHER INFORMATION CONTACT** section if you need to make alternative arrangements for access to the docket.

FOR FURTHER INFORMATION CONTACT: Kevin Leone, Air and Radiation Division, EPA, Region 8, Mailcode 8ARD-IO, 1595 Wynkoop Street, Denver, Colorado, 80202-1129, (303) 312-6227, leone.kevin@epa.gov.

SUPPLEMENTARY INFORMATION: Throughout this document wherever “we,” “us,” or “our” is used, we mean the EPA.

Correction

In FR document 86 FR 41413, appearing on page 41413 in the **Federal Register** on Monday, August 2, 2021, in the heading of the document and in the **ADDRESSES** section of the document the docket number EPA-R08-OAR-2021-0433 should have read EPA-R08-OAR-2021-0005.

List of Subjects in 40 CFR Part 52

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

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

Dated: August 25, 2021.

Debra H. Thomas,

Acting Regional Administrator, Region 8.

[FR Doc. 2021-19039 Filed 9-2-21; 8:45 am]

BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 62

[EPA-R01-OAR-2021-0443; FRL-8778-01-R1]

Approval and Promulgation of State Plan for Designated Facilities and Pollutants: New Hampshire; 111(d)/129 Revised State Plan for Existing Large and Small Municipal Waste Combustors

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve the Clean Air Act (CAA) state plan revision for existing large and small municipal waste combustors (MWCs) submitted by the New Hampshire Department of Environmental Services (NHDES) on October 1, 2018. The revised state plan incorporates wood residue combustion fuel quality standards and test methods at MWC facilities that process and combust construction and demolition debris.

DATES: Written comments must be received on or before October 4, 2021.

ADDRESSES: Submit your comments, identified by Docket ID Number EPA-R01-OAR-2021-0443 at <https://www.regulations.gov>, or via email to kilpatrick.jessica@epa.gov. For comments submitted at *Regulations.gov*, follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from *Regulations.gov*. For either manner of submission, 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, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section. For 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>. Publicly

available docket materials are available at <https://www.regulations.gov> or at the U.S. Environmental Protection Agency, EPA Region 1 Regional Office, Air and Radiation Division, 5 Post Office Square—Suite 100, Boston, MA. EPA requests that if at all possible, you contact the contact listed in the **FOR FURTHER INFORMATION CONTACT** section to schedule your inspection. The Regional Office's official hours of business are Monday through Friday, 8:30 a.m. to 4:30 p.m., excluding legal holidays and facility closures due to COVID-19.

FOR FURTHER INFORMATION CONTACT: Jessica Kilpatrick, Air Permits, Toxics, & Indoor Programs Branch, Air and Radiation Division, U.S. Environmental Protection Agency, Region 1, 5 Post Office Square, Mail Code: 05-2, Boston, MA 02109-0287. Telephone: 617-918-1652. Fax: 617-918-0652 Email: kilpatrick.jessica@epa.gov.

SUPPLEMENTARY INFORMATION:

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I. What is a state plan?

Section 111(d) of the CAA requires pollutants controlled under new source performance standards (NSPS) also be controlled at existing sources in the same source category. Once an NSPS is issued, EPA then publishes emission guidelines (EGs) applicable to the control of the same pollutant for existing (designated) facilities. States with designated facilities must develop state plans to adopt the EGs into their body of regulations. States must also include in their state plans other elements, such as legal authority, inventories, and public participation documentation to demonstrate their ability to enforce the state plans.

II. Why does EPA need to approve state plans?

Section 129(b)(2) of the CAA requires states to submit state plans to EPA for approval. Each state must show that its state plan will carry out and enforce the EGs. State plans must be at least as protective as the EGs and will become

federally enforceable upon EPA's approval. The procedures for adopting and submitting state plans are in 40 CFR part 60, subpart B.

III. Why does EPA regulate air emissions from MWCs?

EPA is required to regulate air emissions from MWCs under sections 111(d) and 129 of the Clean Air Act. Large municipal waste combustors (LMWCs) are capable of combusting more than 250 tons per day of solid waste, while small municipal waste combustors (SMWCs) are capable of combusting at least 35 tons per day, but no more than 250 tons per day of municipal solid waste or refuse-derived fuel. When burned, municipal solid wastes emit various air pollutants, including particulate matter, hydrogen chloride, dioxins/furans, heavy metals (lead, cadmium, and mercury), sulfur dioxide, and nitrogen oxides. Exposure to particulate matter can aggravate existing respiratory and cardiovascular disease as well as increase risk of premature death. Chronic exposure to hydrogen chloride has been reported to cause gastritis, chronic bronchitis, dermatitis, and photosensitization. Acute exposure to high levels of chlorine in humans may result in chest pain, vomiting, toxic pneumonitis, pulmonary edema, and death. At lower levels, chlorine is a potent irritant to the eyes, the upper respiratory tract, and lungs. Exposure to dioxin and furan can cause skin disorders, cancer, and reproductive effects such as endometriosis. These pollutants can also affect the immune system.

Mercury is highly hazardous and is of particular concern because it persists in the environment and bioaccumulates through the food web. Serious human health effects, primarily to the nervous system, have been associated with exposures to mercury. Harmful physiological impacts on wildlife have also been reported; these include nervous system damage and behavioral and reproductive deficits. Human and wildlife exposure to mercury occur mainly through ingestion of fish. When inhaled, mercury vapor attacks the lung tissue and is a cumulative poison. Short-term exposure to mercury in certain forms can cause hallucinations and impair consciousness. Long-term exposure to mercury in certain forms can affect the central nervous system and cause kidney damage.

IV. What history does NHDES have with MWC state plans?

EPA approved NHDES's sections 111(d)/129 state plan for existing large and small MWCs on February 10, 2003,

effective on April 11, 2003. The state plan establishes the operating and performance standards for MWCs with the capacity to combust greater than 35 tons per day of municipal solid waste, to comply with CAA sections 111(d) and 129 as well as State rules promulgated under the New Hampshire Code of Administrative Rules Env-A 3300 *Municipal Waste Combustion*. Since its approval, the state plan has been amended twice. On January 29, 2009, NHDES submitted a revision to comply with EPA's revised regulations for LMWCs via 40 CFR part 60, subpart Cb, Emissions Guidelines and Compliances for Large Municipal Waste Combustors that are Constructed on or Before September 20, 1994. EPA approved these revisions on September 3, 2014. *See* 79 FR 52204. The second revision was submitted by NHDES on July 28, 2016, to align standards for SMWCs with those of LMWCs. EPA proposed these revisions on June 6, 2017. *See* 82 FR 25972.

V. Why did NHDES revise the MWC state plan?

EPA's February 8, 2016 revision to 40 CFR part 241, subpart B, Identification of Non-Hazardous Secondary Materials that are Solid Wastes when Used as Fuels or Ingredients in Combustion Units, added construction and demolition (C&D) wood processed from C&D debris according to best management practices to its categorical list of non-waste fuels. (*See* 81 FR 6743). Subsequently on August 11, 2018, NHDES removed a ban on wood residue combustion via the state statute RSA 125-C:10-c(II)(b) *Combustion Ban*. The change allows combustion of no more than 10,000 tons per year of wood residue at any large municipal waste combustor from November 15 through April 15 from facilities that process construction and demolition debris in a manner no less stringent than the requirements at 40 CFR 241.4(a)(5), Non-Waste Determinations for Specific Non-Hazardous Secondary Materials When Used as a Fuel. The change also requires NHDES to adopt rules regarding fuel quality standards and test methods in accordance with RSA 125-C:6, XIV-a before any such combustion shall occur, therefore this state plan revision is a necessity. The change was initiated in 2016, and it was introduced by the NHDES Air Resources Division and the Solid Waste Division at multiple stakeholder meetings open to the public with opportunities for comment. The proposed rule was presented to the NHDES Air Resources Council on September 11, 2017, and the final rule was posted for notice on May

14, 2018, with a public hearing on June 15, 2018, a comment period ending on June 29, 2018, and an effective date of September 27, 2018.

VI. What revisions have been made to the state plan?

On October 1, 2018, NHDES submitted the sections 111(d)/129 revised state plan for existing large and small municipal waste combustors to EPA. The revision incorporates fuel quality standards and test methods for wood residue at MWC facilities that process C&D wood debris. The revised state plan includes changes to Env-A 3300, defining processed wood residue (PWR) as construction and demolition wood that has undergone positive or negative sorting in accordance with the best management practices as described in 40 CFR 241.4(a)(5). The state plan revision also includes new part Env-A 3308 *Additional Requirements for Combusting PWR* with sections outlining applicability, operating practices, PWR fuel quality, fuel supplier requirements, independent third-party inspections, analysis of compositive samples, reporting and recordkeeping for LMWCs combusting PWR, and cessation and resumption of receipt of PWR from a supplier.

VII. Why is EPA proposing to approve NHDES's revised state plan?

EPA has evaluated NHDES's sections 111(d)/129 revised state plan for existing large and small MWCs for consistency with the CAA, EPA guidelines, and policy. C&D wood is a non-hazardous secondary material that is not classified as a solid waste when used as a fuel in a combustion unit and is regulated by Env-A 3300, which EPA finds to be no less stringent than 40 CFR 241.4(a)(5).

Furthermore, the quantity of PWR New Hampshire's existing large MWCs are allowed to combust ensures that the units do not meet the definition of a cofired combustor and thus become exempt from Federal regulations for large MWCs. Cofired combustors, defined as MWC units combusting municipal solid waste with nonmunicipal solid waste fuel, that have a federally enforceable permit limiting municipal solid waste combustion to 30 percent of the total fuel input by weight, are exempt from large MWC emission guidelines and Federal Plan. *See* 40 CFR 60.32b(i), 60.50a(d), 60.50b(j), 60.1020(g), 60.1555(g), 62.14102(j), and 62.15020(g). By limiting the combustion of no more than 10,000 tons per year of PWR at any MWC from November 15 through April 15, and further restricting combustion of

the material from November 15 through April 15, it is impossible for a large MWC (with a daily capacity rating of no less than 250 tons per day) to meet the definition of a cofired combustor. Therefore, EPA has concluded that the state plan revision meets all requirements, including compliance with Federal regulations.

EPA is proposing to approve NHDES's state plan revision based on our analysis above and our findings that NHDES provided adequate public notice of public hearings for the proposed rulemaking that allows NHDES to carry out and enforce provisions that are at least as protective as the Federal emission guidelines for large and small MWCs. Furthermore, NHDES demonstrates legal authority to adopt emission standards and compliance schedules applicable to the designated facilities; enforce applicable laws, regulations, standards and compliance schedules; seek injunctive relief; obtain information necessary to determine compliance; require record keeping; conduct inspections and tests; require the use of monitors; require emission reports of owners and operators; and make emission data publicly available.

VIII. Proposed Action

EPA is proposing to approve NHDES's sections 111(d)/129 revised State plan for existing large and small MWCs. EPA is soliciting public comments on the issues discussed in this notice or on other relevant matters. These comments will be considered before taking final action. Interested parties may participate in the Federal rulemaking procedure by submitting written comments to this proposed rule by following the instructions listed in the **ADDRESSES** section of this **Federal Register** document.

IX. Incorporation by Reference

In this rule, the EPA is proposing to include in a final EPA rule regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, the EPA is proposing to incorporate by reference

the State of New Hampshire Amendments to the sections 111(d)/129 State Plan for Municipal Waste Combustion, dated October 1, 2018. NHDES amends New Hampshire's Code of Administrative Rules Env-A 3300, Municipal Waste Combustion, effective September 27, 2018, regarding MWC units as discussed in Section VI of this preamble. The EPA has made, and will continue to make, these documents generally available through <https://www.regulations.gov> and at the EPA Region 1 Office (please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section of this preamble for more information).

X. Statutory and Executive Order Reviews

Under section 129 of the Clean Air Act, the Administrator is required to approve a state plan submission that complies with the provisions of the Act and applicable Federal regulations. 42 U.S.C. 7429(b); 40 CFR 60.27. Thus, in reviewing state plan submissions, EPA's role is to approve state choices, provided that they meet the criteria of the Clean Air Act. Accordingly, this proposed 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 proposed 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 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 revised state plan 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 62

Environmental protection, Air pollution control, Administrative practice and procedure, Incorporation by reference, Industrial facilities, Intergovernmental relations, Reporting and recordkeeping requirements, Sulfur oxides, Waste treatment and disposal.

Dated: July 20, 2021.

Deborah Szaro,

Acting Regional Administrator, EPA Region 1.

[FR Doc. 2021-15903 Filed 9-2-21; 8:45 am]

BILLING CODE 6560-50-P

Notices

Federal Register

Vol. 86, No. 169

Friday, September 3, 2021

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.

DEPARTMENT OF AGRICULTURE

Forest Service

Missouri River Resource Advisory Committee

AGENCY: Forest Service, Agriculture (USDA).

ACTION: Notice of meeting.

SUMMARY: The Missouri River Resource Advisory Committee (RAC) will hold a virtual meeting. The committee is authorized under the Secure Rural Schools and Community Self-Determination Act (the Act) and operates in compliance with the Federal Advisory Committee Act. The purpose of the committee is to improve collaborative relationships and to provide advice and recommendations to the Forest Service concerning projects and funding consistent with Title II of the Act as well as make recommendations on recreation fee proposals for sites on the Helena—Lewis and Clark National Forest within Broadwater, Lewis & Clark, and Teton Counties, consistent with the Federal Lands Recreation Enhancement Act. RAC information and virtual meeting information can be found at the following website: <https://www.fs.usda.gov/hlcnf/>.

DATES: The meeting will be held on September 23, 2021, at 6:00 p.m., Mountain Daylight Time.

All RAC meetings are subject to cancellation. For status of the meeting prior to attendance, please contact the person listed under **FOR FURTHER INFORMATION CONTACT**.

ADDRESSES: The meeting will be held virtually and tentatively planned to occur via Zoom video conference. Details regarding individual participation/invitation to the meeting can be found on the website listed under **SUMMARY**. Additionally, individuals may contact the person listed in the below section titled **FOR**

FURTHER INFORMATION CONTACT with any questions or concerns.

Written comments may be submitted as described under **SUPPLEMENTARY INFORMATION**. All comments, including names and addresses when provided, are placed in the record and are available for public inspection and copying. The public may inspect comments received upon request.

FOR FURTHER INFORMATION CONTACT:

Chiara Cipriano, Acting RAC Coordinator, by phone at (406) 594-6497 or email at chiara.cipriano@usda.gov.

Individuals who use telecommunication devices for the hearing-impaired (TDD) may call the Federal Relay Service (FRS) at 1-800-877-8339, 24 hours a day, every day of the year, including holidays.

SUPPLEMENTARY INFORMATION: The purpose of the meeting is to:

1. Hear from Title II project proponents and discuss project proposals;
2. Make funding recommendations on Title II projects; and
3. Discuss the schedule for the next round of project solicitations and meeting.

The meeting is open to the public. The agenda will include time for people to make oral statements of three minutes or less. Individuals wishing to make an oral statement should request in writing by September 17, 2021, to be scheduled on the agenda. Anyone who would like to bring related matters to the attention of the committee may file written statements with the committee staff before or after the meeting. Written comments and requests for time for oral comments must be sent to Chiara Cipriano, 2880 Skyway Drive, Helena Montana, 59602 or by email to chiara.cipriano@usda.gov.

Meeting Accommodations: If you are a person requiring reasonable accommodation, please make requests in advance for sign language interpreting, assistive listening devices, or other reasonable accommodation. For access to the facility or proceedings, please contact the person listed in the section titled **FOR FURTHER INFORMATION CONTACT**. All reasonable accommodation requests are managed on a case-by-case basis.

Dated: August 31, 2021.

Cikena Reid,

USDA Committee Management Officer.

[FR Doc. 2021-19077 Filed 9-2-21; 8:45 am]

BILLING CODE 3411-15-P

DEPARTMENT OF AGRICULTURE

Rural Utilities Service

[RUS-21-TELECOM-0015]

Publication of Depreciation Rates

AGENCY: Rural Utilities Service, Department of Agriculture.

ACTION: Notice of depreciation rates for telecommunications plant.

SUMMARY: The United States Department of Agriculture (USDA) Rural Utilities Service (RUS) administers rural utilities programs, including the Telecommunications Program. RUS announces the depreciation rates for telecommunications plant for the period ending December 31, 2020.

DATES: These rates are effective immediately and will remain in effect until rates are available for the period ending December 31, 2021.

FOR FURTHER INFORMATION CONTACT:

Laurel Leverrier, Assistant Administrator, Telecommunications Program, Rural Utilities Service, Mail Stop 1590—Room 4121, 1400 Independence Avenue SW, Washington, DC 20250-1590. Telephone: (202) 720-9556, laurel.leverrier@usda.gov.

SUPPLEMENTARY INFORMATION: In 7 CFR part 1737, Pre-Loan Policies and Procedures Common to Insured and Guaranteed Telecommunications Loans, § 1737.70(e) explains the depreciation rates that are used by RUS in its feasibility studies. Given that approved depreciation rates per § 1737.70(e)(1) do not exist, RUS is publishing its annual median depreciation rates for all borrowers, in accordance with § 1737.70(e)(2). RUS also notes that the rates have changed only minimally from the previous year. The following chart provides those rates, compiled by RUS, for the reporting period ending December 31, 2020:

MEDIAN DEPRECIATION RATES OF RURAL UTILITIES SERVICE BORROWERS BY EQUIPMENT CATEGORY FOR PERIOD ENDING DECEMBER 31, 2020

Telecommunications plant category	Depreciation rate
1. Land and Support Assets:	
a. Motor vehicles	18.00
b. Aircraft	11.13
c. Special purpose vehicles	12.00
d. Garage and other work equipment	10.00
e. Buildings	3.25
f. Furniture and office equipment	10.00
g. General purpose computers	20.00
2. Central Office Switching:	
a. Digital	10.00
b. Analog & Electro-mechanical	10.00
c. Operator Systems	10.00
3. Central Office Transmission:	
a. Radio Systems	10.00
b. Circuit equipment	10.00
4. Information origination/termination:	
a. Station apparatus	12.25
b. Customer premises wiring	10.00
c. Large private branch exchanges	11.90
d. Public telephone terminal equipment	12.00
e. Other terminal equipment	10.15
5. Cable and wire facilities:	
a. Aerial cable—poles	6.00
b. Aerial cable—metal	6.00
c. Aerial cable—fiber	5.10
d. Underground cable—metal	5.00
e. Underground cable—fiber	5.00
f. Buried cable—metal	5.15
g. Buried cable—fiber	5.00
h. Conduit systems	4.00
i. Other	5.00

Christopher McLean,
Acting Administrator, Rural Utilities Service.
 [FR Doc. 2021-19018 Filed 9-2-21; 8:45 am]
BILLING CODE 3410-15-P

COMMISSION ON CIVIL RIGHTS

Notice of Public Meeting of the Tennessee Advisory Committee

AGENCY: Commission on Civil Rights.
ACTION: Announcement of 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

(FACA), that a meeting of the Tennessee Advisory Committee to the Commission will convene by conference call on Thursday, September 16, 2021, at 12:00 p.m. (CT). The purpose is to consider topics for their next project.

DATES: The meeting will be held on: Thursday, September 16, 2021, 12:00 p.m. CT.

Join via Webex: <https://civilrights.webex.com/civilrights/j.php?MTID=m266086828fecf71c42baa6329432e1c3>.

Join via phone: 800-360-9505 USA Toll Free; Access Code: 199 769 7332#.

FOR FURTHER INFORMATION CONTACT: Victoria Moreno at vmoreno@usccr.gov or by phone at 434-515-0204.

SUPPLEMENTARY INFORMATION: This meeting is available to the public through the WebEx link above. If joining only via phone, callers can expect to incur charges for calls they initiate over wireless lines, and 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 1-800-877-8339 and providing the Service with the call-in number found through registering at the web link provided above for the meeting.

Members of the public are entitled to make comments during the open period at the end of the meeting. Members of the public may also submit written comments; the comments must be received in the Regional Programs Unit within 30 days following the respective meeting. Written comments may be emailed to Victoria Moreno at vmoreno@usccr.gov. All written comments received will be available to the public.

Persons who desire additional information may contact the Regional Programs Unit at (202) 809-9618. Records and documents discussed during the meeting will be available for public viewing as they become available at the www.facadatabase.gov. Persons interested in the work of this advisory committee are advised to go to the Commission's website, www.usccr.gov, or to contact the Regional Programs Unit at the above phone number or email address.

Agenda: Thursday, September 16, 2021; 12:00 p.m. (CT).

1. Welcome & Roll Call
2. Chair's Comments
3. Committee Discussion
4. Next Steps
5. Public Comment
6. Other Business
7. Adjourn

Dated: August 31, 2021.

David Mussatt,
Supervisory Chief, Regional Programs Unit.
 [FR Doc. 2021-19115 Filed 9-2-21; 8:45 am]
BILLING CODE P

DEPARTMENT OF COMMERCE

Census Bureau

Agency Information Collection Activities; Submission to the Office of Management and Budget (OMB) for Review and Approval; Comment Request; Business Enterprise Research and Development Survey

The Department of Commerce will submit the following information collection request to the Office of Management and Budget (OMB) for review and clearance in accordance with the Paperwork Reduction Act of 1995, on or after the date of publication of this notice. We invite the general public and other Federal agencies to comment on proposed, and continuing information collections, which helps us assess the impact of our information collection requirements and minimize the public's reporting burden. Public comments were previously requested via the **Federal Register** on June 28, 2021 during a 60-day comment period. This notice allows for an additional 30 days for public comments.

Agency: U.S. Census Bureau, Department of Commerce.

Title: Business Enterprise Research and Development Survey.

OMB Control Number: 0607-0912.
Form Number(s): BRD-1.

Type of Request: Regular submission, Request for a Revision of a Currently Approved Collection.

Number of Respondents: 47,500.

Average Hours per Response: 2 hours and 37 minutes.

Burden Hours: 124,450.

Needs and Uses: The Census Bureau is requesting clearance to conduct the Business Enterprise Research and Development Survey (BERD) for the 2021-2023 survey years with the revisions outlined in this document. Companies are the major performers of research and development (R&D) in the United States, accounting for over 70 percent of total U.S. R&D expenditures each year. A consistent business R&D information base is essential to government officials formulating public policy, industry personnel involved in corporate planning, and members of the academic community conducting research. To develop policies designed to promote and enhance science and technology, past trends and the present

status of R&D must be known and analyzed. Without comprehensive business R&D statistics, it would be impossible to evaluate the health of science and technology in the United States or to make comparisons between the technological progress of our country and that of other nations.

BERD is a joint statistical project between the National Center for Science and Engineering Statistics (NCSES) within the National Science Foundation (NSF) and the Census Bureau.

NCSES has published annual R&D statistics collected from the Survey of Industrial Research and Development (1953–2007), the Business R&D and Innovation Survey (2008–2016), the Business Research and Development Survey (2017 and 2018), and the Business Enterprise Research and Development Survey (2019 and 2020) for 67 years. The results of the surveys are used to assess trends in R&D expenditures by industry sector, investigate productivity determinants, formulate science and tax policy, and compare individual company performance with industry averages. This survey is the Nation's primary source for international comparative statistics on business R&D spending.

BERD will continue to collect the following types of information:

- R&D expense based on accepted accounting standards.
- Worldwide R&D of domestic companies.
- Business segment detail.
- R&D related capital expenditures.
- Detailed data about the R&D workforce.
- R&D strategy and data on the potential impact of R&D on the market.

Beginning in 2020, in an effort to reduce burden, BERD began rotating select content off the survey in alternating years. In 2020, questions related to detail of R&D performed by others, activities with academia, industries of business and specific federal agency funding R&D, and areas of application for R&D were removed from BERD. In 2021, all of those questions will be reintroduced to the survey and the Intellectual Property and Technology Transfer Section will be removed from the survey. BERD plans to continue rotating this content in alternating years.

Beginning in 2021, the BERD will revise its existing Capital Expenditures section to collect additional information on assets. Cognitive testing on these questions conducted by the Census Bureau in 2018 revealed that these questions pose no substantive impact on burden (the data requested are all readily available in most companies'

books) and would provide context on capital stock of R&D active companies not currently available in any other data source. After collecting two consecutive years of data (for 2021 and 2022), BERD plans to collect the additional assets questions in alternating years, similar to the other rotating content. So, in 2023, BERD would have the smaller [previously collected] Capital Expenditures section, and in 2024 would reinstate the more robust Assets section and so on.

Information from BERD will continue to support NCSES' responsibility to collect information on Research and Development for overall support for Federal policy discussions, as required under the America COMPETES Reauthorization Act of 2010.

Policy officials from many Federal agencies rely on these statistics for essential information. Businesses and trade organizations rely on BERD data to benchmark their industry's performance against others. For example, total U.S. R&D expenditures statistics are used by the Bureau of Economic Analysis (BEA) for incorporating R&D as fixed investment in updates to the National Income and Product Accounts (NIPAs). Also, NCSES, BEA and the Census Bureau periodically seek to use BERD data to augment global R&D investment information that is obtained from BEA's Foreign Direct Investment (FDI) and U.S. Direct Investment Abroad (USDIA) surveys. Further, the Census Bureau links data collected by BERD with other statistical files. At the Census Bureau, historical company-level R&D data are linked to a file that contains information on the outputs and inputs of companies' manufacturing plants. Researchers can analyze the relationships between R&D funding and other economic variables by using micro-level data.

Individuals and organizations access the survey statistics via the internet in annual InfoBriefs published by NCSES that announce the availability of statistics from each cycle of BERD and detailed statistical table reports that contain all of the statistics NCSES produces from BERD. Information about the kinds of projects that rely on statistics from BERD is available from internal records of Census' Center for Economic Studies. In addition, survey statistics are regularly cited in trade publications and many researchers use the survey statistics from these secondary sources without directly contacting NCSES or the Census Bureau.

Affected Public: Business or other for-profit organizations.

Frequency: Annually.

Respondent's Obligation: Mandatory.

Legal Authority: The survey is conducted under the authority of Title 13, United States Code, Sections 8(b), 131, and 182; Title 42, United States Code, Sections 1861–76 (National Science Foundation Act of 1950, as amended); and Section 505 within the America COMPETES Reauthorization Act of 2010.

This information collection request may be viewed at www.reginfo.gov. Follow the instructions to view the Department of Commerce collections currently under review by OMB.

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 and entering either the title of the collection or the OMB Control Number 0607–0912.

Sheleen Dumas,

Department PRA Clearance Officer, Office of the Chief Information Officer, Commerce Department.

[FR Doc. 2021–19134 Filed 9–2–21; 8:45 am]

BILLING CODE 3510–07–P

DEPARTMENT OF COMMERCE

Census Bureau

Agency Information Collection Activities; Submission to the Office of Management and Budget (OMB) for Review and Approval; Comment Request; Current Population Survey, Annual Social and Economic Supplement

AGENCY: U.S. Census Bureau, Commerce.

ACTION: Notice of information collection, request for comment.

SUMMARY: The Department of Commerce, in accordance with the Paperwork Reduction Act (PRA) of 1995, invites the general public and other Federal agencies to comment on proposed, and continuing information collections, which helps us assess the impact of our information collection requirements and minimize the public's reporting burden. The purpose of this notice is to allow for 60 days of public comment on the proposed revision of the Annual Social and Economic Supplement (ASEC) to the Current Population Survey, prior to the submission of the information collection request (ICR) to OMB for approval.

DATES: To ensure consideration, comments regarding this proposed information collection must be received on or before November 2, 2021.

ADDRESSES: Interested persons are invited to submit written comments by email to the Current Population Surveys Branch email address at dsd.cps@census.gov. Please reference the Annual Social and Economic Supplement (ASEC) in the subject line of your comments. You may also submit comments, identified by Docket Number USBC-2021-0021, to the Federal e-Rulemaking Portal: <http://www.regulations.gov>. All comments received are part of the public record. No comments will be posted to <http://www.regulations.gov> for public viewing until after the comment period has closed. Comments will generally be posted without change. All Personally Identifiable Information (for example, name and address) voluntarily submitted by the commenter may be publicly accessible. Do not submit Confidential Business Information or otherwise sensitive or protected information. You may submit attachments to electronic comments in Microsoft Word, Excel, or Adobe PDF file formats.

FOR FURTHER INFORMATION CONTACT: Requests for additional information or specific questions related to collection activities should be directed to Lisa Cheok, U.S. Census Bureau, (301) 763-3806 (or via the internet at dsd.cps@census.gov).

SUPPLEMENTARY INFORMATION:

I. Abstract

The Census Bureau plans to request clearance from the Office of Management and Budget (OMB) for the collection of data concerning the Annual Social and Economic Supplement (ASEC) to be conducted in conjunction with the February, March, and April Current Population Survey (CPS). The Census Bureau and the Bureau of Labor Statistics sponsor this supplement, which had its beginnings in 1942. This collection is authorized under Title 13, United States Code, Sections 141 and 182; and Title 29, United States Code, Sections 1-9. The current clearance expires December 31, 2021. The ASEC data collection questions remain largely unchanged from its most recent collection in 2021, however, there are minor changes and additions requested. The changes are limited to questions on stimulus payments, free and reduced price school lunch, pandemic school meals, and advanced child tax credit payments.

Information on work experience, personal income, noncash benefits, current and previous year health insurance coverage, employer-sponsored insurance take-up, and migration is collected through the ASEC. The work experience items in the ASEC provide a unique measure of the dynamic nature of the labor force as viewed over a one-year period. These items produce statistics that show movements in and out of the labor force by measuring the number of periods of unemployment experienced by people, the number of different employers worked for during the year, the principal reasons for unemployment, and part-/full-time attachment to the labor force. We can make indirect measurements of discouraged workers and others with a casual attachment to the labor market.

The income data from the ASEC are used by social planners, economists, government officials, and market researchers to gauge the economic well-being of the country as a whole, and selected population groups of interest. Government planners and researchers use these data to monitor and evaluate the effectiveness of various assistance programs. Market researchers use these data to identify and isolate potential customers. Social planners use these data to forecast economic conditions and to identify special groups that seem to be especially sensitive to economic fluctuations. Economists use ASEC data to determine the effects of various economic forces, such as inflation, recession, recovery, and so on, and their differential effects on various population groups.

The ASEC is the official source of national poverty estimates calculated in accordance with the Office of Management and Budget's Statistical Policy Directive 14. Two other important national estimates derived from the ASEC are real median household income and the number and percent of individuals without health insurance coverage.

The ASEC also contains questions related to: (1) Medical expenditures; (2) presence and cost of a mortgage on property; (3) child support payments; and (4) amount of child care assistance received. These questions enable analysts and policymakers to obtain better estimates of family and household income, and more precisely gauge poverty status.

II. Method of Collection

The ASEC information will be collected by both personal visit and telephone interviews in conjunction with the regular February, March and

April CPS interviewing. All interviews are conducted using computer-assisted interviewing.

III. Data

OMB Control Number: 0607-0354.

Form Number(s): None.

Type of Review: Regular submission. Revision of a Currently Approved Collection.

Affected Public: Households.

Estimated Number of Respondents: 78,000.

Estimated Time per Response: 25 minutes.

Estimated Total Annual Burden Hours: 32,500.

Estimated Total Annual Cost to Public: \$0 (This is not the cost of respondents' time, but the indirect costs respondents may incur for such things as purchases of specialized software or hardware needed to report, or expenditures for accounting or records maintenance services required specifically by the collection.)

Respondent's Obligation: Voluntary.

Legal Authority: Title 13, United States Code, Sections 141 and 182; and Title 29, United States Code, Sections 1-9.

IV. Request for Comments

We are soliciting public comments to permit the Department/Bureau to: (a) Evaluate whether the proposed information collection is necessary for the proper functions of the Department, including whether the information will have practical utility; (b) Evaluate the accuracy of our estimate of the time and cost burden for this proposed collection, including the validity of the methodology and assumptions used; (c) Evaluate ways to enhance the quality, utility, and clarity of the information to be collected; and (d) Minimize the reporting burden on those who are to respond, including the use of automated collection techniques or other forms of information technology.

Comments that you submit in response to this notice are a matter of public record. We will include, or summarize, each comment in our request to OMB to approve this ICR. 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 may 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.

Sheleen Dumas,

Department PRA Clearance Officer, Office of the Chief Information Officer, Commerce Department.

[FR Doc. 2021-19126 Filed 9-2-21; 8:45 am]

BILLING CODE 3510-07-P

DEPARTMENT OF COMMERCE

Economic Development Administration

Agency Information Collection Activities; Submission to the Office of Management and Budget (OMB) for Review and Approval; Comment Request; Requirements for Approved Construction Investments

AGENCY: Economic Development Administration, Department of Commerce.

ACTION: Notice of information collection, request for comment.

SUMMARY: The Department of Commerce, in accordance with the Paperwork Reduction Act of 1995 (PRA), invites the general public and other Federal agencies to comment on proposed, and continuing information collections, which helps us assess the impact of our information collection requirements and minimize the public's reporting burden. The purpose of this notice is to allow for 60 days of public comment preceding submission of the collection to OMB.

DATES: To ensure consideration, comments regarding this proposed information collection must be received on or before November 2, 2021.

ADDRESSES: Interested persons are invited to submit written comments to Sydney Milner, Program Analyst, Performance, Research and National Technical Assistance Division, Economic Development Administration, U.S. Department of Commerce, via email at smilner@eda.gov. You may also submit comments to PRAcomments@doc.gov. Please reference OMB Control Number 0610-0096 in the subject line of your comments. Do not submit Confidential Business Information or otherwise sensitive or protected information.

FOR FURTHER INFORMATION CONTACT:

Requests for additional information or specific questions related to collection activities should be directed to Sydney Milner, Program Analyst, Performance, Research and National Technical Assistance Division, Economic Development Administration, U.S. Department of Commerce, via email at

smilner@eda.gov via phone at (202) 365-4040.

SUPPLEMENTARY INFORMATION:

I. Abstract

The Economic Development Administration (EDA) leads the Federal economic development agenda by promoting innovation and competitiveness, preparing American regions for growth and success in the worldwide economy. Guided by the basic principle that sustainable economic development should be locally-driven, EDA works directly with communities and regions to help them build the capacity for economic development based on local business conditions and needs. The Public Works and Economic Development Act of 1965 (PWEDA) (42 U.S.C. 3121 *et seq.*) is EDA's organic authority and is the primary legal authority under which EDA awards financial assistance. Under PWEDA, EDA provides financial assistance to both rural and urban distressed communities by fostering entrepreneurship, innovation, and productivity through investments in infrastructure development, capacity building, and business development to attract private capital investments and new and better jobs to regions experiencing economic distress. Further information on EDA programs and financial assistance opportunities can be found at www.eda.gov.

To effectively administer and monitor its economic development assistance programs, EDA collects certain information from applications for, and recipients of, EDA investment assistance. EDA may award assistance for construction projects through its Public Works and Economic Adjustment Assistance (EAA) programs. Public Works program investments help support the construction or rehabilitation of essential public infrastructure and facilities necessary to generate or retain private sector jobs and investments, attract private sector capital, and promote vibrant economic ecosystems, regional competitiveness, and innovation. The EAA program provides a wide range of technical, planning, and infrastructure assistance in regions experiencing adverse economic changes that may occur suddenly or over time.

EDA seeks comments from the public and other Federal agencies on a proposed revision and extension of the series of checklists and templates that constitute EDA's post-approval tool for construction projects. These checklists and templates, as well as any special conditions incorporated into the terms and conditions at the time of award,

supplement the requirements that apply to EDA-funded construction projects.

II. Method of Collection

The checklists and templates are collected via both paper and electronic submissions. These checklists and templates, as well as any special conditions incorporated into the terms and conditions at the time of award, supplement the requirements that apply to EDA-funded construction projects.

As a part of this renewal process, EDA plans to make clarifying edits to the series of checklists and templates, thereby facilitating timely completion by the award recipient and approval by EDA. None of the edits are expected to increase the time burden on the respondent nor do the modifications change the type of collected information.

III. Data

OMB Control Number: 0610-0096.

Form Number(s): None.

Type of Review: Regular submission; Revision and extension of a currently approved collection.

Affected Public: Recipients of EDA construction (Public Works or Economic Assistance Adjustment) awards, including (1) cities or other political subdivisions of a state, including a special purpose unit of state or local government engaged in economic or infrastructure development activities, or a consortium of political subdivisions; (2) states; (3) institutions of higher education or a consortium of institutions of higher education; (4) public or private non-profit organizations or associations; (5) District Organizations; and (6) Indian Tribes or a consortia of Indian Tribes.

Estimated Number of Respondents: 3,500.

Estimated Time per Response: 2 hours.

Estimated Total Annual Burden Hours: 7,000 hours.

Estimated Total Annual Cost to Public: \$407,330 (cost assumes application of U.S. Bureau of Labor Statistics first quarter 2021 mean hourly employer costs for employee compensation for professional and related occupations of \$58.19).

Respondent's Obligation: Mandatory.

Legal Authority: The Public Works and Economic Development Act of 1965 (42 U.S.C. 3121 *et seq.*)

IV. Request for Comments

We are soliciting public comments to permit the Department/Bureau to: (a) Evaluate whether the proposed information collection is necessary for the proper functions of the Department,

including whether the information will have practical utility; (b) Evaluate the accuracy of our estimate of the time and cost burden for this proposed collection, including the validity of the methodology and assumptions used; (c) Evaluate ways to enhance the quality, utility, and clarity of the information to be collected; and (d) Minimize the reporting burden on those who are to respond, including the use of automated collection techniques or other forms of information technology.

Comments that you submit in response to this notice are a matter of public record. We will include or summarize each comment in our request to OMB to approve this ICR. 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 may 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.

Sheleen Dumas,

Department PRA Clearance Officer, Office of the Chief Information Officer, Commerce Department.

[FR Doc. 2021–19131 Filed 9–2–21; 8:45 am]

BILLING CODE 3510–24–P

DEPARTMENT OF COMMERCE

Foreign-Trade Zones Board

[B–60–2021]

Foreign-Trade Zone (FTZ) 171—Liberty County, Texas; Notification of Proposed Production Activity; CCZJV–GPX (Pipe Spools and Valves), Baytown, Texas

CCZJV–GPX submitted a notification of proposed production activity to the FTZ Board for its facility in Baytown, Texas. The notification conforming to the requirements of the regulations of the FTZ Board (15 CFR 400.22) was received on August 24, 2021.

The CCZJV–GPX facility is located within FTZ 171. The facility will be used for production of pipe spools and valves. Pursuant to 15 CFR 400.14(b), FTZ activity would be limited to the specific foreign-status materials/components and specific finished products described in the submitted notification (as described below) and subsequently authorized by the FTZ Board.

Production under FTZ procedures could exempt CCZJV–GPX from

customs duty payments on the foreign-status materials/components used in export production. On its domestic sales, for the foreign-status materials/components noted below, CCZJV–GPX would be able to choose the duty rates during customs entry procedures that apply to seamless or welded stainless steel pipe spools, and ductile iron, carbon, and stainless steel piping balls, gate valves, and check valves (duty rate ranges from duty-free to 5.6%). CCZJV–GPX would be able to avoid duty on foreign-status components which become scrap/waste. Customs duties also could possibly be deferred or reduced on foreign-status production equipment.

The materials/components sourced from abroad may include: Steel pipe (seamless iron or nonalloy; welded carbon; stainless); flanges (stainless steel; stainless steel not processed after forging; carbon steel); butt-welded carbon steel fittings; carbon steel pipe fittings; butt-welded pipe fittings (iron or nonalloy steel; alloy steel (except stainless steel)); forged pipe fittings (iron or nonalloy steel); and, actuators (motorized, pneumatic, hydraulic) (duty rate ranges from duty-free to 6.2%). The request indicates that certain components are subject to various antidumping/countervailing duty (AD/CVD) orders if imported from certain countries. The FTZ Board's regulations (15 CFR 400.14(e)) require that merchandise subject to AD/CVD orders, or items which would be otherwise subject to suspension of liquidation under AD/CVD procedures if they entered U.S. customs territory, be admitted to the zone in privileged foreign (PF) status (19 CFR 146.41). The request also indicates that certain materials/components are subject to duties under Section 232 of the Trade Expansion Act of 1962 (Section 232) or Section 301 of the Trade Act of 1974 (Section 301), depending on the country of origin. The applicable Section 232 and Section 301 decisions require subject merchandise to be admitted to FTZs in PF status.

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 October 13, 2021.

A copy of the notification will be available for public inspection in the "Reading Room" section of the Board's website, which is accessible via www.trade.gov/ftz.

For further information, contact Juanita Chen at juanita.chen@trade.gov or 202–482–1378.

Dated: August 31, 2021.

Andrew McGilvray,
Executive Secretary.

[FR Doc. 2021–19135 Filed 9–2–21; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

Foreign-Trade Zones Board

[B–37–2021]

Foreign-Trade Zone (FTZ) 20—Norfolk, Virginia, Authorization of Production Activity, STIHL, Incorporated (Handheld Outdoor Power Equipment), Virginia Beach, Virginia

On May 3, 2021, STIHL, Incorporated submitted a notification of proposed production activity to the FTZ Board for its facility within Subzone 20E in Virginia Beach, Virginia.

The notification was processed in accordance with the regulations of the FTZ Board (15 CFR part 400), including notice in the **Federal Register** inviting public comment (86 FR 24841, May 10, 2021). On August 31, 2021, the applicant was notified of the FTZ Board's decision that no further review of the activity is warranted at this time. The production activity described in the notification was authorized, subject to the FTZ Act and the FTZ Board's regulations, including Section 400.14.

Dated: August 31, 2021.

Andrew McGilvray,
Executive Secretary.

[FR Doc. 2021–19051 Filed 9–2–21; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

International Trade Administration

[A–583–853]

Certain Crystalline Silicon Photovoltaic Products From Taiwan: Final Results of Antidumping Duty Administrative Review; Partial Rescission of Antidumping Duty Administrative Review; Final Determination of No Shipments; 2019–2020

AGENCY: Enforcement and Compliance, International Trade Administration, Department of Commerce.

SUMMARY: The Department of Commerce (Commerce) determines that certain crystalline silicon photovoltaic products (solar products) from Taiwan were sold in the United States at less than normal value during the period of review (POR), February 1, 2019, through January 31, 2020.

DATES: Applicable September 3, 2021.

FOR FURTHER INFORMATION CONTACT:

Zachary Shaykin or Thomas Martin, 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) 482-2638 or (202) 482-3936, respectively.

SUPPLEMENTARY INFORMATION:**Background**

On April 29, 2021, Commerce published the *Preliminary Results*.¹ On June 8, 2021, we received case briefs from Inventec Solar Energy Corporation (ISEC),² JA Solar International Limited (JA Solar),³ and United Renewable Energy Corporation (URE),⁴ and a letter in lieu of a case brief from Canadian Solar companies.⁵ We received no rebuttal briefs. For a complete description of the events that occurred since the *Preliminary Results*, see the Issues and Decision Memorandum.⁶

Scope of the Order⁷

The merchandise covered by the *Order* is solar products from Taiwan. For a complete description of the scope of this review, see the Issues and Decision Memorandum.⁸

Analysis of Comments Received

All issues raised in the case briefs that were submitted by parties in this administrative review are addressed in

¹ See *Certain Crystalline Silicon Photovoltaic Products from Taiwan: Preliminary Results; Preliminary Intent to Rescind and Partial Rescission of Antidumping Duty Administrative Review; and Preliminary Determination of No Shipments; 2019–2020*, 86 FR 22630 (April 29, 2021) (*Preliminary Results*).

² See ISEC's Letter, "Certain Crystalline Silicon Photovoltaic Products from Taiwan: Case Brief," dated June 8, 2021.

³ See JA Solar's Letter, "Antidumping Duty Administrative Review of Certain Crystalline Silicon Photovoltaic Products from Taiwan: Case Brief," dated June 8, 2021 (JA Solar's Case Brief).

⁴ See URE's Letter, "Certain Crystalline Silicon Photovoltaic Products from Taiwan: Case Brief," dated June 8, 2021.

⁵ The Canadian Solar companies are: (1) Canadian Solar Inc.; (2) Canadian Solar International Limited; (3) Canadian Solar Manufacturing (Changshu), Inc.; (4) Canadian Solar Manufacturing (Luoyang), Inc.; and; (5) Canadian Solar Solutions Inc. (collectively, Canadian Solar). See Canadian Solar's Letter, "Certain Crystalline Silicon Photovoltaic Products from Taiwan (2019–2020 Review): Letter in Lieu of Case Brief of Canadian Solar," dated June 8, 2021.

⁶ See Memorandum, "Issues and Decision Memorandum for the Final Results of the 2019–2020 Administrative Review of the Antidumping Duty Order on Certain Crystalline Silicon Photovoltaic Products from Taiwan," dated concurrently with, and hereby adopted by, this notice (Issues and Decision Memorandum).

⁷ See *Certain Crystalline Silicon Photovoltaic Products from Taiwan: Antidumping Duty Order*, 80 FR 8596 (February 18, 2015) (*Order*).

⁸ *Id.*

the Issues and Decision Memorandum. A list of the sections of the Issues and Decision Memorandum are in the appendix to this notice. The Issues and Decision Memorandum is a public document and is on file electronically via Enforcement and Compliance's Antidumping and Countervailing Duty Centralized Electronic Service System (ACCESS). ACCESS is available to registered users at <https://access.trade.gov>. In addition, a complete version of the Issues and Decision Memorandum can be accessed directly at <http://enforcement.trade.gov/frn>.

Changes Since the Preliminary Results

Based on a review of the record and comments received from interested parties regarding our *Preliminary Results*, we made changes to the weighted-average dumping margin for the ISEC/E-TON entity⁹ and the weighted-average rate for companies not selected for individual review in this administrative review;¹⁰ however, no changes were made to the weighted-average dumping margin for URE. In addition, we: (1) Corrected the name of certain Canadian Solar companies from the *Preliminary Results* and from the draft U.S. Customs and Border Protection (CBP) instructions that we released for comment;¹¹ and (2) added certain case numbers to Commerce's draft customs instructions.¹²

Partial Rescission of Administrative Review

We originally initiated this review with respect to Inventec Energy Corporation (IEC).¹³ On March 5, 2021, ISEC reported that IEC ceased business operations, and was dissolved and liquidated prior to the POR.¹⁴ Therefore, pursuant to 19 CFR 351.213(d)(3) and in accordance with the *Preliminary Results* and Commerce practice, we have completed this review with respect to IEC, and continue to conclude that IEC had no shipments during the POR.

⁹ Commerce has determined to collapse Inventec Solar Energy Corporation and E-TON Solar Tech. Co., Ltd., and treat these companies as a single entity for the purposes of this review, in accordance with 19 CFR 351.401(f). See Memorandum, "2019–2020 Administrative Review of Certain Crystalline Silicon Photovoltaic Products from Taiwan: Affiliation and Single Entity Treatment Memorandum," dated April 23, 2021.

¹⁰ See Issues and Decision Memorandum at Comment 1.

¹¹ *Id.* at Comment 4.

¹² *Id.* at Comment 5.

¹³ See *Initiation of Antidumping and Countervailing Duty Administrative Reviews*, 85 FR 19730, 19735 (April 8, 2020).

¹⁴ See Memorandum, "Certain Crystalline Silicon Photovoltaic Products from Taiwan—Inventec's Sections A Supplemental Questionnaire Response," dated March 5, 2021.

Thus, pursuant to 19 CFR 351.213(d)(3), Commerce has rescinded this administrative review with respect to IEC. Therefore, Commerce will issue the appropriate instructions to CBP based on these final results.

Final Determination of No Shipments

As noted in the *Preliminary Results*, we received no-shipment claims from seven producers and/or exporters under review, and we preliminarily determined that these seven companies had no shipments during the POR.¹⁵ We received no comments from interested parties with respect to these claims. Therefore, because we have not received any information to contradict our preliminary no-shipment determination, nor comment in opposition to our preliminary finding and record evidence indicates that these seven companies had no entries of subject merchandise to the United States during the POR, we continue to find that they had no shipments during the POR.¹⁶ Consistent with our practice, we have completed the review with respect to these seven companies and will issue appropriate instructions to CBP based on our final results. We will instruct CBP to liquidate any existing entries of subject merchandise produced by the seven companies, but exported by other parties, at the rate for the intermediate reseller, if available, or at the all-others rate.

Final Rates for Non-Examined Companies

The statute and Commerce's regulations do not address the establishment of a rate to be applied to individual respondents not selected for examination when Commerce limits its examination in an administrative review pursuant to section 777A(c)(2) of the Tariff Act of 1930, as amended (the Act). Generally, Commerce looks to section 735(c)(5) of the Act, which provides instructions for calculating the all-others rate in an investigation, for guidance when calculating the rate for respondents which we did not individually examine in an administrative review. Section 735(c)(5)(A) of the Act establishes a preference to avoid using rates which are zero, *de minimis*, or based entirely on facts available (FA) in calculating an all-others rate. Accordingly,

¹⁵ See *Preliminary Results*, 86 FR at 22632. These companies are AU Optronics Corporation; Canadian Solar Inc.; Canadian Solar International Limited.; Canadian Solar Manufacturing (Changshu), Inc.; Canadian Solar Manufacturing (Luoyang), Inc.; Canadian Solar Solutions Inc.; and Vina Solar Technology Co., Ltd.

¹⁶ See *Preliminary Results*, 86 FR at 22632.

Commerce’s practice in administrative reviews has been to average the weighted-average dumping margins for the companies selected for individual examination in the administrative review, excluding rates that are zero, *de minimis*, or based entirely on FA. For these final results of review, we have calculated weighted-average dumping margins that are not zero, *de minimis*,

or determined entirely on the basis of facts available.¹⁷ Accordingly, Commerce assigns to the companies not individually examined in this review a dumping margin of 7.89 percent, which is the weighted-average of the dumping margins calculated using the public ranged sales data of ISEC and E-TON, and URE.

Final Results of the Review

As a result of this review, Commerce determines the following weighted-average dumping margins exist for the mandatory respondents, the ISEC/E-TON entity and URE, for the period February 1, 2019, through January 31, 2020.

Producers/exporters	Weighted-average dumping margin (percent)
Inventec Solar Energy Corporation and E-TON Solar Tech Co., Ltd	21.87
United Renewable Energy Co., Ltd	1.27

**Review-Specific Average Rate
Applicable to the Following Companies:**

Producers/exporters	Weighted-average dumping margin (percent)
Baoding Jiasheng Photovoltaic Technology Co. Ltd	7.89
Baoding Tianwei Yingli New Energy Resources Co., Ltd	7.89
Beijing Tianneng Yingli New Energy Resources Co. Ltd	7.89
Boviet Solar Technology Co., Ltd	7.89
EEPV CORP	7.89
Hainan Yingli New Energy Resources Co., Ltd	7.89
Hengshui Yingli New Energy Resources Co., Ltd	7.89
Kyocera Mexicana S.A. de C.V	7.89
Lixian Yingli New Energy Resources Co., Ltd	7.89
Motech Industries, Inc	7.89
Shenzhen Yingli New Energy Resources Co., Ltd	7.89
Sunengine Corporation Ltd	7.89
Sunrise Global Solar Energy	7.89
Tianjin Yingli New Energy Resources Co., Ltd	7.89
TSEC Corporation	7.89
Win Win Precision Technology Co., Ltd	7.89
Yingli Energy (China) Co., Ltd	7.89
Yingli Green Energy International Trading Company Limited	7.89

Disclosure

We intend to disclose the calculations performed in connection with these final results to parties in this proceeding within five days after the date of publication of this notice, in accordance with 19 CFR 351.224(b).

Assessment Rates

Pursuant to section 751(a)(2)(C) of the Act, and 19 CFR 351.212(b)(1), Commerce has determined, and CBP shall assess, antidumping duties on all appropriate entries of subject merchandise in accordance with the

final results of this review. Pursuant to 19 CFR 351.212(b)(1), we calculated importer-specific *ad valorem* duty assessment rates based on the ratio of the total amount of dumping calculated for the examined sales to the total entered value of those sales. Where either the respondent’s weighted-average dumping margin is zero or *de minimis* within the meaning of 19 CFR 351.106(c)(1), or an importer-specific assessment rate is zero or *de minimis*, we will instruct CBP to liquidate the appropriate entries without regard to antidumping duties.

For the companies which were not selected for individual review, we will instruct CBP to assess antidumping duties at an *ad valorem* rate equal to each company’s weighted-average dumping margin identified above. The final results of this review shall be the basis for the assessment of antidumping duties on entries of merchandise covered by the final results of this review and for future deposits of estimated duties, where applicable.¹⁸

For entries of subject merchandise during the POR produced by each mandatory respondent for which it did

¹⁷ In the case of two mandatory respondents, our practice is to calculate: (A) A weighted average of the dumping margins calculated for the mandatory respondents; (B) a simple average of the dumping margins calculated for the mandatory respondents; and (C) a weighted average of the dumping margins calculated for the mandatory respondents using

each company’s publicly ranged values for the merchandise under consideration. We compare (B) and (C) to (A) and select the rate closest to (A) as the most appropriate rate for all other companies. See *Certain Crystalline Silicon Photovoltaic Products from Taiwan: Final Results of Antidumping Duty Administrative Review; 2014–*

2016, 82 FR 31555, 31556 (July 7, 2017). We have applied that practice here. See Memorandum, “Calculation of the Rate for Non-Selected Respondents,” dated concurrently with this notice.

¹⁸ See section 751(a)(2)(C) of the Act.

not know its merchandise was destined for the United States, or for entries associated with the seven companies that had no shipments during the POR, we will instruct CBP to liquidate such entries at the all-others rate if there is no rate for the intermediate company(-ies) involved in the transaction.

Commerce intends to issue assessment instructions to CBP no earlier than 35 days after the date of publication of the final results of this review in the **Federal Register**. If a timely summons is filed at the U.S. Court of International Trade, the assessment instructions will direct CBP not to liquidate relevant entries until the time for parties to file a request for a statutory injunction has expired (*i.e.*, within 90 days of publication).

Cash Deposit Requirements

The following cash deposit requirements will be effective for all shipments of the subject merchandise entered, or withdrawn from warehouse, for consumption on or after the publication date of the final results of this administrative review, as provided by section 751(a)(2)(C) of the Act: (1) The cash deposit rate for each specific company listed above will be equal to the weighted-average dumping margin that is established in the final results of this review, (2) for previously investigated companies not listed above, including the companies which Commerce has determined had no shipments in these final results, the cash deposit rate will continue to be the company-specific rate published for the most recently completed segment of this proceeding in which the companies participated; (3) if the exporter is not a firm covered in this review, a prior review, or the original less-than-fair-value (LTFV) investigation, but the producer is, then the cash deposit rate will be the cash deposit rate established for the most recently completed segment for the producer of the subject merchandise; and (4) the cash deposit rate for all other producers or exporters will continue to be 19.50 percent, the all-others rate established in the LTFV investigation.¹⁹ These cash deposit requirements, when imposed, shall remain in effect until further notice.

Notification to Importers

This notice serves as a final reminder to importers of their responsibility under 19 CFR 351.402(f)(2) to file a certificate regarding the reimbursement of antidumping duties prior to

liquidation of the relevant entries during this review period. Failure to comply with this requirement could result in Commerce's presumption that reimbursement of antidumping duties occurred and the subsequent assessment of double antidumping duties.

Administrative Protective Order

This notice also serves as the final reminder to parties subject to administrative protective order (APO) of their responsibility concerning the return or destruction of proprietary information disclosed under APO in accordance with 19 CFR 351.305(a)(3), which continues to govern business proprietary information in this segment of the proceeding. Timely written notification of return/destruction of APO materials or conversion to judicial protective order is hereby requested. Failure to comply with the regulations and the terms of an APO is a sanctionable violation.

Notification to Interested Parties

This notice is issued and published in accordance with sections 751(a)(1) and 777(i)(1) of the Act, and 19 CFR 351.221(b)(5) and 19 CFR 351.213(h).

Dated: August 27, 2021.

Christian Marsh,

Acting Assistant Secretary for Enforcement and Compliance.

Appendix—List of Sections in the Issues and Decision Memorandum

- I. Summary
- II. Background
- III. Scope of the Order
- IV. Final Determination of No Shipments
- V. Partial Recission of Administrative Review
- VI. Changes Since the *Preliminary Results*
- VII. Discussion of the Issues
 - Comment 1: Whether Commerce Made a Clerical Error in the Normal Value Calculation in Certain Instances for Certain Control Number (CONNUM) Models
 - Comment 2: Whether to Attribute Certain U.S. sales to ISEC or its Customer Pursuant to the Knowledge Test
 - Comment 3: Whether Commerce Should Collapse ISEC and E-TON into a Single Entity
 - Comment 4: Name Correction for Certain Canadian Solar Companies
 - Comment 5: Whether to Include an Additional Case Number to Liquidation and Cash Deposit Instructions with Respect to URE
- VIII. Recommendation

[FR Doc. 2021-19052 Filed 9-2-21; 8:45 am]

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DEPARTMENT OF COMMERCE

International Trade Administration

[A-570-985]

Xanthan Gum From the People's Republic of China: Amended Preliminary Results of the Antidumping Duty Administrative Review; 2017-2018

AGENCY: Enforcement and Compliance, International Trade Administration, Department of Commerce.

SUMMARY: The Department of Commerce (Commerce) preliminarily finds that Neimenggu Fufeng Biotechnologies Co., Ltd. (aka Inner Mongolia Fufeng Biotechnologies Co., Ltd.)/Shandong Fufeng Fermentation Co., Ltd./Xinjiang Fufeng Biotechnologies Co., Ltd. (collectively, Fufeng) is eligible for separate rate status. The period of review (POR) is July 1, 2017, through June 30, 2018. Interested parties are invited to comment on these amended preliminary results.

DATES: Applicable September 3, 2021.

FOR FURTHER INFORMATION CONTACT: Aleksandras Nakutis or Thomas Hanna, 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) 482-3147 or (202) 482-0835, respectively.

SUPPLEMENTARY INFORMATION:

Background

Pursuant to a series of remand orders and the Court of International Trade's (CIT) final judgment regarding the underlying less-than-fair-value (LTFV) investigation, Commerce amended its final determination and prior amended final determination in the investigation and amended the *Order* by excluding merchandise produced and exported by Fufeng from the *Order*.¹ Given this

¹ See *Xanthan Gum from the People's Republic of China: Amended Final Determination of Sales at Less Than Fair Value and Antidumping Duty Order*, 78 FR 43143 (July 19, 2013) (*Order*); see also *CP Kelco US, Inc. v. United States*, Ct. No. 13-00288, Slip Op. 15-27 (CIT March 31, 2015); *CP Kelco US, Inc. v. United States*, Ct. No. 13-00288, Slip Op. 16-36 (CIT April 8, 2016); *CP Kelco US, Inc. v. United States*, 211 F. Supp. 3d 1338 (CIT 2017); *CP Kelco US, Inc. v. United States*, Ct. No. 13-00288, Slip Op. 18-36 (CIT April 5, 2018); *CP Kelco US, Inc. v. United States*, Ct. No. 13-00288, Slip Op. 18-120 (CIT September 17, 2018); and *Xanthan Gum From the People's Republic of China: Notice of Court Decision Not in Harmony With Amended Final Determination in Less Than Fair Value Investigation; Notice of Amended Final Determination Pursuant to Court Decision; Notice of Revocation of Antidumping Duty Order in Part; and Discontinuation of Fourth and Fifth Antidumping Duty Administrative Reviews in Part*, 83 FR 52205

¹⁹ See *Certain Crystalline Silicon Photovoltaic Products from Taiwan: Final Determination of Sales at Less Than Fair Value*, 79 FR 76966, 76969 (December 23, 2014).

exclusion, Commerce discontinued this review with respect to, and did not issue preliminary or final results of review for, Fufeng while awaiting the outcome of the appeals process.² On February 10, 2020, the Court of Appeals for the Federal Circuit (CAFC) reversed the CIT's decision that resulted in the exclusion of Fufeng from the *Order*.³ Accordingly, Commerce issued a third amended final determination in the LTFV investigation of xanthan gum from China, in which it found Fufeng subject to the *Order* and announced its intention to resume the instant review of Fufeng.⁴ Commerce is now amending the preliminary results of this administrative review by completing the administrative review with respect to Fufeng.

In the *Third Amended Final Determination*, Commerce explained that:

. . . because we already selected mandatory respondents, other than Fufeng, and issued final results with respect to those respondents, we will analyze Fufeng's separate rate certification and issue preliminary results regarding Fufeng's separate rate status. We will set a briefing period to allow interested parties to comment on our separate rates determination for Fufeng before issuing the final results of review with respect to Fufeng.⁵

Accordingly, we have addressed Fufeng's separate rate status below.

Scope of the Order

The product covered by the *Order* is dry xanthan gum, whether or not coated or blended with other products, from China (xanthan gum).⁶

(October 16, 2018) (*Discontinuation and Partial Revocation*).

² See *Discontinuation and Partial Revocation* at 52206; see also *Xanthan Gum from the People's Republic of China: Preliminary Results of the Antidumping Duty Administrative Review, and Preliminary Determination of No Shipments; 2017–2018*, 84 FR 26813 (June 10, 2019) (*Preliminary Results*) and accompanying Preliminary Decision Memorandum (June 2019 Preliminary Decision Memorandum) and *Xanthan Gum from the People's Republic of China: Final Results of Antidumping Duty Administrative Review and Final Determination of No Shipments; 2017–2018*, 84 FR 64831 (November 25, 2019) (*Final Results*) and accompanying Issues and Decision Memorandum.

³ See *CP Kelco US, Inc. v. United States, Neimenggu Fufeng Biotechnologies Co., Ltd., Shandong Fufeng Fermentation Co., Ltd.*, 949 F.3d 1348 (Fed. Cir. 2020).

⁴ See *Xanthan Gum from the People's Republic of China: Notice of Third Amended Final Determination Pursuant to Court Decision*, 85 FR 40967 (July 8, 2020) (*Third Amended Determination*).

⁵ *Id.* at 40969.

⁶ For a complete description of the scope of the *Order*, see Memorandum, "Xanthan Gum from the People's Republic of China: Decision Memorandum for the Amended Preliminary Results of the 2017–2018 Antidumping Duty Administrative Review" (Preliminary Decision Memorandum).

Separate Rate Status

Based on the criteria established by *Sparklers*⁷ and *Silicon Carbide*,⁸ Commerce preliminarily determines that the information placed on the record by Fufeng demonstrates an absence of *de jure* and *de facto* government control over its export activities. Therefore, we have preliminarily granted Fufeng separate rate status. For details regarding our analysis, see the Preliminary Decision Memorandum.

Dumping Margin for Non-Individually Examined Respondents Granted Separate Rate Status

The statute and Commerce's regulations do not identify the dumping margin to apply to respondents that are eligible for a separate rate in a non-market economy antidumping duty administrative review that were not selected for individual examination. Generally, Commerce looks to section 735(c)(5) of the Tariff Act of 1930, as amended (the Act), which provides instructions for calculating the all-others rate in a market economy antidumping duty investigation, for guidance when determining the dumping margin for respondents that were not individually examined that qualify for a separate rate. Section 735(c)(5)(A) of the Act states that the all-others rate should be calculated by averaging the weighted-average dumping margins determined for individually examined respondents, excluding dumping margins that are zero, *de minimis*, or based entirely on facts available. Where the dumping margins for the individually examined respondents are all zero, *de minimis*, or based entirely on facts available, section 735(c)(5)(B) of the Act provides that Commerce may use "any reasonable method" to establish the all others rate. The dumping margins for both of the individually examined respondents in this review are zero. Therefore, consistent with the dumping margin assigned to the other non-individually examined separate rate recipients in the *Final Results* of this review, we are preliminarily assigning a dumping margin of zero percent to Fufeng.⁹

Disclosure and Public Comment

Because Commerce did not calculate a weighted-average dumping margin for

⁷ See *Final Determination of Sales at Less Than Fair Value: Sparklers from the People's Republic of China*, 56 FR 20588 (May 6, 1991) (*Sparklers*).

⁸ See *Notice of Final Determination of Sales at Less Than Fair Value: Silicon Carbide from the People's Republic of China*, 59 FR 22585 (May 2, 1994) (*Silicon Carbide*).

⁹ See *Final Results* at 64832.

Fufeng, there are no calculations to disclose to interested parties.

Interested parties are invited to comment on these amended preliminary results of review. Pursuant to 19 CFR 351.309(c)(1)(ii), interested parties may submit case briefs no later than 21 days after the date of publication of this notice in the **Federal Register**.¹⁰ Rebuttal briefs, limited to issues raised in the case briefs, may be filed no later than seven days after the deadline for filing case briefs.¹¹ Parties who submit case briefs or rebuttal briefs should submit with each argument: (1) A statement of the issue; (2) a brief summary of the argument; and (3) a table of authorities.¹² Executive summaries should be limited to five pages total, including footnotes.¹³ Case and rebuttal briefs should be filed using Enforcement and Compliance's Antidumping and Countervailing Duty Centralized Electronic Service System (ACCESS).¹⁴ Note that Commerce has temporarily modified certain of its requirements for serving documents containing business proprietary information until further notice.¹⁵

Pursuant to 19 CFR 351.310(c), any interested party may request a hearing within 21 days of the date of publication of this notice in the **Federal Register**.¹⁶ Interested parties who wish to request a hearing must submit a written request to the Assistant Secretary for Enforcement and Compliance, filed electronically via ACCESS, by the deadline noted above. If a hearing is requested, Commerce will notify interested parties of the hearing date and time. Requests for a hearing should contain: (1) The requesting party's name, address, and telephone number; (2) the number of individuals from the requesting party's firm that will attend the hearing; and (3) a list of the issues the party intends to discuss at the hearing. Issues raised in the hearing are limited to those issues raised in the party's case and rebuttal briefs.

Unless we extend the deadline for the amended final results of this review, we intend to issue the amended final results of this administrative review, including the results of our analysis of

¹⁰ Commerce has exercised its discretion under 19 CFR 351.309(c)(1)(ii) to alter the time limit for submission of case briefs.

¹¹ See 19 CFR 351.309(d)(1); see also *Temporary Rule Modifying AD/CVD Service Requirements Due to COVID-19; Extension of Effective Period*, 85 FR 41363 (July 10, 2020) (*Temporary Rule*).

¹² See 19 CFR 351.309(c)(2) and (d)(2).

¹³ *Id.*

¹⁴ See 19 CFR 351.303.

¹⁵ See *Temporary Rule*.

¹⁶ Commerce has exercised its discretion under 19 CFR 351.310(c) to alter the time limit for requesting a hearing.

issues raised by the parties in their briefs, within 120 days of the date of publication of this notice in the **Federal Register**.¹⁷

Assessment Rates

Upon issuance of the amended final results of review, Commerce will determine, and CBP shall assess, antidumping duties on all appropriate entries covered by the amended final results of review.¹⁸ Commerce intends to issue assessment instructions to CBP no earlier than 35 days after the date of publication of the amended final results of this review in the **Federal Register**.¹⁹ If a timely summons is filed at the U.S. Court of International Trade, the assessment instructions will direct CBP not to liquidate relevant entries until the time for parties to file a request for a statutory injunction has expired (*i.e.*, within 90 days of publication).

Cash Deposit Requirements

The cash deposit rate for Fufeng will be equal to the dumping margin established for Fufeng in the amended final results of this review (if the dumping margin is zero or *de minimis*, then a cash deposit rate of zero will be required). For information regarding the cash deposit requirements established for other companies in this segment of the proceeding, *see the Final Results*.

This cash deposit requirement, when imposed, shall remain in effect until further notice.

Notification to Importers

This notice also serves as a preliminary reminder to importers of their responsibility under 19 CFR 351.402(f) to file a certificate regarding the reimbursement of antidumping and/or countervailing duties prior to liquidation of the relevant entries during this review period. Failure to comply with this requirement could result in Commerce's presumption that reimbursement of antidumping and/or countervailing duties occurred and the subsequent assessment of double antidumping duties.

Notification to Interest Parties

These amended preliminary results of administrative review are issued and published in accordance with sections 751(a)(1) and 777(i)(1) of the Act, and 19 CFR 351.213(h)(1).

¹⁷ See section 751(a)(3)(A) of the Act; and 19 CFR 351.213(h)(1).

¹⁸ See 19 CFR 351.212(b)(1).

¹⁹ See *Notice of Discontinuation of Policy to Issue Liquidation Instructions After 15 Days in Applicable Antidumping and Countervailing Duty Administrative Proceedings*, 86 FR 3995 (January 15, 2021).

Dated: August 30, 2021.

James Maeder,

Deputy Assistant Secretary for Antidumping and Countervailing Duty Operations.

[FR Doc. 2021-19065 Filed 9-2-21; 8:45 am]

BILLING CODE 3510-DS-P

DEPARTMENT OF COMMERCE

International Trade Administration

[C-533-902]

Organic Soybean Meal from India: Preliminary Affirmative Countervailing Duty Determination and Alignment of Final Determination With Final Antidumping Duty Determination

AGENCY: Enforcement and Compliance, International Trade Administration, Department of Commerce.

SUMMARY: The Department of Commerce (Commerce) preliminarily determines that countervailable subsidies are being provided to producers and exporters of organic soybean meal from India. The period of investigation is January 1, 2020, through December 31, 2020. Interested parties are invited to comment on this preliminary determination.

DATES: Applicable September 3, 2021.

FOR FURTHER INFORMATION CONTACT: Lauren Caserta, AD/CVD Operations, Office VII, Enforcement and Compliance, International Trade Administration, U.S. Department of Commerce, 1401 Constitution Avenue NW, Washington, DC 20230; telephone: (202) 482-4737.

SUPPLEMENTARY INFORMATION:

Background

This preliminary determination is made in accordance with section 703(b) of the Tariff Act of 1930, as amended (the Act). Commerce published the notice of initiation of this investigation on April 27, 2021.¹ On June 3, 2021, Commerce postponed the preliminary determination of this investigation and the revised deadline is now August 30, 2021.² For a complete description of the events that followed the initiation of this investigation, *see the Preliminary Decision Memorandum*.³ A list of topics

¹ See *Organic Soybean Meal from India: Initiation of Countervailing Duty Investigation*, 86 FR 22136 (April 27, 2021) (*Initiation Notice*).

² See *Organic Soybean Meal from India: Postponement of Preliminary Determination in the Countervailing Duty Investigation*, 86 FR 29742 (June 3, 2021).

³ See Memorandum, "Decision Memorandum for the Preliminary Affirmative Determination in the Countervailing Duty Investigation of Organic Soybean Meal from India," dated concurrently with, and hereby adopted by, this notice (*Preliminary Decision Memorandum*).

discussed in the Preliminary Decision Memorandum is included as Appendix II to this notice. The Preliminary Decision Memorandum is a public document and is on file electronically via Enforcement and Compliance's Antidumping and Countervailing Duty Centralized Electronic Service System (ACCESS). ACCESS is available to registered users at <http://access.trade.gov>. In addition, a complete version of the Preliminary Decision Memorandum can be accessed directly at <http://enforcement.trade.gov/frn/>.

Scope of the Investigation

The product covered by this investigation is organic soybean meal from India. For a complete description of the scope of this investigation, *see Appendix I*.

Scope Comments

In accordance with the preamble to Commerce's regulations,⁴ the *Initiation Notice* set aside a period of time for parties to raise issues regarding product coverage, (*i.e.*, scope).⁵ No interested party commented on the scope of the investigation as it appeared in the *Initiation Notice*.

Methodology

Commerce is conducting this investigation in accordance with section 701 of the Act. For each of the subsidy programs found countervailable, Commerce preliminarily determines that there is a subsidy, *i.e.*, a financial contribution by an "authority" that gives rise to a benefit to the recipient, and that the subsidy is specific.⁶

Commerce notes that, in making these findings, it relied, in part, on facts available and, because it finds that one or more respondents did not act to the best of their ability to respond to Commerce's requests for information, it drew an adverse inference where appropriate in selecting from among the facts otherwise available.⁷ For further information, *see "Use of Facts Otherwise Available and Adverse Inferences"* in the Preliminary Decision Memorandum.

Alignment

As noted in the Preliminary Decision Memorandum, in accordance with section 705(a)(1) of the Act and 19 CFR 351.210(b)(4), Commerce is aligning the

⁴ See *Antidumping Duties; Countervailing Duties, Final Rule*, 62 FR 27296, 27323 (May 19, 1997).

⁵ See *Initiation Notice*.

⁶ See sections 771(5)(B) and (D) of the Act regarding financial contribution; section 771(5)(E) of the Act regarding benefit; and section 771(5A) of the Act regarding specificity.

⁷ See sections 776(a) and (b) of the Act.

final countervailing duty (CVD) determination in this investigation with the final determination in the companion antidumping duty (AD) investigation of organic soybean meal from India based on a request made by the petitioners.⁸ Consequently, the final CVD determination will be issued on the same date as the final AD determination, which is currently scheduled to be issued no later than January 10, 2022, unless postponed.

All-Others Rate

Sections 703(d) and 705(c)(5)(A) of the Act provide that in the preliminary determination, Commerce shall determine an estimated all-others rate for companies not individually examined. Pursuant to section 705(c)(5)(A)(i) of the Act, this rate shall normally be an amount equal to the weighted average of the estimated subsidy rates established for those companies individually examined, excluding any zero and *de minimis* rates and any rates based entirely under section 776 of the Act.

In this investigation, the only individually calculated rate that is not zero, *de minimis* or based entirely on facts otherwise available is the rate calculated for Bergwerff Organic India Private Limited (Bergwerff). Consequently, the rate calculated for Bergwerff is also assigned as the rate for all other producers and exporters not individually examined in this investigation.

Preliminary Determination

Commerce preliminarily determines that the following estimated countervailable subsidy rates exist:

Company	Subsidy rate (percent)
Bergwerff Organic India Private Limited ⁹	7.05
Shanti Worldwide	266.37
Shri Sumati Oil Industries Pvt. Ltd	266.37
Navjyot International Pvt. Ltd	266.37
Ish Agritech Pvt. Ltd ¹⁰	266.37
Satguru Organics Pvt. Ltd ¹¹	266.37
Radiance Overseas ¹²	266.37
Swastik Enterprises ¹³	266.37
Soni Soya Products Limited ¹⁴ ...	266.37
Raj Foods International ¹⁵	266.37
Vantage Organic Foods Pvt. Ltd ¹⁶	266.37
Shree Bhagwati Oil Mill ¹⁷	266.37
Pragati Organics ¹⁸	266.37

⁸ See Petitioners' Letter, "Organic Soybean Meal from India: Petitioners' Request to Align the Countervailing Duty Final Determination with Antidumping Duty Final Determination," dated August 23, 2021.

Company	Subsidy rate (percent)
All Others	7.05

Suspension of Liquidation

In accordance with section 703(d)(1)(B) and (d)(2) of the Act, Commerce will direct U.S. Customs and Border Protection (CBP) to suspend liquidation of entries of subject merchandise as described in the scope of the investigation section entered, or withdrawn from warehouse, for consumption on or after the date of publication of this notice in the **Federal Register**. Further, pursuant to 19 CFR 351.205(d), Commerce will instruct CBP to require a cash deposit equal to the rates indicated above.

Disclosure

Commerce intends to disclose its calculations and analysis performed to interested parties in this preliminary determination within five days of its public announcement, or if there is no public announcement, within five days of the date of this notice in accordance with 19 CFR 351.224(b).

Verification

As provided in section 782(i)(1) of the Act, Commerce intends to verify the information relied upon in making its final determination. Normally, Commerce verifies information using standard procedures, including an on-site examination of original accounting, financial, and sales documentation. While we consider the possibility of conducting an on-site verification for some of the information submitted by the respondents, we may also need to verify the information relied upon in making the final determination through alternative means in lieu of an on-site verification. Commerce intends to notify parties of its verification procedures.

Public Comment

Interested parties will be notified of the timeline for the submission of case briefs and written comments at a later

⁹ As discussed in the Preliminary Decision Memorandum, Commerce has found the following companies to be cross-owned with Bergwerff: Suminter India Organics Private Limited.

¹⁰ See Preliminary Decision Memorandum at section VII, "Use of Facts Otherwise Available and Adverse Inferences."

¹¹ *Id.*
¹² *Id.*
¹³ *Id.*
¹⁴ *Id.*
¹⁵ *Id.*
¹⁶ *Id.*
¹⁷ *Id.*
¹⁸ *Id.*

date. Rebuttal briefs, limited to issues raised in case briefs, may be submitted no later than seven days after the deadline date for case briefs.¹⁹ Note that Commerce has temporarily modified certain of its requirements for serving documents containing business proprietary information, until further notice.²⁰ Pursuant to 19 CFR 351.309(c)(2) and (d)(2), parties who submit case briefs or rebuttal briefs in this investigation are encouraged to submit with each argument: (1) A statement of the issue; (2) a brief summary of the argument; and (3) a table of authorities.

Pursuant to 19 CFR 351.310(c), interested parties who wish to request a hearing, limited to issues raised in the case and rebuttal briefs, must submit a written request to the Assistant Secretary for Enforcement and Compliance, U.S. Department of Commerce within 30 days after the date of publication of this notice. Requests should contain the party's name, address, and telephone number, the number of participants, whether any participant is a foreign national, and a list of the issues to be discussed. If a request for a hearing is made, Commerce intends to hold the hearing at a time and date to be determined. Parties should confirm by telephone the date, time, and location of the hearing two days before the scheduled date.

International Trade Commission Notification

In accordance with section 703(f) of the Act, Commerce will notify the International Trade Commission (ITC) of its determination. If the final determination is affirmative, the ITC will determine before the later of 120 days after the date of this preliminary determination or 45 days after the final determination.

Notification to Interested Parties

This determination is issued and published pursuant to sections 703(f) and 777(i) of the Act and 19 CFR 351.205(c).

¹⁹ See 19 CFR 351.309; see also *Temporary Rule Modifying AD/CVD Service Requirements Due to COVID-19*, 85 FR 17006, 17007 (March 26, 2020) (*Temporary Rule*); and 19 CFR 351.303 (for general filing requirements).

²⁰ See *Temporary Rule*, 85 FR 17006; see also *Temporary Rule Modifying AD/CVD Service Requirements Due to COVID-19; Extension of Effective Period*, 85 FR 41363 (July 10, 2020).

Dated: August 30, 2021.

James Maeder,

Deputy Assistant Secretary for Antidumping and Countervailing Duty Operations.

Appendix I

Scope of the Investigation

The merchandise subject to the investigation is certified organic soybean meal. Certified organic soybean meal results from the mechanical pressing of certified organic soybeans into ground products known as soybean cake, soybean chips, or soybean flakes, with or without oil residues. Soybean cake is the product after the extraction of part of the oil from soybeans. Soybean chips and soybean flakes are produced by cracking, heating, and flaking soybeans and reducing the oil content of the conditioned product. "Certified organic soybean meal" is certified by the U.S. Department of Agriculture (USDA) National Organic Program (NOP) or equivalently certified to NOP standards or NOP-equivalent standards under an existing organic equivalency or recognition agreement.

Certified organic soybean meal subject to this investigation has a protein content of 34 percent or higher.

Organic soybean meal that is otherwise subject to this investigation is included when incorporated in admixtures, including but not limited to prepared animal feeds. Only the organic soybean meal component of such admixture is covered by the scope of this investigation. The products covered by this investigation are currently classified under the following Harmonized Tariff Schedule of the United States (HTSUS) subheadings: 1208.10.0010 and 2304.00.0000. Certified organic soybean meal may also enter under HTSUS 2309.90.1005, 2309.90.1015, 2309.90.1020, 2309.90.1030, 2309.90.1032, 2309.90.1035, 2309.90.1045, 2309.90.1050, and 2308.00.9890.

The HTSUS subheadings and specifications are provided for convenience and customs purposes; the written description of the scope is dispositive.

Appendix II

List of Topics Discussed in the Preliminary Decision Memorandum

- I. Summary
- II. Background
- III. Scope Comments
- IV. Scope of the Investigation
- V. Injury Test
- VI. Subsidies Valuation
- VII. Benchmarks and Discount Rates
- VIII. Use of Facts Otherwise Available and Adverse Inferences
- IX. Analysis of Programs
- X. Calculation of the All-Others Rate
- XI. Recommendation

[FR Doc. 2021-19139 Filed 9-2-21; 8:45 am]

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DEPARTMENT OF COMMERCE

International Trade Administration

[A-570-028]

Hydrofluorocarbon Blends From the People's Republic of China: Final Results of the Antidumping Duty Administrative Review; 2019-2020

AGENCY: Enforcement and Compliance, International Trade Administration, Department of Commerce.

SUMMARY: The Department of Commerce (Commerce) finds that the sole company subject to this administrative review is part of the China-wide entity because it did not file a separate rate application (SRA). The period of review (POR) is August 1, 2019, through July 31, 2020.

DATES: Applicable September 3, 2021.

FOR FURTHER INFORMATION CONTACT: Benjamin A. Lubberda, Enforcement and Compliance, International Trade Administration, U.S. Department of Commerce, 1401 Constitution Avenue NW, Washington, DC 20230; telephone: (202) 482-2185.

SUPPLEMENTARY INFORMATION:

Background

On May 7, 2021, Commerce published the *Preliminary Results* of this administrative review of the antidumping duty order on hydrofluorocarbon (HFC) blends from the People's Republic of China (China) in the **Federal Register**.¹ Although we invited parties to comment on the *Preliminary Results*, no interested party submitted comments. Accordingly, no decision memorandum accompanies this **Federal Register** notice.²

Commerce conducted this administrative review in accordance with section 751 of the Tariff Act of 1930, as amended (the Act).

Scope of the Order

The products subject to the *Order* are HFC blends.³ HFC blends covered by the scope are R-404A, a zeotropic mixture consisting of 52 percent 1,1,1-Trifluoroethane, 44 percent Pentafluoroethane, and 4 percent 1,1,1,2-Tetrafluoroethane; R-407A, a zeotropic mixture of 20 percent

¹ See *Hydrofluorocarbon Blends from the People's Republic of China: Preliminary Results of the Antidumping Duty Administrative Review and Rescission of Antidumping Duty Administrative Review, in Part; 2019-2020*, 86 FR 24587 (May 7, 2021) (*Preliminary Results*).

² For further details of the issues addressed in this proceeding, see *Preliminary Results* and accompanying Preliminary Decision Memorandum.

³ See *Hydrofluorocarbon Blends from the People's Republic of China: Antidumping Duty Order*, 81 FR 55436 (August 19, 2016) (*Order*).

Difluoromethane, 40 percent Pentafluoroethane, and 40 percent 1,1,1,2-Tetrafluoroethane; R-407C, a zeotropic mixture of 23 percent Difluoromethane, 25 percent Pentafluoroethane, and 52 percent 1,1,1,2-Tetrafluoroethane; R-410A, a zeotropic mixture of 50 percent Difluoromethane and 50 percent Pentafluoroethane; and R-507A, an azeotropic mixture of 50 percent Pentafluoroethane and 50 percent 1,1,1-Trifluoroethane also known as R-507. The foregoing percentages are nominal percentages by weight. Actual percentages of single component refrigerants by weight may vary by plus or minus two percent points from the nominal percentage identified above.⁴

Any blend that includes an HFC component other than R-32, R-125, R-143a, or R-134a is excluded from the scope of the *Order*.

Excluded from the *Order* are blends of refrigerant chemicals that include products other than HFCs, such as blends including chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), hydrocarbons (HCs), or hydrofluoroolefins (HFOs).

Also excluded from the *Order* are patented HFC blends, including, but not limited to, ISCEON® blends, including MO99TM (R-438A), MO79 (R-422A), MO59 (R-417A), MO49PlusTM (R-437A) and MO29TM (R-4 22D), Genetron® PerformaxTM LT (R-407F), Choice® R-421A, and Choice® R-421B.

HFC blends covered by the scope of the *Order* are currently classified in the Harmonized Tariff Schedule of the United States (HTSUS) at subheadings 3824.78.0020 and 3824.78.0050. Although the HTSUS subheadings are provided for convenience and customs purposes, the written description of the scope is dispositive.⁵

⁴ R-404A is sold under various trade names, including Forane® 404A, Genetron® 404A, Solkane® 404A, Klea® 404A, and Suva®404A. R-407A is sold under various trade names, including Forane® 407A, Solkane® 407A, Klea®407A, and Suva®407A. R-407C is sold under various trade names, including Forane® 407C, Genetron® 407C, Solkane® 407C, Klea® 407C and Suva® 407C. R-410A is sold under various trade names, including EcoFluor R410, Forane® 410A, Genetron® R410A and AZ-20, Solkane® 410A, Klea® 410A, Suva® 410A, and Puron®. R-507A is sold under various trade names, including Forane® 507, Solkane® 507, Klea®507, Genetron®AZ-50, and Suva®507. R-32 is sold under various trade names, including Solkane®32, Forane®32, and Klea®32. R-125 is sold under various trade names, including Solkane®125, Klea®125, Genetron®125, and Forane®125. R-143a is sold under various trade names, including Solkane®143a, Genetron®143a, and Forane®125.

⁵ See *Order*. Certain merchandise has been the subject of affirmative anti-circumvention determinations by Commerce, pursuant to section 781 of the Act. As a result, the circumventing merchandise is included in the scope of the *Order*.

Final Results of Review

Because we received no comments, we made no changes to the *Preliminary Results*. We continue to find that PureMann, Inc. (PureMann), the sole company subject to this review, did not file an SRA and has not demonstrated its eligibility for separate rate status; therefore, PureMann is part of the China-wide entity. In this administrative review, no party requested a review of the China-wide entity, and Commerce did not self-initiate a review of the China-wide entity. Thus, the China-wide entity's entries were not subject to the review, and the rate applicable to the China-wide entity was not subject to change as a result of this review. The China-wide entity rate remains 216.37 percent.⁶

Disclosure and Public Comment

Normally, Commerce discloses the calculations used in its analysis to parties in a review within five days of the date of publication of the notice of final results, in accordance with 19 CFR 351.224(b). However, in this case, there are no calculations on the record to disclose.

Assessment Rates

Commerce shall determine, and U.S. Customs and Border Protection (CBP) shall assess, antidumping duties on all appropriate entries in accordance with section 751(a)(2)(C) of the Act and 19 CFR 351.212(b). Because we determined that PureMann was not eligible for a separate rate and is part of the China-wide entity, we will instruct CBP to apply an *ad valorem* assessment of 216.37 percent to all entries of subject merchandise during the POR that were exported by PureMann.

Commerce intends to issue assessment instructions to CBP no earlier than 35 days after the date of publication of the final results of this review in the **Federal Register**. If a timely summons is filed at the U.S. Court of International Trade, the assessment instructions will direct CBP not to liquidate relevant entries until the

See Hydrofluorocarbon Blends from the People's Republic of China: Final Negative Scope Ruling on Gujarat Fluorochemicals Ltd.'s R-410A Blend; Affirmative Final Determination of Circumvention of the Antidumping Duty Order by Indian Blends Containing Chinese Components, 85 FR 61930 (October 1, 2020); *Hydrofluorocarbon Blends from the People's Republic of China: Final Scope Ruling on Unpatented R-421A; Affirmative Final Determination of Circumvention of the Antidumping Duty Order for Unpatented R-421A*, 85 FR 34416 (June 4, 2020); and *Hydrofluorocarbon Blends from the People's Republic of China: Affirmative Final Determination of Circumvention of the Antidumping Duty Order; Unfinished R-32/R-125 Blends*, 85 FR 15428 (March 18, 2020).

⁶ See *Order*, 81 FR at 55438.

time for parties file a request for a statutory injunction has expired (*i.e.*, within 90 days of publication).

Cash Deposit Requirements

The following cash deposit requirements will be effective upon publication of the final results of this review for shipments of the subject merchandise from China entered, or withdrawn from warehouse, for consumption on or after the publication date, as provided by sections 751(a)(2)(C) of the Act: (1) For previously investigated or reviewed Chinese or non-Chinese exporters not listed above that received a separate rate in a prior segment of this proceeding, the cash deposit rate will continue to be the existing exporter-specific rate; (2) for all Chinese exporters of subject merchandise that have not been found to be entitled to a separate rate, the cash deposit rate will be that for the China-wide entity (*i.e.*, 216.37 percent); and (3) for all non-Chinese exporters of subject merchandise that have not received their own rate, the cash deposit rate will be the rate applicable to the Chinese exporter that supplied that non-Chinese exporter. These deposit requirements, when imposed, shall remain in effect until further notice.

Notification to Importers

This notice serves as a final reminder to importers of their responsibility under 19 CFR 351.402(f) to file a certificate regarding the reimbursement of antidumping duties prior to liquidation of the relevant entries during this review period. Failure to comply with this requirement could result in the Secretary's presumption that reimbursement of antidumping duties occurred and the subsequent assessment of double antidumping duties.

Notification Regarding Administrative Protective Order

This notice serves as a reminder to parties subject to administrative protective order (APO) of their responsibility concerning the disposition of proprietary information disclosed under APO in accordance with 19 CFR 351.305(a)(3), which continues to govern business proprietary information in this segment of the proceeding. Timely written notification of return/destruction of APO materials or conversion to judicial protective order is hereby requested. Failure to comply with the regulations and the terms of an APO is a sanctionable violation.

Notification to Interested Parties

This notice is issued and published in accordance with sections 751(a)(l) and 777(i) of the Act.

Dated: August 30, 2021.

James Maeder,

Deputy Assistant Secretary for Antidumping and Countervailing Duty Operations.

[FR Doc. 2021-19138 Filed 9-2-21; 8:45 am]

BILLING CODE 3510-DS-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

Interagency Marine Debris Coordinating Committee Meeting

AGENCY: National Ocean Service (NOS), National Oceanic and Atmospheric Administration (NOAA), Department of Commerce (DOC).

ACTION: Notice of open meeting.

SUMMARY: Notice is hereby given of a virtual public meeting of the Interagency Marine Debris Coordinating Committee (IMDCC). IMDCC members will discuss federal marine debris activities, with a particular emphasis on the topics identified in the section on *Matters to Be Considered*.

DATES: The virtual public meeting will be held on September 29, 2021 from 10 a.m. to 11 a.m. ET.

ADDRESSES: The meeting will be held virtually using Google Meet. Refer to the Interagency Marine Debris Coordinating Committee website at <https://marinedebris.noaa.gov/IMDCC> for information on how to participate online and the most up-to-date agenda. If you are unable to participate online, you can also connect to the meeting using the phone number provided: Phone: +1 570-481-1237, PIN: 363 843 510#.

FOR FURTHER INFORMATION CONTACT:

Ya'el Seid-Green, Executive Secretariat, Interagency Marine Debris Coordinating Committee, Marine Debris Program, 1305 East-West Highway, Silver Spring, MD 20910; Phone 240-533-0399; Email yael.seid-green@noaa.gov or visit the Interagency Marine Debris Coordinating Committee website at <https://marinedebris.noaa.gov/IMDCC>. To register for the meeting, contact Ya'el Seid-Green, yael.seid-green@noaa.gov.

SUPPLEMENTARY INFORMATION: The Interagency Marine Debris Coordinating Committee (IMDCC) is a multi-agency body responsible for coordinating a comprehensive program of marine debris research and activities among Federal agencies, in cooperation and

coordination with non-governmental organizations, industry, academia, states, Tribes, and other nations, as appropriate. Representatives meet to share information, assess and promote best management practices, and coordinate the Federal Government's efforts to address marine debris.

The Marine Debris Act establishes the IMDCC (33 U.S.C. 1954). The IMDCC submits biennial progress reports to Congress with updates on activities, achievements, strategies, and recommendations. The National Oceanic and Atmospheric Administration serves as the Chairperson of the IMDCC.

The meeting will be open to public attendance on September 29, 2021 from 10 a.m. to 11 a.m. ET. There will not be a public comment period.

Matters To Be Considered

The open meeting will include presentations on the Fiscal Year 2021 achievements and Fiscal Year 2022 planned activities of the participating agencies. The agenda topics described are subject to change. The latest version of the agenda will be posted at <https://marinedebris.noaa.gov/IMDCC>.

Special Accommodations

The meeting is accessible to people with disabilities. Requests for sign language interpretation or other auxiliary aids should be directed to Ya'el Seid-Green, Executive Secretariat at yael.seid-green@noaa.gov or 240-533-0399 by September 17, 2021.

Scott Lundgren,

Director, Office of Response and Restoration, National Ocean Service, National Oceanic and Atmospheric Administration.

[FR Doc. 2021-19064 Filed 9-2-21; 8:45 am]

BILLING CODE 3510-NK-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648-XB384]

New England Fishery Management Council; Public Meeting

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of public meeting.

SUMMARY: The New England Fishery Management Council (Council) is scheduling a joint public meeting of its Recreational Advisory Panel via webinar to consider actions affecting

New England fisheries in the exclusive economic zone (EEZ).

Recommendations from this group will be brought to the full Council for formal consideration and action, if appropriate.

DATES: This webinar will be held on Wednesday, September 22, 2021, at 8 a.m. Webinar registration URL information: <https://attendee.gotowebinar.com/register/2723094895052199947>.

ADDRESSES:

Council address: New England Fishery Management Council, 50 Water Street, Mill 2, Newburyport, MA 01950.

FOR FURTHER INFORMATION CONTACT:

Thomas A. Nies, Executive Director, New England Fishery Management Council; telephone: (978) 465-0492.

SUPPLEMENTARY INFORMATION:

Agenda

The Recreational Advisory Panel will discuss development of draft Framework Adjustment 63/ Specifications and Management Measures: Specifically (1) Set 2022 total allowable catches for US/Canada management units of Eastern Georges Bank (GB) cod and Eastern GB haddock, and 2022-23 specifications for the GB yellowtail flounder stock, (2) Set 2022-24 specifications for GB cod and Gulf of Maine (GOM) cod, and possibly adjust 2022 specifications for GB haddock and GOM haddock, (3) Adjust 2022 specifications for white hake based on the rebuilding plan, (4) Adopt additional measures to promote stock rebuilding, and (5) Develop alternatives to the current default system. They also plan to receive an overview of the Atlantic Cod Stock Structure Management Workshops. The panel plans a preliminary discussion of possible 2022 Council priorities for groundfish. They will also make recommendations as appropriate to the Groundfish Committee. Other business will be discussed, if necessary.

Although non-emergency issues not contained on the agenda may come before this Council for discussion, those issues may not be the subject of formal action during this meeting. Council action will be restricted to those issues specifically listed in this notice and any issues arising after publication of this notice that require emergency action under section 305(c) of the Magnuson-Stevens Act, provided the public has been notified of the Council's intent to take final action to address the emergency. The public also should be aware that the meeting will be recorded. Consistent with 16 U.S.C. 1852, a copy

of the recording is available upon request.

Special Accommodations

This meeting is physically accessible to people with disabilities. Requests for sign language interpretation or other auxiliary aids should be directed to Thomas A. Nies, Executive Director, at (978) 465-0492, at least 5 days prior to the meeting date.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: August 31, 2021.

Tracey L. Thompson,

Acting Deputy Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2021-19121 Filed 9-2-21; 8:45 am]

BILLING CODE 3510-22-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648-XB385]

New England Fishery Management Council; Public Meeting

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of public meeting.

SUMMARY: The New England Fishery Management Council (Council) is scheduling a joint public meeting of its Groundfish Advisory Panel via webinar to consider actions affecting New England fisheries in the exclusive economic zone (EEZ).

Recommendations from this group will be brought to the full Council for formal consideration and action, if appropriate.

DATES: This webinar will be held on Wednesday, September 22, 2021, at 1 p.m. Webinar registration URL information: <https://attendee.gotowebinar.com/register/5418405813545134603>.

ADDRESSES: *Council address:* New England Fishery Management Council, 50 Water Street, Mill 2, Newburyport, MA 01950.

FOR FURTHER INFORMATION CONTACT: Thomas A. Nies, Executive Director, New England Fishery Management Council; telephone: (978) 465-0492.

SUPPLEMENTARY INFORMATION:

Agenda

The Groundfish Advisory Panel will discuss development of draft Framework Adjustment 63/ Specifications and Management Measures: Specifically (1) Set 2022 total allowable catches for US/Canada

management units of Eastern Georges Bank (GB) cod and Eastern GB haddock, and 2022–23 specifications for the GB yellowtail flounder stock, (2) Set 2022–24 specifications for GB cod and Gulf of Maine (GOM) cod, and possibly adjust 2022 specifications for GB haddock and GOM haddock, (3) Adjust 2022 specifications for white hake based on the rebuilding plan, (4) Adopt additional measures to promote stock rebuilding, and (5) Develop alternatives to the current default system. They also plan to receive an overview of the Atlantic Cod Stock Structure Management Workshops. The panel plans a preliminary discussion of possible 2022 Council priorities for groundfish. They will also make recommendations as appropriate to the Groundfish Committee. Other business will be discussed, if necessary.

Although non-emergency issues not contained on the agenda may come before this Council for discussion, those issues may not be the subject of formal action during this meeting. Council action will be restricted to those issues specifically listed in this notice and any issues arising after publication of this notice that require emergency action under section 305(c) of the Magnuson-Stevens Act, provided the public has been notified of the Council's intent to take final action to address the emergency. The public also should be aware that the meeting will be recorded. Consistent with 16 U.S.C. 1852, a copy of the recording is available upon request.

Special Accommodations

This meeting is physically accessible to people with disabilities. Requests for sign language interpretation or other auxiliary aids should be directed to Thomas A. Nies, Executive Director, at (978) 465–0492, at least 5 days prior to the meeting date.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: August 31, 2021.

Tracey L. Thompson,

Acting Deputy Director, Office of Sustainable Fisheries, National Marine Fisheries Service.
[FR Doc. 2021–19122 Filed 9–2–21; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

Notice of Public Hearings and Availability of the Draft Environmental Impact Statement and Draft Management Plan for the Proposed Designation of the Connecticut National Estuarine Research Reserve

AGENCY: Office for Coastal Management (OCM), National Ocean Service (NOS), National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce.

ACTION: Notice of availability; public hearings.

SUMMARY: Notice is hereby given that, pursuant to the Coastal Zone Management Act, as amended (CZMA), the National Oceanic and Atmospheric Administration (NOAA) Office for Coastal Management is announcing a 45-day public comment period and will hold public hearings for the purpose of receiving comments on the draft management plan (DMP) and draft environmental impact statement (DEIS) for the proposed designation of the Connecticut National Estuarine Research Reserve (CT NERR). The DMP addresses research, monitoring, education, and stewardship, as well as cultural resource needs for the proposed CT NERR, and the DEIS analyzes alternatives to the proposed action along with their potential environmental impacts.

DATES: NOAA is accepting written public comments on the adequacy of the DMP and DEIS for the proposed designation of the CT NERR through 5 p.m. (EST), October 18, 2021. In addition, NOAA will accept oral or written public comments on the adequacy of the DMP and DEIS for the proposed designation of the CT NERR during public hearings held from 2:30 to 4 p.m. and 7:30 to 9 p.m. (EST) on October 7, 2021, online via WebEx and by phone. For more information about the public hearings, please visit: <https://portal.ct.gov/DEEP/Coastal-Resources/NERR/NERR-Home-Page>. All relevant comments received at the October 7, 2021, public hearings and during the 45-day public comment period ending at 5 p.m. (EST), October 18, 2021, will be considered in the preparation of the Final Management Plan and Final Environmental Impact Statement for the proposed designation of the CT NERR.

ADDRESSES: Written comments may be submitted by any one of the following methods:

- *Electronic Submission:* Submit all electronic public comments via the Federal eRulemaking Portal. Go to www.regulations.gov and enter NOAA–NOS–2020–0089 in the search box. Click on the “Comment” icon, complete the required fields, and enter or attach your comments. Written comments provided electronically must be submitted no later than 5 p.m. (EST) October 18, 2021.

- *Mail:* Submit written comments to Erica Seiden, Stewardship Division (N/OCM6), Office for Coastal Management, NOS, NOAA, 1305 East-West Highway, Silver Spring, Maryland 20910; ATTN: CT NERR. Written comments submitted by mail must be postmarked by October 18, 2021.

The October 7, 2021, public hearings will be conducted online via WebEx and by phone. Online participants should go to the following University of Connecticut website to get instructions for participating in and attending the public hearings: <https://uconnvtc.webex.com/meet/ctnerr>. Hearing documents will be available on the Connecticut Department of Energy and Environmental Protection's CT NERR website: <https://portal.ct.gov/DEEP/Coastal-Resources/NERR/NERR-Home-Page>, as well as on the Federal eRulemaking Portal: www.regulations.gov (enter NOAA–NOS–2020–0089 in the search box). You may also participate in the hearings by phone, by using the toll-free number +1 415–655–0002 and the attendee access code 120 996 1055.

Instructions: All relevant comments received are part of the public record and will be posted for public viewing on www.regulations.gov with no changes. All personally identifiable information (e.g., name, address, etc.), confidential business information, or otherwise sensitive information submitted voluntarily by the commenter will be publicly accessible and maintained by NOAA as part of the public record. NOAA will accept anonymous comments. To submit an anonymous comment, on the eRulemaking portal, enter “N/A” in the required fields if you wish to remain anonymous. If you would like to provide an anonymous comment during the public hearings, type your comment into the question box and (1) direct your message only to the moderator by selecting that person's name; and (2) state at the top of your comment that you would like to remain anonymous. Multimedia submissions (e.g., 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. NOAA will generally not consider comments, or comment contents, located outside of the primary submission sites or addresses (*i.e.*, those posted on the web, cloud, or other file-sharing system). Please note, the public hearings will not be audio or video recorded.

Closed captioning will be provided for those who attend the public hearings online via WebEx: <https://uconnvtc.webex.com/meet/ctnerr>.

FOR FURTHER INFORMATION CONTACT: Erica Seiden, Stewardship Division (N/OCM6), Office for Coastal Management, NOS, NOAA, 1305 East-West Highway, Silver Spring, Maryland 20910; ATTN: CT NERR; phone: (240) 533-0781; or email: erica.seiden@noaa.gov.

SUPPLEMENTARY INFORMATION: The National Estuarine Research Reserve System (NERRS) is a federal-state partnership administered by NOAA. The NERRS protects more than 1.3 million acres of estuarine habitat for long-term research, monitoring, education, and stewardship throughout the coastal United States. Established by the CZMA, as amended (16 U.S.C. 1451 *et seq.*), each reserve is managed by a lead state agency or university, with input from local partners. NOAA provides funding and national programmatic guidance to the NERRS.

NOAA received the State of Connecticut's nomination of the proposed Connecticut NERR site on January 3, 2019. NOAA evaluated the nomination package and found that the proposed site met the reserve system requirements for designation. (See 16 U.S.C. 1461(b).) Accordingly, NOAA informed the State of Connecticut on September 27, 2019, that it was accepting the nomination and that the next step would be to prepare a DEIS and DMP. (See 15 CFR 921.13.)

The National Environmental Policy Act's (42 U.S.C. 4321 *et seq.*) implementing regulations (40 CFR parts 1500-1508) require agencies to provide public notice of the availability of environmental documents, including environmental impact statements (40 CFR 1506.6). Similarly, the CZMA's implementing regulations for the NERRS require NOAA to provide notice in the **Federal Register** of the availability of the DEIS and the associated public hearing(s) (15 CFR 921.13). This notice is part of NOAA's action to comply with these requirements.

The CT NERR DEIS considers the human and environmental consequences of designating the nominated site, plus four alternative sites: (1) The Connecticut River site; (2)

the Lower Connecticut River site; (3) the revised nominated site; and (4) the no action alternative. The DMP sets a course for operating the proposed CT NERR should it be designated, and includes plans for administration, research, education, facilities, and management of the proposed site. (See 15 CFR 921.13.)

For more detailed information on the site selection process and the proposed site, see the Connecticut Department of Energy and Environmental Protection's Connecticut National Estuarine Research Reserve website: <https://portal.ct.gov/DEEP/Coastal-Resources/NERR/NERR-Home-Page>.

Keelin Kuipers,

Deputy Director, Office for Coastal Management, National Ocean Service, National Oceanic and Atmospheric Administration.

[FR Doc. 2021-18874 Filed 9-2-21; 8:45 am]

BILLING CODE 3510-JE-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648-XB343]

South Atlantic Fishery Management Council; Public Meetings; Correction

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of correction of public meetings.

SUMMARY: The South Atlantic Fishery Management Council (Council) will hold meetings of the following: Snapper Grouper Committee; Dolphin Wahoo Committee; Mackerel Cobia Committee; and Habitat and Ecosystem-Based Management Committee. The meeting week will also include a formal public comment session and a meeting of the Full Council.

DATES: The Council meeting will be held from 1 p.m. on Monday, September 13, 2021, until 12 p.m. on Friday, September 17, 2021.

ADDRESSES: *Meeting address:* The meeting will be held via webinar. Registration is required. Details are included in **SUPPLEMENTARY INFORMATION**.

FOR FURTHER INFORMATION CONTACT: Kim Iverson, Public Information Officer, SAFMC; phone: (843) 302-8440 or toll free: (866) SAFMC-10; fax: (843) 769-4520; email: kim.iverson@safmc.net.

SUPPLEMENTARY INFORMATION: The original notice published in the **Federal**

Register on August 23, 2021 (86 FR 47063). Due to the ongoing COVID-19 situation and increasing transmission rates in the region, the September 13-17, 2021 meeting of the South Atlantic Fishery Management Council will be held via webinar. The meeting was originally scheduled to take place in person in Charleston, SC.

Meeting information, including agendas, overviews, and briefing book materials will be posted on the Council's website at: <http://safmc.net/safmc-meetings/council-meetings/>. Webinar registration links for the meeting will also be available from the Council's website.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: August 30, 2021.

Tracey L. Thompson,

Acting Deputy Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2021-19023 Filed 9-2-21; 8:45 am]

BILLING CODE 3510-22-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648-XB378]

North Pacific Fishery Management Council; Public Meeting

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of web conference.

SUMMARY: The North Pacific Fishery Management Council (Council) Partial Coverage Fishery Monitoring Advisory Committee (PCFMAC) will meet September 17, 2021.

DATES: The meeting will be held on Friday, September 17, 2021, from 8:30 a.m. to 4:30 p.m. Alaska Time.

ADDRESSES: The meeting will be a web conference. Join online through the link at <https://meetings.npfmc.org/Meeting/Details/2374>.

Council address: North Pacific Fishery Management Council, 1007 W 3rd Ave., Anchorage, AK 99501-2252; telephone: (907) 271-2809. Instructions for attending the meeting are given under **SUPPLEMENTARY INFORMATION**, below.

FOR FURTHER INFORMATION CONTACT: Sara Cleaver, Council staff; phone: (907) 271-2809 and email: sara.cleaver@noaa.gov. For technical support, please contact administrative Council staff, email: npfmc.admin@noaa.gov.

SUPPLEMENTARY INFORMATION:

Agenda

Friday, September 17, 2021

The PCFMAC agenda will include: (a) Reviewing the draft 2022 Annual Deployment Plan and budget update; (b) status update on the partial coverage integrated analysis work plan; (c) an update on observer provider labor issues; (d) public comment; and (e) other business. The agenda is subject to change, and the latest version will be posted at <https://meetings.npfmc.org/Meeting/Details/2374> prior to the meeting, along with meeting materials.

Connection Information

You can attend the meeting online using a computer, tablet, or smartphone; or by phone only. Connection information will be posted online at: <https://meetings.npfmc.org/Meeting/Details/2374>.

Public Comment

Public comment letters will be accepted and should be submitted electronically to <https://meetings.npfmc.org/Meeting/Details/2374>.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: August 31, 2021.

Tracey L. Thompson,

Acting Deputy Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2021-19092 Filed 9-2-21; 8:45 am]

BILLING CODE 3510-22-P

DEPARTMENT OF COMMERCE**National Oceanic and Atmospheric Administration**

[RTID 0648-XB383]

New England Fishery Management Council; Public Meeting

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of public meeting.

SUMMARY: The New England Fishery Management Council (Council) is scheduling a joint public meeting of its Scallop Committee via webinar to consider actions affecting New England fisheries in the exclusive economic zone (EEZ). Recommendations from this group will be brought to the full Council for formal consideration and action, if appropriate.

DATES: This webinar will be held on Wednesday, September 22, 2021, at 9 a.m. Webinar registration URL information: <https://>

attendee.gotowebinar.com/register/6632293038888778251.

ADDRESSES: Council address: New England Fishery Management Council, 50 Water Street, Mill 2, Newburyport, MA 01950.

FOR FURTHER INFORMATION CONTACT: Thomas A. Nies, Executive Director, New England Fishery Management Council; telephone: (978) 465-0492.

SUPPLEMENTARY INFORMATION:**Agenda**

The Committee will review Framework 34, specifically a review of results of 2021 scallop surveys, and preliminary projections. The primary focus of this meeting will be to develop input on the range of potential specification alternatives for FY 2022 and FY 2023. Framework 34 will implement measures approved through Amendment 21 to the FMP. The action will set ABC/ACLs, days-at-sea, access area allocations, total allowable landings for the Northern Gulf of Maine (NGOM) management area, targets for General Category incidental catch, General Category access area trips and trip accounting, and set-asides for the observer and research programs for fishing year 2022 and default specifications for fishing year 2023. They also plan to discuss the 2021 Work Priorities with a focus on Amendment 21 timelines, including final decision and implementation. Receive updates on the progress of the Scallop Survey Working Group and the evaluation of rotational management. Develop input, if needed. The Committee will also provide input on the range of possible 2022 scallop work priorities. Other business will be discussed, if necessary.

Although non-emergency issues not contained on the agenda may come before this Council for discussion, those issues may not be the subject of formal action during this meeting. Council action will be restricted to those issues specifically listed in this notice and any issues arising after publication of this notice that require emergency action under section 305(c) of the Magnuson-Stevens Act, provided the public has been notified of the Council's intent to take final action to address the emergency. The public also should be aware that the meeting will be recorded. Consistent with 16 U.S.C. 1852, a copy of the recording is available upon request.

Special Accommodations

This meeting is physically accessible to people with disabilities. Requests for sign language interpretation or other auxiliary aids should be directed to

Thomas A. Nies, Executive Director, at (978) 465-0492, at least 5 days prior to the meeting date.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: August 31, 2021.

Tracey L. Thompson,

Acting Deputy Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2021-19123 Filed 9-2-21; 8:45 am]

BILLING CODE 3510-22-P

DEPARTMENT OF COMMERCE**Patent and Trademark Office**

[Docket No. PTO-P-2021-0032]

Patent Eligibility Jurisprudence Study

AGENCY: United States Patent and Trademark Office, Department of Commerce.

ACTION: Request for information; extension of comment period.

SUMMARY: On July 9, 2021, the United States Patent and Trademark Office (USPTO) published a request for public input on a study it is conducting on the current state of patent eligibility jurisprudence in the United States and on how that jurisprudence has impacted investment and innovation. Through this notice, the USPTO is extending the period for public comment until October 15, 2021.

DATES: *Comment date:* Comments must be received by October 15, 2021. Late comments will be considered to the extent practicable.

ADDRESSES: For reasons of Government efficiency, comments must be submitted through the Federal eRulemaking Portal at www.regulations.gov. To submit comments via the portal, enter docket number PTO-P-2021-0032 on the homepage and click "Search." The site will provide a search results page listing all documents associated with this docket. Find a reference to this request for information and click on the "Comment Now!" icon, complete the required fields, and enter or attach your comments. Attachments to electronic comments will be accepted in ADOBE® portable document format or MICROSOFT WORD® format. Because comments will be made available for public inspection, information that the submitter does not desire to make public, such as an address or phone number, should not be included in the comments. Visit the Federal eRulemaking Portal for additional instructions on providing comments via the portal. If electronic submission of comments is not feasible due to a lack of access to a computer and/or the

internet, please contact the USPTO using the contact information below for special instructions regarding how to submit comments by other means.

FOR FURTHER INFORMATION CONTACT: Courtney L. Stopp, Office of Policy and International Affairs, USPTO, at Courtney.Stopp@uspto.gov or 571-272-9300. Please direct media inquiries to the USPTO's Office of the Chief Communications Officer at 571-272-8400.

SUPPLEMENTARY INFORMATION: At the request of Senators Tillis, Hirono, Cotton, and Coons, the USPTO is conducting a study on the current state of patent eligibility jurisprudence in the United States and on how that jurisprudence has impacted investment and innovation. On July 9, 2021, the USPTO published a request for information, seeking public input to assist in the preparation of that study. See Patent Eligibility Jurisprudence Study, 86 FR 36257 (Jul. 9, 2021). The notice requested public comments by September 7, 2021.

Through this notice, the USPTO is extending the period for public comment until October 15, 2021, to give interested members of the public additional time to submit comments. All other information and instructions to commenters provided in the July 9, 2021, notice remain unchanged. Previously submitted comments do not need to be resubmitted.

Andrew Hirshfeld,

Commissioner for Patents, Performing the Functions and Duties of the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office.

[FR Doc. 2021-19112 Filed 9-2-21; 8:45 am]

BILLING CODE 3510-16-P

DEPARTMENT OF COMMERCE

Patent and Trademark Office

[Docket No.: PTO-P-2021-0037]

Modification of COVID-19 Prioritized Examination Pilot Program

AGENCY: United States Patent and Trademark Office, Department of Commerce.

ACTION: Notice.

SUMMARY: The United States Patent and Trademark Office (USPTO or Office) is modifying the COVID-19 Prioritized Examination Pilot Program to accept applications until December 31, 2021. Requests that are compliant with the pilot program's requirements and are filed on or before December 31, 2021,

will be accepted, even if more than 500 requests have already been approved. The USPTO will evaluate whether to terminate or further extend the program during this extension.

DATES: The COVID-19 Prioritized Examination Pilot Program is modified as of September 3, 2021 and is extended to run until December 31, 2021.

FOR FURTHER INFORMATION CONTACT: Robert A. Clarke, Editor of the Manual of Patent Examining Procedure (MPEP) (telephone at 571-272-7735; email at robert.clarke@uspto.gov).

SUPPLEMENTARY INFORMATION: On May 14, 2020, the USPTO published a notice for the implementation of the COVID-19 Prioritized Examination Pilot Program. See COVID-19 Prioritized Examination Pilot Program, 85 FR 28932 (May 14, 2020) (COVID-19 Track One Notice). The COVID-19 Track One Notice indicated that an applicant may request prioritized examination without payment of the prioritized examination fee and associated processing fee if: (1) The application's claim(s) covered a product or process related to COVID-19, (2) the product or process was subject to an applicable Food and Drug Administration (FDA) approval for COVID-19 use, and (3) the applicant met other requirements given in the COVID-19 Track One Notice. As of August 2, 2021, 120 patents have issued from applications granted prioritized status under the pilot program. The average total pendency, including time consumed by continued examination, from filing to issue for those applications was 249 days. The shortest pendency from filing date to issue date for those applications was 75 days.

The COVID-19 Track One Notice indicated that the pilot program would expire after the USPTO accepted 500 applications into the program. As of August 16, 2021, the USPTO had accepted 476 applications into the program, and there were 52 requests to participate that had not yet been acted upon. To ensure that applicants are not refused access to the pilot program due to delays in the USPTO's consideration of the requests to participate, the USPTO is modifying the program to consider on the merits any request filed on or before December 31, 2021, even if an applicant's request to participate is not acted upon until after the USPTO has accepted 500 requests. The USPTO will evaluate whether to terminate or further extend the program during this extension. If the USPTO determines that a further extension of the pilot program is appropriate, the USPTO will publish a subsequent notice further extending the program.

Unless the pilot program is further extended by a subsequent notice to the public, following the expiration of this extension, the pilot program will be terminated, and applicants may instead seek to use the Prioritized Examination (Track One) Program. Applications accorded prioritized examination under the pilot program will not lose that status merely because the application is pending after the date the pilot program is terminated. In other words, applications accepted into the pilot program will continue to be examined under prioritized examination status until that status is terminated for one or more reasons, as described in the COVID-19 Track One Notice.

The Prioritized Examination (Track One) Program permits an applicant to have an application advanced out of turn (accorded special status) for examination under 37 CFR 1.102(e) if the applicant timely files a request for prioritized (Track One) examination accompanied by the appropriate fees and meets the other conditions of 37 CFR 1.102(e). See MPEP 708.02(b)(2). The current fee schedule is available at: www.uspto.gov/learning-and-resources/fees-and-payment/uspto-fee-schedule.

The Track One Program does not have the restrictions of the COVID-19 Track One Program on the types of inventions for which special status may be sought, as the Track One Program does not require a connection to any particular technology. Moreover, delays associated with the determination of whether an application presents a claim that covers a product or process related to COVID-19 and whether the product or process was subject to an applicable FDA approval for COVID-19 use will be avoided under the Track One Program.

Andrew Hirshfeld,

Commissioner for Patents, Performing the Functions and Duties of the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office.

[FR Doc. 2021-19114 Filed 9-2-21; 8:45 am]

BILLING CODE 3510-16-P

COMMITTEE FOR PURCHASE FROM PEOPLE WHO ARE BLIND OR SEVERELY DISABLED

Procurement List; Additions and Deletions

AGENCY: Committee for Purchase From People Who Are Blind or Severely Disabled.

ACTION: Additions to and deletions from the Procurement List.

SUMMARY: This action adds service(s) to the Procurement List that will be furnished by nonprofit agencies employing persons who are blind or have other severe disabilities and deletes product(s) from the Procurement List previously furnished by such agencies.

DATES:

Date added to the Procurement List: September 11, 2021.

Date deleted from the Procurement List: October 3, 2021.

ADDRESSES: Committee for Purchase From People Who Are Blind or Severely Disabled, 1401 S Clark Street, Suite 715, Arlington, Virginia 22202-4149.

FOR FURTHER INFORMATION CONTACT: Michael R. Jurkowski, Telephone: (703) 785-6404, or email *CMTEFedReg@AbilityOne.gov*.

SUPPLEMENTARY INFORMATION:

Additions

On 6/11/2021, the Committee for Purchase From People Who Are Blind or Severely Disabled published notice of proposed additions to the Procurement List. This notice is published pursuant to 41 U.S.C. 8503 (a)(2) and 41 CFR 51-2.3.

After consideration of the material presented to it concerning capability of qualified nonprofit agencies to provide the service(s) and impact of the additions on the current or most recent contractors, the Committee has determined that the service(s) listed below are suitable for procurement by the Federal Government under 41 U.S.C. 8501-8506 and 41 CFR 51-2.4.

Regulatory Flexibility Act Certification

I certify that the following action will not have a significant impact on a substantial number of small entities. The major factors considered for this certification were:

1. The action will not result in any additional reporting, recordkeeping, or other compliance requirements for small entities other than the small organizations that will furnish the service(s) to the Government.

2. The action will result in authorizing small entities to furnish the service(s) to the Government.

3. There are no known regulatory alternatives which would accomplish the objectives of the Javits-Wagner-O'Day Act (41 U.S.C. 8501-8506) in connection with the product(s) and service(s) proposed for addition to the Procurement List.

End of Certification

Accordingly, the following service(s) are added to the Procurement List:

Service(s)

Service Type: Base Operation Support Services

Mandatory for: United States Coast Guard, Air Station Barber's Point, Kapolei, HI
Designated Source of Supply: Service Disabled Veterans Business Association, Silver Spring, MD

Contracting Activity: U.S. COAST GUARD, DOL-9

The Committee finds good cause to dispense with the 30-day delay in the effective date normally required by the Administrative Procedure Act. See 5 U.S.C. 553(d). This addition to the Committee's Procurement List is effectuated because of the expiration of the U.S. Coast Guard contract. The Federal customer contacted and has worked diligently with the AbilityOne Program to fulfill this service need under the AbilityOne Program. To avoid performance disruption, and the possibility that the U.S. Coast Guard will refer its business elsewhere, this addition must be effective on September 11, 2021 ensuring timely execution for a September 11, 2021, start date while still allowing nine (9) days for comment. Pursuant to its own regulation 41 CFR 51-2.4, the Committee determined that no severe adverse impact exists against the current contractor. The Committee also published a notice of proposed Procurement List addition in the **Federal Register** on June 11, 2021 and did not receive any comments from any interested persons, including from the incumbent contractor. This addition will not create a public hardship and has limited effect on the public at large, but, rather, will create new jobs for other affected parties—people with significant disabilities in the AbilityOne program who otherwise face challenges locating employment. Moreover, this addition will enable Federal customer operations to continue without interruption.

Deletions

On 7/30/2021, the Committee for Purchase From People Who Are Blind or Severely Disabled published notice of proposed deletions from the Procurement List. This notice is published pursuant to 41 U.S.C. 8503(a)(2) and 41 CFR 51-2.3.

After consideration of the relevant matter presented, the Committee has determined that the product(s) listed below are no longer suitable for procurement by the Federal Government under 41 U.S.C. 8501-8506 and 41 CFR 51-2.4.

Regulatory Flexibility Act Certification

I certify that the following action will not have a significant impact on a

substantial number of small entities. The major factors considered for this certification were:

1. The action will not result in additional reporting, recordkeeping or other compliance requirements for small entities.

2. The action may result in authorizing small entities to furnish the product(s) and service(s) to the Government.

3. There are no known regulatory alternatives which would accomplish the objectives of the Javits-Wagner-O'Day Act (41 U.S.C. 8501-8506) in connection with the product(s) and service(s) deleted from the Procurement List.

End of Certification

Accordingly, the following product(s) and service(s) are deleted from the Procurement List:

Product(s)

NSN(s)—Product Name(s): 7520-00-286-1725—File, Sorter, Legal, A-Z, Blue

Designated Source of Supply: Exceptional Children's Foundation, Culver City, CA

Contracting Activity: GSA/FAS ADMIN SVCS ACQUISITION BR(2, NEW YORK, NY

NSN(s)—Product Name(s):

MR 921—Roller Mop, Angled Head, 10.5" Head

MR 399—Set, Cookie Cutter, Assorted, 3PC
MR 391—Slotted Turner, Red

Designated Source of Supply: Industries for the Blind and Visually Impaired, Inc., West Allis, WI

Contracting Activity: Military Resale-Defense Commissary Agency

NSN(s)—Product Name(s):

MR 13111—Cookie Spatula, Slip N' Serve
MR 11103—Pan, Roasting, Oval, Includes Shipper 21103

MR 10640—Bowl, Dressing Dispenser, Salad

Designated Source of Supply: Winston-Salem Industries for the Blind, Inc., Winston-Salem, NC

Contracting Activity: Military Resale-Defense Commissary Agency

NSN(s)—Product Name(s): 4240-01-390-3057—Head Harness, Skull Cap

Contracting Activity: W4GG HQ US ARMY TACOM, ROCK ISLAND, IL

NSN(s)—Product Name(s): 6530-00-NIB-0069—Catheter, External, Male, Self-Adhering, Wide-band, Extra Large

Designated Source of Supply: The Lighthouse for the Blind, St. Louis, MO

Contracting Activity: STRATEGIC ACQUISITION CENTER, FREDERICKSBURG, VA

NSN(s)—Product Name(s): 8455-00-292-9558—Insignia, Embroidered, Marine PFC

Designated Source of Supply: Georgia Industries for the Blind, Bainbridge, GA
Contracting Activity: DLA TROOP SUPPORT, PHILADELPHIA, PA

NSN(s)—Product Name(s): 8465-00-001-6474—Entrenching Tool Carrier, Plastic Resin, Olive Drab
Designated Source of Supply: Dallas Lighthouse for the Blind, Inc., Dallas, TX
Contracting Activity: DLA TROOP SUPPORT, PHILADELPHIA, PA

Michael R. Jurkowski,

Acting Director, Business Operations.

[FR Doc. 2021-19099 Filed 9-2-21; 8:45 am]

BILLING CODE 6353-01-P

COMMITTEE FOR PURCHASE FROM PEOPLE WHO ARE BLIND OR SEVERELY DISABLED

Procurement List; Proposed Additions and Deletions

AGENCY: Committee for Purchase From People Who Are Blind or Severely Disabled.

ACTION: Proposed additions to and deletions from the procurement list.

SUMMARY: The Committee is proposing to add product(s) to the Procurement List that will be furnished by nonprofit agencies employing persons who are blind or have other severe disabilities and deletes product(s) and service(s) previously furnished by such agencies.

DATES: *Comments must be received on or before:* October 3, 2021.

ADDRESSES: Committee for Purchase From People Who Are Blind or Severely Disabled, 1401 S Clark Street, Suite 715, Arlington, Virginia 22202-4149.

FOR FURTHER INFORMATION CONTACT: For further information or to submit comments contact: Michael R. Jurkowski, Telephone: (703) 785-6404 or email CMTEFedReg@AbilityOne.gov.

SUPPLEMENTARY INFORMATION: This notice is published pursuant to 41 U.S.C. 8503(a)(2) and 41 CFR 51-2.3. Its purpose is to provide interested persons an opportunity to submit comments on the proposed actions.

Additions

If the Committee approves the proposed additions, the entities of the Federal Government identified in this notice will be required to procure the product(s) listed below from nonprofit agencies employing persons who are blind or have other severe disabilities.

The following product(s) are proposed for addition to the Procurement List for production by the nonprofit agencies listed:

Product(s)

NSN(s)—Product Name(s):

1095-01-600-0972—Knife, Combat
Designated Source of Supply: DePaul Industries, Portland, OR

Contracting Activity: DEFENSE LOGISTICS AGENCY, DLA LAND AND MARITIME
List Designation: C-List
Mandatory for: 100% of the requirement of the Department of Defense

Deletions

The following product(s) and service(s) are proposed for deletion from the Procurement List:

Product(s)

NSN(s)—Product Name(s):

7045-01-370-9678—Mini-Cartridge, Data, 120 MB, 3-1/2"

Designated Source of Supply: North Central Sight Services, Inc., Williamsport, PA

Contracting Activity: DLA TROOP SUPPORT, PHILADELPHIA, PA

Service(s)

Service Type: Janitorial Services

Mandatory for: Department of Veteran Affairs, Ventura Vet Center, 790 East Santa Clara Street, Suite 100, Ventura, CA, 790 East Santa Clara Street, Ventura, CA

Designated Source of Supply: The ARC of Ventura County, Inc., Ventura, CA

Contracting Activity: VETERANS AFFAIRS, DEPARTMENT OF, 262-NETWORK CONTRACT OFFICE 22

Michael R. Jurkowski,

Acting Director, Business Operations.

[FR Doc. 2021-19101 Filed 9-2-21; 8:45 am]

BILLING CODE 6353-01-P

CONSUMER PRODUCT SAFETY COMMISSION

Sunshine Act Meeting Notice

TIME AND DATE: Wednesday, September 1, 2021; 10 a.m.

PLACE: This meeting will be conducted by remote means.

STATUS: Commission Meeting—Closed to the Public.

MATTER TO BE CONSIDERED: Briefing Matter.

CONTACT PERSON FOR MORE INFORMATION: Alberta E. Mills, Secretary, Division of the Secretariat, Office of the General Counsel, U.S. Consumer Product Safety Commission, 4330 East West Highway, Bethesda, MD 20814, (301) 504-7479 (Office) or 240-863-8938 (cell).

Dated: August 31, 2021.

Alberta E. Mills,

Secretary.

[FR Doc. 2021-19164 Filed 9-1-21; 11:15 am]

BILLING CODE 6355-01-P

DEPARTMENT OF EDUCATION

[Docket No.: ED-2021-SCC-0129]

Agency Information Collection Activities; Comment Request; Implementation of Title I/II-A Program Initiatives

AGENCY: Institute of Education Sciences (IES), Department of Education (ED).

ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995, ED is proposing a new collection.

DATES: Interested persons are invited to submit comments on or before November 2, 2021.

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-2021-SCC-0129. 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](http://www.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 6W208B, Washington, DC 20202-8240.

FOR FURTHER INFORMATION CONTACT: For specific questions related to collection activities, please contact Erica Johnson, (202) 245-7676-4018.

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: Implementation of Title I/II—A Program Initiatives.

OMB Control Number: 1850–NEW.

Type of Review: New collection.

Respondents/Affected Public: State, Local, and Tribal Governments.

Total Estimated Number of Annual Responses: 3,459.

Total Estimated Number of Annual Burden Hours: 1,956.

Abstract: When the primary federal law governing K–12 schooling was updated in 2015 as the Every Student Succeeds Act (ESSA), it shifted many decisions to states and districts. However, through two of its core programs (Title I and Title II–A), ESSA retained federal requirements for states to set challenging content standards, assess student performance, identify and support low-performing schools, and promote the development of the educator workforce. How states and districts respond to the combination of flexibility and requirements and how policies are enacted in schools and classrooms will determine whether ESSA stimulates educational improvement as intended, which is particularly important in the wake of educational disruptions wrought by the coronavirus pandemic.

This is the second of two clearance requests. This second package requests clearance for state, district, principal, and teacher survey instruments and the collection of these data.

Dated: August 30, 2021.

Stephanie Valentine,

PRA Coordinator, Strategic Collections and Clearance, Governance and Strategy Division, Office of Chief Data Officer, Office of Planning, Evaluation and Policy Development.

[FR Doc. 2021–19044 Filed 9–2–21; 8:45 am]

BILLING CODE 4000–01–P

ELECTION ASSISTANCE COMMISSION

Sunshine Act Meetings

AGENCY: U.S. Election Assistance Commission.

ACTION: Notice of public meeting agenda; correction.

SUMMARY: The U.S. Election Assistance Commission published a document in the **Federal Register** regarding the scheduled Moving VVSG 2.0 Forward meeting.

FOR FURTHER INFORMATION CONTACT: Kristen Muthig, Telephone: (202) 897–9285, Email: kmuthig@eac.gov.

SUPPLEMENTARY INFORMATION:

Correction

The Notice appeared in the **Federal Register** of August 30, 2021, in FR Doc. 2021–18729, on page 48409, in the second column, the Agenda section should be corrected to read:

Agenda: The U.S. Election Assistance Commission (EAC) will meet with panels consisting of voting system manufacturers, voting system test labs (VSTLs), and representatives from the election administration community to discuss various aspects of the final stages of VVSG 2.0 implementation. This includes the state of developing voting system equipment for VVSG 2.0 compliance, preparation for testing against the new requirements, and the need for VVSG 2.0 compliant systems. The EAC Commissioners will be requesting feedback from the panels on these topics.

The full agenda will be posted in advance on the EAC website: <https://www.eac.gov>.

Amanda Joiner,

Associate Counsel, U.S. Election Assistance Commission.

[FR Doc. 2021–18981 Filed 9–1–21; 4:15 pm]

BILLING CODE 6820–KF–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. ER21–2782–000]

Sagebrush ESS, LLC; Supplemental Notice That Initial Market-Based Rate Filing Includes Request for Blanket Section 204 Authorization

This is a supplemental notice in the above-referenced proceeding of Sagebrush ESS, LLC’s application for market-based rate authority, with an accompanying rate tariff, noting that such application includes a request for

blanket authorization, under 18 CFR part 34, of future issuances of securities and assumptions of liability.

Any person desiring to intervene or to protest should file with the Federal Energy Regulatory Commission, 888 First Street NE, Washington, DC 20426, in accordance with Rules 211 and 214 of the Commission’s Rules of Practice and Procedure (18 CFR 385.211 and 385.214). Anyone filing a motion to intervene or protest must serve a copy of that document on the Applicant.

Notice is hereby given that the deadline for filing protests with regard to the applicant’s request for blanket authorization, under 18 CFR part 34, of future issuances of securities and assumptions of liability, is September 20, 2021.

The Commission encourages electronic submission of protests and interventions in lieu of paper, using the FERC Online links at <http://www.ferc.gov>. To facilitate electronic service, persons with internet access who will eFile a document and/or be listed as a contact for an intervenor must create and validate an eRegistration account using the eRegistration link. Select the eFiling link to log on and submit the intervention or protests.

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.

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://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. 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 the Federal Energy Regulatory Commission at FERCOnlineSupport@ferc.gov or call toll-free, (886) 208–3676 or TTY, (202) 502–8659.

Dated: August 30, 2021.

Debbie-Anne A. Reese,
Deputy Secretary.

[FR Doc. 2021-19072 Filed 9-2-21; 8:45 am]

BILLING CODE 6717-01-P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. RP21-1058-000]

EQT Energy, LLC v. Texas Eastern Transmission, LP; Notice of Complaint

Take notice that on August 27, 2021, pursuant to Section 5 of the Natural Gas Act¹ and Rule 206 of the Federal Energy Regulatory Commission's (Commission) Rules of Practice and Procedure, 18 CFR 385.206 (2020), EQT Energy, LLC (Complainant or EQT Energy) filed a formal complaint against Texas Eastern Transmission, LP (Respondent or Texas Eastern), alleging that recent service cuts on Respondent's 30 Inch System caused by a 20 percent operating pressure reduction required by order of the Pipeline and Hazardous Materials Safety Administration did not constitute an event of force majeure, and therefore Texas Eastern's refusal to provide EQT Energy with the appropriate reservation charge credits, as required by the pipeline's tariff, is unjust and unreasonable and contrary to Commission policy and precedent, all as more fully explained in its complaint.

The Complainant certifies that copies of the complaint were served on the contacts listed for Respondent in the Commission's list of Corporate Officials.

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, 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. The Respondent's answer and all interventions, or protests must be filed on or before the comment date. The Respondent's answer, motions to intervene, and protests must be served on the Complainant.

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.

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 the Federal Energy Regulatory Commission at FERCOnlineSupport@ferc.gov, or call toll-free, (886) 208-3676 or TTY, (202) 502-8659.

Comment Date: 5:00 p.m. Eastern Time on September 16, 2021.

Dated: August 30, 2021.

Debbie-Anne A. Reese,
Deputy Secretary.

[FR Doc. 2021-19073 Filed 9-2-21; 8:45 am]

BILLING CODE 6717-01-P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. CP21-6-000]

Spire Storage West, LLC.; Notice of Intent To Prepare an Environmental Impact Statement for the Proposed Clear Creek Expansion Project, Request for Comments on Environmental Issues, and Schedule for Environmental Review

The staff of the Federal Energy Regulatory Commission (FERC or Commission) will prepare an environmental impact statement (EIS) that will discuss the environmental impacts of the Clear Creek Expansion Project (Project) involving construction and operation of facilities by Spire Storage West, LLC. (Spire Storage) in Uinta County, Wyoming. The Commission will use this EIS in its decision-making process to determine whether the Project is in the public convenience and necessity. The

schedule for preparation of the EIS is discussed in the *Schedule for Environmental Review* section of this notice.

As part of the National Environmental Policy Act (NEPA) review process, the Commission takes into account concerns the public may have about proposals and the environmental impacts that could result whenever it considers the issuance of a Certificate of Public Convenience and Necessity. This gathering of public input is referred to as "scoping." By notice issued on November 9, 2020, in Docket No. CP21-6-000, the Commission opened a scoping period; and staff intends to prepare an EIS that will address the concerns raised during that scoping period as well as comments received in response to this notice. Therefore, the Commission requests comments on potential alternatives and impacts, and any relevant information, studies, or analyses of any kind concerning impacts affecting the quality of the human environment. To ensure that your comments are timely and properly recorded, please submit your comments so that the Commission receives them in Washington, DC on or before 5:00 p.m. Eastern Time on September 27, 2021. Further details on how to submit comments are provided in the *Public Participation* section of this notice.

As mentioned above, the Commission previously opened a scoping period which expired on December 9, 2020. All substantive written and oral comments provided during scoping will be addressed in the EIS. Therefore, if you submitted comments on this Project to the Commission during the previous scoping process, you do not need to file those comments again.

If you are a landowner receiving this notice, a pipeline company representative may contact you about the acquisition of an easement to construct, operate, and maintain the proposed facilities. The company would seek to negotiate a mutually acceptable easement agreement. You are not required to enter into an agreement. However, if the Commission approves the Project, the Natural Gas Act conveys the right of eminent domain to the company. Therefore, if you and the company do not reach an easement agreement, the pipeline company could initiate condemnation proceedings in court. In such instances, compensation would be determined by a judge in accordance with state law. The Commission does not grant, exercise, or oversee the exercise of eminent domain authority. The courts have exclusive authority to handle eminent domain

¹ 15 U.S.C. 717d.

cases; the Commission has no jurisdiction over these matters.

Spire Storage provided landowners with a fact sheet prepared by the FERC entitled “An Interstate Natural Gas Facility On My Land? What Do I Need To Know?” which addresses typically asked questions, including the use of eminent domain and how to participate in the Commission’s proceedings. This fact sheet along with other landowner topics of interest are available for viewing on the FERC website (www.ferc.gov) under the Natural Gas Questions or Landowner Topics link.

Public Participation

There are three methods you can use to submit your comments to the Commission. 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, which is located on the Commission’s website (www.ferc.gov) under the link to FERC Online. Using eComment 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, which is located 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.” You will be asked to select the type of filing you are making; a comment on a particular project is considered a “Comment on a Filing”; or

(3) You can file a paper copy of your comments by mailing them to the Commission. Be sure to reference the project docket number (CP21-6-000) 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, MD 20852.

Additionally, the Commission offers a free service called eSubscription. This service provides automatic notification of filings made to subscribed dockets, document summaries, and direct links to the documents. Go to <https://>

www.ferc.gov/ferc-online/overview to register for eSubscription.

Summary of the Proposed Project, the Project Purpose and Need, and Expected Impacts

Spire Storage proposes to expand its natural gas storage facilities at its existing Clear Creek Storage Field in Uinta County, Wyoming in order to increase the certificated gas capacities from 4.0 billion cubic feet (Bcf) to 20 Bcf, and increase the maximum daily injection and withdrawal capacities from 35 million cubic feet (MMcf) and 50 MMcf per day, to 350 MMcf and 500 MMcf per day, respectively. Spire Storage further proposes to construct pipeline connections north to the Canyon Creek Plant, south to the Kern River Gas Transmission mainline, and reconnect with the Questar Pipeline at the Clear Creek Plant. According to Spire Storage, the purpose of this project is to increase storage capacity and enhance operational capabilities to satisfy market demand for natural gas services in the Western United States.

The Clear Creek Expansion Project would consist of the following facilities:

- Four compressor units at the Clear Creek Plant;
- a tank storage and natural gas liquids fueling equipment facility on an existing pad;
- 11 new injection/withdrawal wells, one new water disposal well, and associated lines;
- approximately 7.0 miles of 20-inch-diameter pipeline;
- approximately 3.6 miles of 24-inch diameter pipeline; and
- approximately 3.5 miles of 4,160-volt powerline; and other related appurtenances.

The general location of the Project facilities is shown in appendix 1.¹

Based on the environmental information provided by Spire Storage, construction of the proposed facilities would disturb about 249.00 acres of land for the aboveground facilities and the pipeline. Following construction, Spire Storage would maintain about 128.1 acres for operation of the Project facilities; the remaining acreage would be restored and revert to former uses.

¹ The appendices referenced in this notice will not appear in the **Federal Register**. Copies of the appendices were sent to all those receiving this notice in the mail and are available at www.ferc.gov using the link called “eLibrary.” For instructions on connecting to eLibrary, refer to the last page of this notice. 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 TTY (202) 502-8659.

Based on an initial review of Spire Storage’s proposal and public comments, Commission staff have identified several expected impacts that deserve attention in the EIS. The Project would impact eight waterbodies, 0.48 acre of wetland, public lands managed by the U.S. Bureau of Land Management (BLM) and the Wyoming Office of State Lands and Investment, and greenhouse gas emissions.

The NEPA Process and the EIS

The EIS issued by the Commission will discuss impacts that could occur as a result of the construction and operation of the proposed Project under the relevant general resource areas:

- Geology and soils;
- water resources and wetlands;
- vegetation and wildlife;
- threatened and endangered species;
- cultural resources;
- land use;
- socioeconomics and environmental justice;
- air quality and noise; and
- reliability and safety.

Commission staff will also make recommendations on how to lessen or avoid impacts on the various resource areas. Your comments will help Commission staff focus its analysis on the issues that may have a significant effect on the human environment.

The EIS will present Commission staff’s independent analysis of the issues. The BLM is a cooperating agency in the preparation of the EIS.² Staff will prepare a draft EIS which will be issued for public comment. Commission staff will consider all timely comments received during the comment period on the draft EIS and revise the document, as necessary, before issuing a final EIS. Any draft and final EIS will be available in electronic format in the public record through eLibrary³ and the Commission’s natural gas environmental documents web page (<https://www.ferc.gov/industries-data/natural-gas/environmental-documents>). If eSubscribed, you will receive instant email notification when the environmental document is issued.

Alternatives Under Consideration

The EIS will evaluate reasonable alternatives that are technically and economically feasible and meet the purpose and need for the proposed

² The Council on Environmental Quality regulations addressing cooperating agency responsibilities are at Title 40 Code of Federal Regulations (CFR), Section 1501.8. (2021).

³ For instructions on connecting to eLibrary, refer to the last page of this notice.

action.⁴ Alternatives currently under consideration include:

- The no-action alternative, meaning the Project is not implemented.

With this notice, the Commission requests specific comments regarding any additional potential alternatives to the proposed action or segments of the proposed action. Please focus your comments on reasonable alternatives (including alternative facility sites and pipeline routes) that meet the Project objectives, are technically and economically feasible, and avoid or lessen environmental impact.

Consultation Under Section 106 of the National Historic Preservation Act

In accordance with the Advisory Council on Historic Preservation’s implementing regulations for section 106 of the National Historic Preservation Act, the Commission initiated section 106 consultation for the Project in the notice issued on October 22, 2021, with the Wyoming State Historic Preservation Officer, and other government agencies, interested Indian

tribes, and the public to solicit their views and concerns regarding the Project’s potential effects on historic properties.⁵ This notice is a continuation of section 106 consultation for the Project. The Project EIS will document findings on the impacts on historic properties and summarize the status of consultations under section 106.

Schedule for Environmental Review

On October 22, 2020, the Commission issued its Notice of Application for the Project. Among other things, that notice alerted other agencies issuing federal authorizations of the requirement to complete all necessary reviews and to reach a final decision on the request for a federal authorization within 90 days of the date of issuance of the Commission staff’s final EIS for the Project. This notice identifies the Commission staff’s planned schedule for completion of the final EIS for the Project, which is based on an issuance of the draft EIS in October of 2021.

Issuance of Notice of Availability of the final EIS—January 21, 2022
90-day Federal Authorization Decision Deadline—April 21, 2022

If a schedule change becomes necessary for the final EIS, an additional notice will be provided so that the relevant agencies are kept informed of the Project’s progress.

Permits and Authorizations

The table below lists the anticipated permits and authorizations for the Project required under federal law. This list may not be all-inclusive and does not preclude any permit or authorization if it is not listed here. Agencies with jurisdiction by law and/or special expertise may formally cooperate in the preparation of the Commission’s EIS and may adopt the EIS to satisfy its NEPA responsibilities related to this Project. Agencies that would like to request cooperating agency status should follow the instructions for filing comments provided under the *Public Participation* section of this notice.

ENVIRONMENTAL PERMITS, APPROVALS, AND CONSULTATIONS

Agency	Permit/approval/consultation
Federal:	
Federal Energy Regulatory Commission	Certificate of Public Convenience and Necessity under Section 7(c) of the Natural Gas Act.
U.S. Army Corps of Engineers	Clean Water Act 404, Nationwide Permit 12.
U.S. Fish and Wildlife Service	Endangered Species Act—Section 7 Consultation, Migratory Bird Treaty Act, Bald Eagle and Golden Eagle Protection Act.
U.S. Environmental Protection Agency	Underground Injection Control Permit through the Wyoming Oil and Gas Conservation Commission for class II wells.
U.S. Bureau of Land Management	SF–299, Right-of-Way Grant and Temporary Use Permits
	Approval to dispose of produced water: controls disposal of produced water from federal leases.
	Application for permit to Drill, Deepen, or Plug Back (ADP/Sundry Process).

Environmental Mailing List

This notice is being sent to the Commission’s current environmental mailing list for the Project which includes the BLM Kemmerer Field office; Wyoming Department of Environmental Quality; federal, state, and local government representatives and agencies; elected officials; environmental and public interest groups; Native American Tribes; other interested parties; and local libraries and newspapers. This list also includes all affected landowners (as defined in the Commission’s regulations) who are potential right-of-way grantors, whose property may be used temporarily for

Project purposes, or who own homes within certain distances of aboveground facilities, and anyone who submits comments on the Project and includes a mailing address with their comments. Commission staff will update the environmental mailing list as the analysis proceeds to ensure that Commission notices related to this environmental review are sent to all individuals, organizations, and government entities interested in and/or potentially affected by the proposed Project. State and local government representatives should notify their constituents of this proposed project and encourage them to comment on their areas of concern.

If you need to make changes to your name/address, or if you would like to remove your name from the mailing list, please complete one of the following steps:

- (1) Send an email to GasProjectAddressChange@ferc.gov stating your request. You must include the docket number CP21–6–000 in your request. If you are requesting a change to your address, please be sure to include your name and the correct address. If you are requesting to delete your address from the mailing list, please include your name and address as it appeared on this notice. This email address is unable to accept comments.
OR

⁴ 40 CFR 1508.1(z).

⁵ The Advisory Council on Historic Preservation’s regulations are at Title 36, Code of Federal

Regulations, Part 800. Those regulations define historic properties as any prehistoric or historic district, site, building, structure, or object included

in or eligible for inclusion in the National Register of Historic Places.

(2) Return the attached "Mailing List Update Form" (appendix 2).

Additional Information

Additional information about the Project is available from the Commission's Office of External Affairs, at (866) 208-FERC, or on the FERC website at www.ferc.gov using the eLibrary link. Click on the eLibrary link, click on "General Search" and enter the docket number in the "Docket Number" field, excluding the last three digits (*i.e.*, CP21-6). Be sure you have selected an appropriate date range. For assistance, please contact FERC Online Support at FercOnlineSupport@ferc.gov or (866) 208-3676, or for TTY, contact (202) 502-8659. The eLibrary link also provides access to the texts of all formal documents issued by the Commission, such as orders, notices, and rulemakings.

Public sessions or site visits will be posted on the Commission's calendar located at <https://www.ferc.gov/news-events/events> along with other related information.

Dated: August 26, 2021.

Kimberly D. Bose,
Secretary.

[FR Doc. 2021-19100 Filed 9-2-21; 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: RP21-1055-000.
Applicants: Colorado Interstate Gas Company, L.L.C.
Description: Compliance filing: Operational Purchase and Sales Report 2021 to be effective N/A.
Filed Date: 8/27/21.
Accession Number: 20210827-5060.
Comment Date: 5 p.m. ET 9/8/21.
Docket Numbers: RP21-1056-000.
Applicants: Tres Palacios Gas Storage LLC.
Description: Compliance filing: Informational Filing Re MBR Authority, Compliance Dkt. Nos. CP07-90-000 et al. to be effective N/A.
Filed Date: 8/27/21.
Accession Number: 20210827-5072.
Comment Date: 5 p.m. ET 9/8/21.
Docket Numbers: RP21-1057-000.
Applicants: Northern Border Pipeline Company.

Description: § 4(d) Rate Filing: NBPL—TC eConnects Implementation to be effective 10/1/2021.

Filed Date: 8/27/21.

Accession Number: 20210827-5163.

Comment Date: 5 p.m. ET 9/8/21.

Docket Numbers: RP21-1059-000.

Applicants: Northwest Pipeline LLC.

Description: § 4(d) Rate Filing: 2021 Winter Fuel Filing to be effective 10/1/2021.

Filed Date: 8/30/21.

Accession Number: 20210830-5036.

Comment Date: 5 p.m. ET 9/13/21.

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.

The filings are accessible in the Commission's eLibrary system (<https://elibrary.ferc.gov/idmws/search/fercensearch.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: August 30, 2021.

Debbie-Anne A. Reese,

Deputy Secretary.

[FR Doc. 2021-19075 Filed 9-2-21; 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: ER10-2437-016.
Applicants: Arizona Public Service Company.

Description: Amendment to May 28, 2021 Notice of Change in Status of Arizona Public Service Company.

Filed Date: 8/27/21.

Accession Number: 20210827-5125.

Comment Date: 5 p.m. ET 9/17/21.

Docket Numbers: ER10-2721-009.

Applicants: El Paso Electric Company.
Description: Supplement to August 28, 2020 Notice of Non-Material Change in Status of El Paso Electric Company.

Filed Date: 8/26/21.

Accession Number: 20210826-5134.

Comment Date: 5 p.m. ET 9/16/21.

Docket Numbers: ER20-287-006.

Applicants: CPV Fairview, LLC.
Description: Compliance filing: Informational Filing Regarding Planned Transfer to be effective N/A.

Filed Date: 8/30/21.

Accession Number: 20210830-5132.

Comment Date: 5 p.m. ET 9/20/21.

Docket Numbers: ER21-471-002.

Applicants: Midcontinent Independent System Operator, Inc.

Description: Report Filing: 2021-08-27_SA 3576 Supplemental for MDU-Emmons Logan Wind FSA (J302 J503) to be effective N/A.

Filed Date: 8/27/21.

Accession Number: 20210827-5100.

Comment Date: 5 p.m. ET 9/17/21.

Docket Numbers: ER21-2238-001.

Applicants: ITC Great Plains, LLC, Southwest Power Pool, Inc.

Description: Tariff Amendment: Southwest Power Pool, Inc. submits tariff filing per 35.17(b); 3817 ITC Great Plains/Iron Star FCRA—Deficiency Response to be effective 8/29/2021.

Filed Date: 8/30/21.

Accession Number: 20210830-5080.

Comment Date: 5 p.m. ET 9/13/21.

Docket Numbers: ER21-2785-000.

Applicants: WSPP Inc.

Description: § 205(d) Rate Filing: List of Members Update 2021 to be effective 8/12/2021.

Filed Date: 8/30/21.

Accession Number: 20210830-5000.

Comment Date: 5 p.m. ET 9/20/21.

Docket Numbers: ER21-2786-000.

Applicants: Southwest Power Pool, Inc.

Description: § 205(d) Rate Filing: 3125R10 Basin Electric Power Cooperative NITSA and NOA to be effective 8/1/2021.

Filed Date: 8/30/21.

Accession Number: 20210830-5034.

Comment Date: 5 p.m. ET 9/20/21.

Docket Numbers: ER21-2787-000.

Applicants: NorthWestern Corporation.

Description: § 205(d) Rate Filing: RS 271—Revised O&M Agreement with REC Advanced Silicon Materials LLC to be effective 8/31/2021.

Filed Date: 8/30/21.

Accession Number: 20210830-5108.

Comment Date: 5 p.m. ET 9/20/21.

Docket Numbers: ER21-2788-000.

Applicants: Midcontinent Independent System Operator, Inc.

Description: § 205(d) Rate Filing: 2021-08-30 Improve ELMP Offline Fast Start Pricing Logic to be effective 10/30/2021.

Filed Date: 8/30/21.

Accession Number: 20210830–5134.

Comment Date: 5 p.m. ET 9/20/21.

Docket Numbers: ER21–2789–000.

Applicants: Duke Energy Carolinas, LLC.

Description: § 205(d) Rate Filing: DEC–NCEMC Revisions to Rate Schedule No. 273 to be effective 1/1/2021.

Filed Date: 8/30/21.

Accession Number: 20210830–5141.

Comment Date: 5 p.m. ET 9/20/21.

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: August 30, 2021.

Debbie-Anne A. Reese,

Deputy Secretary.

[FR Doc. 2021–19074 Filed 9–2–21; 8:45 am]

BILLING CODE 6717–01–P

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OGC–2021–0583; FRL–8937–01–OGC]

Proposed Settlement Agreement, Enforcement Action Alleging Air Pollution Violations

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of proposed settlement agreement; request for public comment.

SUMMARY: In accordance with the Clean Air Act, as amended (CAA or the Act), notice is given of a proposed settlement agreement in the administrative enforcement action brought by the State of New Jersey, Department of Environmental Protection, Division of Air Enforcement (New Jersey), against the Edison facility owned and operated by the Environmental Protection Agency (EPA) Region 2. In November 2019, New

Jersey conducted an inspection of EPA's Edison facility and found several state law violations related to its boilers and emergency generators. EPA worked with New Jersey to bring the boilers and generators back into full compliance by the end of 2020. A draft administrative settlement agreement between EPA and New Jersey that would fully resolve the matter through EPA paying a \$8,600 penalty is here proposed and is ready for public notice and comment.

DATES: Written comments on the proposed settlement agreement must be received by October 4, 2021.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–HQ–OGC–2021–0583, online at <https://www.regulations.gov> (EPA's preferred method). Follow the online instructions for submitting comments.

Instructions: All submissions received must include the Docket ID number for this action. Comments received may 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 "Additional Information about Commenting on the Proposed Settlement Agreement" heading under the **SUPPLEMENTARY INFORMATION** section of this document. Out of an abundance of caution for members of the public and our staff, the EPA Docket Center and Reading Room are closed to the public, with limited exceptions, to reduce the risk of transmitting COVID–19. Our Docket Center staff will continue to provide remote customer service via email, phone, and webform. We encourage the public to submit comments via <https://www.regulations.gov>, as there may be a delay in processing mail and faxes. Hand-deliveries and couriers may be received by scheduled appointment only. For further information on EPA Docket Center services and the current status, please visit us online at <https://www.epa.gov/dockets>.

EPA continues to carefully and continuously monitor information from the CDC, local area health departments, and our federal partners so that we can respond rapidly as conditions change regarding COVID–19.

FOR FURTHER INFORMATION CONTACT: Susan Stahle, Air and Radiation Law Office MC–2344A, Office of General Counsel, U.S. Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Washington, DC 20460; telephone (202) 564–1272; email address stahle.susan@epa.gov.

SUPPLEMENTARY INFORMATION:

I. Obtaining a Copy of the Proposed Settlement Agreement

The official public docket for this action (identified by Docket ID No. EPA–HQ–OGC–2021–0583) contains a copy of the proposed settlement agreement.

The electronic version of the public docket for this action contains a copy of the proposed settlement agreement and is available through <https://www.regulations.gov>. You may use <https://www.regulations.gov> to submit or view public comments, access the index listing of the contents of the official public docket, and access those documents in the public docket that are available electronically. Once in the system, key in the appropriate docket identification number then select "search."

II. Additional Information About the Proposed Settlement Agreement

In November 2019, New Jersey conducted an inspection of EPA's Edison facility and found several state law violations regarding EPA's boilers and emergency generators.¹ Based on this inspection, and further information provided by EPA, New Jersey alleged the following types of violations:

- Failure to seek new general permits when the boilers and emergency generators were replaced;
- Operating the boilers and emergency generators with expired general permits;
- Operating one emergency generator on five bad air days;
- Operating one boiler on one bad air day; and
- Improper tune-ups and/or tune-up report submission for two boilers.

EPA worked with New Jersey to bring the boilers and generators back into full compliance by the end of 2020. These steps included: (1) Obtaining new general permits, and setting up an internal calendar to better track when to seek permit renewals; (2) changing a generator setting to require that generator testing be started manually, to avoid automatic startup on bad air days; (3) creating and revising a log sheet to ensure that staff check on "bad air day" status prior to testing the emergency generators; (4) conducting the 2020 tune-up using an outside contractor, with EPA staff attending for training purposes; and (5) submitting the 2020 tune-up reports via a New Jersey online reporting system.

¹ While the proposed settlement agreement cites to state law violations, current or prior versions of the cited provisions were also approved into New Jersey's federally enforceable State Implementation Plan under the relevant provisions of the Clean Air Act, 42 U.S.C. 7401 *et seq.*

EPA and New Jersey have now tentatively agreed on a proposed settlement agreement that would fully resolve the identified state law violations through payment of a \$8,600 penalty, a penalty which would rise to a full penalty of \$17,200 if EPA failed to pay that penalty on time. To the extent the alleged violations may have constituted violations of the CAA, EPA and New Jersey agree this proposed agreement would also constitute settlement of any claims New Jersey could have made under the CAA.

In accordance with section 113(g) of the CAA, for a period of 30 days following the date of publication of this document, the Agency will accept written comments relating to the proposed settlement agreement. EPA may withdraw or withhold consent to the proposed settlement agreement if the comments disclose facts or considerations that indicate that such consent is inappropriate, improper, inadequate, or inconsistent with the requirements of the Act.

III. Additional Information About Commenting on the Proposed Settlement Agreement

Submit your comments, identified by Docket ID No. EPA-HQ-OGC-2021-0583, via <https://www.regulations.gov>. Once submitted, comments cannot be edited or removed from this docket. EPA may publish any comment received to its public docket. Do not submit to EPA's docket at <https://www.regulations.gov> 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. 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>. For additional information about submitting information identified as CBI, please contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section of this document. Note that written comments containing CBI and submitted by mail may be delayed and deliveries or couriers will be

received by scheduled appointment only.

If you submit an electronic comment, EPA recommends that you include your name, mailing address, and an email address or other contact information in the body of your comment. This ensures that you can be identified as the submitter of the comment and allows EPA to contact you in case EPA cannot read your comment due to technical difficulties or needs further information on the substance of your comment. Any identifying or contact information provided in the body of a comment will be included as part of the comment that is placed in the official public docket and made available in EPA's electronic public docket. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment.

Use of the <https://www.regulations.gov> website to submit comments to EPA electronically is EPA's preferred method for receiving comments. The electronic public docket system is an "anonymous access" system, which means EPA will not know your identity, email address, or other contact information unless you provide it in the body of your comment.

Please ensure that your comments are submitted within the specified comment period. Comments received after the close of the comment period will be marked "late." EPA is not required to consider these late comments.

Gautam Srinivasan,
Associate General Counsel.

[FR Doc. 2021-19047 Filed 9-2-21; 8:45 am]

BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

[ER-FRL-9058-2]

Environmental Impact Statements; Notice of Availability

Responsible Agency: Office of Federal Activities, General Information 202-564-5632 or <https://www.epa.gov/nepa>. Weekly receipt of Environmental Impact Statements (EIS)

Filed August 23, 2021 10 a.m. EST

Through August 30, 2021 10 a.m. EST Pursuant to 40 CFR 1506.9.

Notice: Section 309(a) of the Clean Air Act requires that EPA make public its comments on EISs issued by other Federal agencies. EPA's comment letters on EISs are available at: <https://cdxnodengn.epa.gov/cdx-enepa-public/action/eis/search>.

EIS No. 20210128, Draft, NOAA, CT, Connecticut National Estuarine Research Reserve, Comment Period Ends: 10/18/2021, Contact: Erica Seiden 240-533-0781.

EIS No. 20210129, Draft, USPS, DC, Next Generation Delivery Vehicle Acquisitions, Comment Period Ends: 10/18/2021, Contact: Davon M. Collins 202-268-4570.

EIS No. 20210130, Draft, USACE, NY, Nassau County Back Bays Coastal Storm Risk Management Integrated Feasibility Report and Environmental Impact Statement, Comment Period Ends: 10/18/2021, Contact: Scott Sanderson 215-656-6571.

EIS No. 20210131, Final, USACE, LA, South Central Coast Louisiana Final Integrated Feasibility Study with Environmental Impact Statement, Review Period Ends: 10/04/2021, Contact: Joe Jordan 309-794-5791.

Amended Notice:

EIS No. 20210095, Draft, FHWA, NY, Interstate 81 Viaduct Project, Comment Period Ends: 10/14/2021, Contact: Richard J. Marquis 518-431-4127. Revision to FR Notice Published 07/16/2021; Extending the Comment Period from 09/14/2021 to 10/14/2021.

EIS No. 20210103, Draft, FTA, CA, West Santa Ana Branch Transit Corridor Project Draft Environmental Impact Statement/Environmental Impact Report, Comment Period Ends: 09/28/2021, Contact: Rusty Whisman 213-202-3956. Revision to FR Notice Published 07/30/2021; Extending the Comment Period from 09/13/2021 to 09/28/2021.

Dated: August 30, 2021.

Cindy S. Barger,

Director, NEPA Compliance Division, Office of Federal Activities.

[FR Doc. 2021-19063 Filed 9-2-21; 8:45 a.m.]

BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

[EPA-HQ-OPP-2018-0038; FRL-8901-01-OCSP]

United States Department of Justice and Parties to Certain Litigation; Transfer of Data

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: This notice announces that pesticide related information submitted to the Environmental Protection Agency (EPA) pursuant to the Federal Insecticide, Fungicide, and Rodenticide

Act (FIFRA) and the Federal Food, Drug, and Cosmetic Act (FFDCA), including information that may have been claimed as Confidential Business Information (CBI) by the submitter, will be transferred to the U.S. Department of Justice (DOJ) and parties to certain litigation. This transfer of data is in accordance with the CBI regulations governing the disclosure of potential CBI in litigation.

DATES: Access to this information by DOJ and the parties to certain litigation is ongoing and expected to continue during the litigation as discussed in this Notice.

FOR FURTHER INFORMATION CONTACT: Marietta Echeverria, Registration Division (7505P), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Washington, DC 20460-0001; *telephone number:* (703) 305-7090; *email address:* RDFRNotices@epa.gov.

SUPPLEMENTARY INFORMATION:
This notice is being provided pursuant to 40 CFR 2.209(d) to inform affected businesses that EPA, via DOJ, will provide certain information to the parties and the Court in the matter of *Center for Biological Diversity et al. v. U.S. Environmental Protection Agency* (Case No. 20-73146) (9th Cir.) (“Inpyrfluxam litigation”). The information is contained in documents that have been submitted to EPA pursuant to FIFRA and FFDCA by pesticide registrants or other data-submitters, including information that has been claimed to be, or determined

to potentially contain, CBI. In the Inpyrfluxam Litigation, Petitioners seek judicial review of EPA’s August 31, 2020 registrations of inpyrfluxam under FIFRA and ESA.

The documents are being produced as part of the Administrative Record of the decision at issue and include documents that registrants or other data-submitters may have submitted to EPA regarding the pesticide inpyrfluxam, and that may be subject to various release restrictions under federal law. The information includes documents submitted with pesticide registration applications and may include CBI as well as scientific studies subject to the disclosure restrictions of FIFRA section 10(g), 7 U.S.C. 136h(g).

All documents that may be subject to release restrictions under federal law will be designated as “Confidential or Restricted Information” in the certified list of record materials that EPA will file in this case. Further, EPA intends to seek a Protective Order that would preclude public disclosure of any such documents by the parties in this action who have received the information from EPA, and that would limit the use of such documents to litigation purposes only. EPA would only produce such documents in accordance with the Protective Order. The anticipated Protective Order would require that such documents would be filed under seal and would not be available for public review, unless the information contained in the document has been determined to not be subject to FIFRA

section 10(g) and all CBI has been redacted.

Authority: 7 U.S.C. 136 *et seq.*; 21 U.S.C. 301 *et seq.*

Dated: August 31, 2021.

Marietta Echeverria,
Acting Director, Registration Division, Office of Pesticide Programs.

[FR Doc. 2021-19130 Filed 9-2-21; 8:45 am]

BILLING CODE 6560-50-P

FEDERAL COMMUNICATIONS COMMISSION

[FR ID 42210]

Open Meeting; Correction

AGENCY: Federal Communications Commission.

ACTION: Notice; correction.

SUMMARY: The Federal Communications Commission (FCC) published a document in the **Federal Register** of August 6, 2021, announcing a meeting on Thursday, August 5, 2021. The agenda has since changed.

FOR FURTHER INFORMATION CONTACT: Jeffrey Riordan, the Office of Media Relations, (202) 418-0500.

SUPPLEMENTARY INFORMATION:

Correction

In the **Federal Register** of August 6, 2021, in FR Doc. 2021-16868, on page 43237, delete the following agenda items in the chart:

5	MEDIA	<i>Title:</i> Revisions to Political Programming and Record-Keeping Rules (MB Docket No. 21-293). <i>Summary:</i> The Commission will consider a Notice of Proposed Rulemaking to update outmoded political programming rules.
6	WIRELESS TELECOMMUNICATIONS ...	<i>Title:</i> Review of the Commission’s Part 95 Personal Radio Services Rules (WT Docket No. 10-119). <i>Summary:</i> The Commission will consider a Memorandum Opinion and Order on Reconsideration that would grant three petitions for reconsideration of the Commission’s May 2017 Part 95 Personal Radio Services Rules Report and Order.

Dated: August 4, 2021.

Marlene Dortch,
Secretary.

[FR Doc. 2021-17107 Filed 9-2-21; 8:45 am]

BILLING CODE 6712-01-P

FEDERAL DEPOSIT INSURANCE CORPORATION

Notice to All Interested Parties of Intent To Terminate Receiverships

Notice is hereby given that the Federal Deposit Insurance Corporation (FDIC or

Receiver), as Receiver for the institutions listed below, intends to terminate its receivership for said institutions.

NOTICE OF INTENT TO TERMINATE RECEIVERSHIPS

Fund	Receivership name	City	State	Date of appointment of receiver
10023	Downey Savings and Loan, FA	Newport Beach	CA	11/21/2008
10024	PFF Bank and Trust	Pomona	CA	11/21/2008
10181	Florida Community Bank	Immokalee	FL	01/29/2010

NOTICE OF INTENT TO TERMINATE RECEIVERSHIPS—Continued

Fund	Receivership name	City	State	Date of appointment of receiver
10217	Tamalpais Bank	San Rafael	CA	04/16/2010
10312	Darby Bank and Trust Company	Vidalia	GA	11/12/2010
10524	Seaway Bank and Trust	Chicago	IL	01/27/2017
10532	Louisa Community Bank	Louisa	KY	10/25/2019
10537	First City Bank of Florida	Fort Walton Beach	FL	10/16/2020

The liquidation of the assets for each receivership has been completed. To the extent permitted by available funds and in accordance with law, the Receiver will be making a final dividend payment to proven creditors.

Based upon the foregoing, the Receiver has determined that the continued existence of the receiverships will serve no useful purpose. Consequently, notice is given that the receiverships shall be terminated, to be effective no sooner than thirty days after the date of this notice. If any person wishes to comment concerning the termination of any of the receiverships, such comment must be made in writing, identify the receivership to which the comment pertains, and be sent within thirty days of the date of this notice to: Federal Deposit Insurance Corporation, Division of Resolutions and Receiverships, Attention: Receivership Oversight Department 34.6, 1601 Bryan Street, Dallas, TX 75201.

No comments concerning the termination of the above-mentioned receiverships will be considered which are not sent within this time frame.

(Authority: 12 U.S.C. 1819)

Federal Deposit Insurance Corporation.

Dated at Washington, DC, on August 31, 2021.

James P. Sheesley,

Assistant Executive Secretary.

[FR Doc. 2021-19118 Filed 9-2-21; 8:45 am]

BILLING CODE 6714-01-P

FEDERAL RESERVE SYSTEM

Change in Bank Control Notices; Acquisitions of Shares of a Bank or Bank Holding Company

The notificants listed below have applied under the Change in Bank Control Act (Act) (12 U.S.C. 1817(j)) and § 225.41 of the Board's Regulation Y (12 CFR 225.41) to acquire shares of a bank or bank holding company. The factors that are considered in acting on the applications are set forth in paragraph 7 of the Act (12 U.S.C. 1817(j)(7)).

The public portions of the applications listed below, as well as

other related filings required by the Board, if any, are available for immediate inspection at the Federal Reserve Bank(s) indicated below and at the offices of the Board of Governors. This information may also be obtained on an expedited basis, upon request, by contacting the appropriate Federal Reserve Bank and from the Board's Freedom of Information Office at <https://www.federalreserve.gov/foia/request.htm>. Interested persons may express their views in writing on the standards enumerated in paragraph 7 of the Act.

Comments regarding each of these applications must be received at the Reserve Bank indicated or the offices of the Board of Governors, Ann E. Misback, Secretary of the Board, 20th Street and Constitution Avenue NW, Washington, DC 20551-0001, not later than September 20, 2021.

A. Federal Reserve Bank of Kansas City (Jeffrey Imgarten, Assistant Vice President) 1 Memorial Drive, Kansas City, Missouri 64198-0001:

1. *Keith A. Knudsen, Laurel, Nebraska; individually, and as voting trustee of the Employee Stock Ownership Plan Accounts Trust of the Security Bank KSOP & Trust, Laurel, Nebraska;* to acquire voting shares of First Laurel Security Co., and thereby indirectly acquire voting shares of Security Bank, both of Laurel, Nebraska.

2. *William D. Young, Avon, Colorado;* to join the Young Family Control Group, a group acting in concert, to acquire voting shares of C.S.B. Co., and thereby indirectly acquire voting shares of Homestead Bank, both of Cozad, Nebraska.

Board of Governors of the Federal Reserve System, August 31, 2021.

Michele Taylor Fennell,

Deputy Associate Secretary of the Board.

[FR Doc. 2021-19127 Filed 9-2-21; 8:45 am]

BILLING CODE P

FEDERAL RESERVE SYSTEM

Formations of, Acquisitions by, and Mergers of Bank Holding Companies

The companies listed in this notice have applied to the Board for approval, pursuant to the Bank Holding Company Act of 1956 (12 U.S.C. 1841 *et seq.*) (BHC Act), Regulation Y (12 CFR part 225), and all other applicable statutes and regulations to become a bank holding company and/or to acquire the assets or the ownership of, control of, or the power to vote shares of a bank or bank holding company and all of the banks and nonbanking companies owned by the bank holding company, including the companies listed below.

The public portions of the applications listed below, as well as other related filings required by the Board, if any, are available for immediate inspection at the Federal Reserve Bank(s) indicated below and at the offices of the Board of Governors. This information may also be obtained on an expedited basis, upon request, by contacting the appropriate Federal Reserve Bank and from the Board's Freedom of Information Office at <https://www.federalreserve.gov/foia/request.htm>. Interested persons may express their views in writing on the standards enumerated in the BHC Act (12 U.S.C. 1842(c)).

Comments regarding each of these applications must be received at the Reserve Bank indicated or the offices of the Board of Governors, Ann E. Misback, Secretary of the Board, 20th Street and Constitution Avenue NW, Washington, DC 20551-0001, not later than October 4, 2021.

A. Federal Reserve Bank of Kansas City (Jeffrey Imgarten, Assistant Vice President) 1 Memorial Drive, Kansas City, Missouri 64198-0001:

1. *Grey Mountain Holdings, Inc., and GM Acquisition Sub, Inc., both of Fulton, Missouri;* to become bank holding companies by acquiring IFB Holdings, Inc., and thereby indirectly acquiring Investors Community Bank, both of Chillicothe, Missouri.

Board of Governors of the Federal Reserve System, August 31, 2021.

Michele Taylor Fennell,

Deputy Associate Secretary of the Board.

[FR Doc. 2021-19128 Filed 9-2-21; 8:45 am]

BILLING CODE P

DEPARTMENT OF DEFENSE

GENERAL SERVICES ADMINISTRATION

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[OMB Control No. 9000-0061; Docket No. 2021-0053; Sequence No. 10]

Submission for OMB Review; Federal Acquisition Regulation Part 47: Transportation Requirements

AGENCY: Department of Defense (DOD), General Services Administration (GSA), and National Aeronautics and Space Administration (NASA).

ACTION: Notice.

SUMMARY: Under the provisions of the Paperwork Reduction Act, the Regulatory Secretariat Division has submitted to the Office of Management and Budget (OMB) a request to review and approve a revision of a previously approved information collection requirements regarding Federal Acquisition Regulation (FAR) part 47 transportation requirements.

DATES: Submit comments on or before October 4, 2021.

ADDRESSES: Written comments and recommendations for this 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 Review—Open for Public Comments" or by using the search function. Additionally, submit a copy to GSA through <https://www.regulations.gov> and follow the instructions on the site. This website provides the ability to type short comments directly into the comment field or attach a file for lengthier comments.

Instructions: All items submitted must cite "9000-0061, Federal Acquisition Regulation Part 47: Transportation Requirements." Comments received generally will be posted without change to <https://www.regulations.gov>, including any personal and/or business confidential information provided. To confirm receipt of your comment(s), please check <https://www.regulations.gov> approximately two to three days after

submission to verify posting. If there are difficulties submitting comments, contact the GSA Regulatory Secretariat Division at 202-501-4755 or GSARegSec@gsa.gov.

FOR FURTHER INFORMATION CONTACT:

Jennifer Hawes, Procurement Analyst, at telephone 202-969-7386, or jennifer.hawes@gsa.gov.

SUPPLEMENTARY INFORMATION:

A. OMB Control Number, Title, and Any Associated Form(s)

9000-0061, Federal Acquisition Regulation Part 47: Transportation Requirements.

B. Need and Uses

This clearance covers the information that contractors must submit to comply with the following requirements in FAR part 47:

- *FAR 52.247-2, Permits, Authorities, or Franchises.* The clause requires an offeror to indicate whether it has the proper authorization from the Federal Highway Administration (or other cognizant regulatory body) before it can be allowed to move material under any contract for regulated freight transportation or transportation-related services. The offeror may also be requested to furnish a copy of the authorization before moving material under the contract. The contracting officer and transportation office review the information to ensure that the offeror has complied with all regulatory requirements and has obtained any permits, licenses, or franchises that are needed to transport the supplies.

- *FAR 52.247-6, Financial Statement.* This provision requires an offeror to furnish the Government with a current certified statement of the offeror's financial condition and such data as the Government may request with respect to the offeror's operations. The contracting officer uses this information to determine whether a potential awardee is responsible in accordance with FAR part 9.

- *FAR 52.247-48, F.o.b. Destination—Evidence of Shipment.* This clause requires the contractor to retain and make available to the Government for review, as necessary, evidence of free on board (f.o.b.) destination shipment documentation for a period of three years after final payment of the contract. The Government may request this information from the contractor while auditing a contract or to resolve disputes.

- *FAR 52.247-51, Evaluation of Export Offers.* This provision requires an offeror to nominate a port/terminal of loading they recommend for the

purposes of evaluation of their offer and indicate whether the prices proposed are based on f.o.b. origin or f.o.b. destination. The contracting officer uses the information to ensure that offers are evaluated and awards are made on the basis of the lowest laid down cost to the Government at the overseas port of discharge.

- *FAR 52.247-52, Clearance and Documentation Requirements—Shipments to DOD Air or Water Terminal Transshipment Points.* This clause directs the contractor to provide the Government certain information regarding shipments to DoD air or water terminal transshipment points. The Government transportation office uses this information to support applications for export release and to prepare the Transportation Control and Movement Document (TCMD).

- *FAR 52.247-53, Freight Classification Description.* When the Government purchases supplies that are new to the supply system, nonstandard, or modifications of previously shipped items, and different freight classifications may apply, this provision requests an offeror provide the full Uniform Freight Classification (rail) description, or the National Motor Freight Classification description applicable to the supplies. The contracting officer uses this information to determine the proper freight for supplies.

- *FAR 52.247-57, Transportation Transit Privilege Credits.* This clause allows the offeror to identify any transportation charges, including any transit charges, that the offeror will agree to pay, subject to reimbursement by the Government. The contracting officer uses this information to ensure consideration of an offeror's transit credits when evaluating an f.o.b. origin price for shipping supplies to the designated Government destinations.

- *FAR 52.247-60, Guaranteed Shipping Characteristics.* This clause requires the offeror to provide details on the shipping container(s) to be used for each part or component that is packed or packaged separately. The contracting officer uses this information to determine transportation costs for evaluation purposes.

- *FAR 52.247-63, Preference for U.S.-Flag Air Carriers.* In the event that a contractor selects a carrier other than a U.S.-flag air carrier for international air transportation during performance of the contract, this clause requires the contractor to include a statement regarding the unavailability of U.S.-Flag Air Carriers on vouchers involving such transportation. The Government uses the information provided on the

voucher to ensure compliance with section 5 of the International Air Transportation Fair Competitive Practices Act of 1974 (49 U.S.C. 40118), which requires the Government and its contractors and subcontractors to use U.S.-flag air carriers for U.S. Government-financed international air transportation of personnel (and their personal effects) or property, to the extent that service by those carriers is available.

- *FAR 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels.* This clause requires a contractor to provide the contracting officer and the Maritime Administration's one legible copy of rated on-board ocean bill of lading for each shipment made by the contractor or its subcontractors. The Government uses this information to ensure compliance with the Cargo Preference Act of 1954.

- *FAR 52.247-67, Submission of Transportation Documents for Audit.* This clause requires the contractor to submit for prepayment audit transportation documents on which the United States will assume freight charges that were paid by the contractor under a cost-reimbursement contract or by the contractor's first-tier subcontractor (for a cost-reimbursement subcontract). For freight shipment bills under \$100 are to be retained on-site by the contractor and made available for on-site audits. The Government uses this information to conduct a prepayment audit of transportation charges on a cost-reimbursement contract when reimbursement of transportation as a direct charge to the contract or subcontract is authorized. The prepayment audit is required to comply with agency prepayment audit programs established pursuant to 31 U.S.C. 3726.

- *FAR 52.247-68, Report of Shipment (REPSHIP).* This clause requires contractors to send an advance notice of shipment to the consignee transportation officer to be received at least 24 hours before the arrival of the shipment, unless otherwise directed by a contracting officer. The Government uses this information to alert the receiving activity of certain shipments. The advance notice facilitates arrangements for transportation control, labor, space, and use of materials handling equipment at destination. The timely receipt of notices by the consignee transportation office precludes the Government from incurring demurrage and vehicle detention charges.

- *FAR 47.303 Clauses for Standard Delivery Terms.* The following FAR

clauses require the contractor to (as appropriate to the delivery terms specified in the contract): Prepare or provide special annotation on a Government or commercial bill of lading; provide an ocean bill of lading or airway bill; annotate commercial shipping documents; distribute copies of the bill of lading; provide applicable transportation receipts; assist in obtaining documents for exportation or importation destinations; and/or obtain insurance documents. The contracting officer and the Government transportation office use this information in awarding and administering contracts to ensure: (1) Acquisitions are made on the basis most advantageous to the Government; and (2) supplies arrive in good order and condition and on time at the required place.

C. Annual Burden

Respondents: 17,565.

Recordkeepers: 940.

Total Annual Responses: 256,208.

Total Burden Hours: 23,097 (22,079 reporting hours + 1,018 recordkeeping hours).

D. Public Comment

A 60-day notice was published in the **Federal Register** at 86 FR 33293, on June 24, 2021. No comments were received.

Obtaining Copies: Requesters may obtain a copy of the information collection documents from the GSA Regulatory Secretariat Division by calling 202-501-4755 or emailing GSARegSec@gsa.gov. Please cite OMB Control No. 9000-0061, Federal Acquisition Regulation Part 47: Transportation Requirements.

Janet Fry,

Director, Federal Acquisition Policy Division, Office of Governmentwide Acquisition Policy, Office of Acquisition Policy, Office of Governmentwide Policy.

[FR Doc. 2021-19056 Filed 9-2-21; 8:45 am]

BILLING CODE 6820-EP-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention

Notice of Award of Single-Source Cooperative Agreements To Fund the Council of Medical Specialty Societies (CMSS) and the Society for Post-Acute and Long-Term Care Medicine (AMDA)

AGENCY: Centers for Disease Control and Prevention (CDC), Department of Health and Human Services (HHS).

ACTION: Notice.

SUMMARY: The Centers for Disease Control and Prevention (CDC), located within the Department of Health and Human Services (HHS) announces the award of approximately \$26,000,000 in COVID-19 funding to the Council of Medical Specialty Societies (CMSS) and the Society for Post-Acute and Long-Term Care Medicine (AMDA) to address the need to incorporate adult vaccination into the standard of care for subspecialty providers, including occupational health and long term care (LTC), and improve adult vaccination rates.

DATES: The period for this award will be September 30, 2021 through September 29, 2026.

FOR FURTHER INFORMATION CONTACT:

Amy Parker Fiebelkorn, MSN, MPH
CAPT, U.S. Public Health Services,
National Center for Immunization and
Respiratory Diseases, Centers for
Disease Control and Prevention, 1600
Clifton Road NE, MS-H24-8, Atlanta,
GA 30329, Telephone: 800-232-6348,
Email: dez8@cdc.gov.

SUPPLEMENTARY INFORMATION: The single-source awards will increase COVID-19, influenza, and routine adult vaccination coverage in adults with chronic medical conditions, in occupational health clinics, and in adults working and residing in long-term care (LTC) facilities. The Council of Medical Specialty Societies (CMSS) and the Society for Post-Acute and Long-Term Care Medicine (AMDA) will incorporate adult vaccination into the standard of care for subspecialty providers (including occupational health and LTC). CMSS will focus on activities leading to adoption of the Standards for Adult Immunization Practice in its 45 societies, and AMDA will focus on the same with its affiliate organization, the Foundation for Post-Acute and Long-Term Care Medicine. CMSS and AMDA will develop/update vaccine policy statements, develop/promote continuing education on adult immunization for their membership, and award funds to up to 7 subspecialty societies (for CMSS) and to the Foundation (for AMDA) to systematize routine delivery of adult immunizations. The funded subrecipients (*i.e.*, CMSS subspecialty societies and AMDA's Foundation) should also fund staff at the national level and in regional chapters to update vaccination policies and encourage use of adult vaccinations as quality measures. Funded CMSS subspecialty societies and AMDA's Foundation should also contract with 7-10

healthcare systems or 7–10 LTC chains each, respectively, to implement adult immunization quality improvement interventions.

Summary of the Award

Recipient: Council of Medical Specialty Societies (CMSS) and the Society for Post-Acute and Long-Term Care Medicine (AMDA).

Purpose of the Award: The purpose of these awards is to increase COVID–19, influenza, and routine vaccines in adults with chronic medical conditions (e.g., COPD, asthma, diabetes, heart disease, cancer, and renal disease), increase workplace vaccination (occupational health settings), and increase vaccination among adults working and residing in LTCFs through implementation of immunization quality improvement interventions. CMSS will focus on activities leading to adoption of the Standards for Adult Immunization Practice in its 45 societies. AMDA will focus on the same with its affiliate organization, the Foundation for Post-Acute and Long-Term Care Medicine. CMSS and AMDA will develop/update vaccine policy statements, develop/promote continuing education on adult immunization for their membership, and award funds to up to 7 subspecialty societies (for CMSS) and to the Foundation (for AMDA) to systematize routine delivery of adult immunizations. CMSS-funded subspecialty societies and AMDA's Foundation should fund staff at the national level and in regional chapters to update vaccination policies and encourage use of adult vaccinations as quality measures. CMSS subspecialty societies and AMDA's Foundation should also contract with 7–10 healthcare systems or 7–10 LTC chains each, respectively, to implement adult immunization quality improvement interventions.

Amount of Award: \$26,000,000 in Federal Fiscal Year (FFY) 2021 funds, and an estimated total of \$66,000,000 over the five-year period of performance.

Period of Performance: September 30, 2021 through September 29, 2026.

Dated: August 30, 2021.

Joseph I. Hungate III,

Deputy Director, Office of Financial Resources, Office of the Chief Operating Officer, Centers for Disease Control and Prevention.

[FR Doc. 2021–19050 Filed 9–2–21; 8:45 am]

BILLING CODE 4163–18–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention

Humanitarian Exemption Approved for All Afghan Evacuees Subject to CDC's Global Testing Order

AGENCY: Centers for Disease Control and Prevention (CDC), Department of Health and Human Services (HHS).

ACTION: Notice.

SUMMARY: The Centers for Disease Control and Prevention (CDC), located within the Department of Health and Human Services (HHS), announces a blanket humanitarian exemption to the agency's Requirement for Negative Pre-Departure COVID–19 Test Result for individuals relocating to the United States from Afghanistan, including U.S. citizens, lawful permanent residents (LPRs), third country nationals, and Afghans at risk, including Afghan Special Immigrant Visa (SIV) applicants.

DATES: This exemption went into effect on August 15, 2021.

FOR FURTHER INFORMATION CONTACT: Tiffany Brown, Deputy Chief of Staff, Centers for Disease Control and Prevention, 1600 Clifton Road NE, MS H21–10, Atlanta, GA 30329. Phone: 404–639–7000. Email: cdreregulations@cdc.gov.

SUPPLEMENTARY INFORMATION: On January 12, 2021, CDC announced an Order requiring all air passengers arriving to the U.S. from a foreign country to get tested no more than 3 days before their flight departs and to present the negative result or documentation of having recovered from COVID–19 to the airline before boarding the flight.

In August 2021, the U.S. Department of State (DOS) issued a series of Security Alerts for Afghanistan due to increased Taliban activity throughout the country, including the capital of Kabul. In response to a request from DOS on August 15, 2021, CDC and the U.S. Department of Health and Human Services (HHS) granted a blanket humanitarian exemption to CDC's Order to expedite the evacuation of U.S. citizens, lawful permanent residents (LPRs), third country nationals, and Afghans at risk, including Afghan Special Immigrant Visa (SIV) applicants, while adhering to COVID–19 mitigation guidance issued by CDC.

The exemption, which is being administered by DOS and cooperating federal and state agencies, was granted with the following conditions: (1) The CDC Order requiring mask use for

passengers and crew on air conveyances bound for the United States should be followed to the extent possible; (2) all efforts should be made to test and provide test documentation to the traveler at a transit location prior to arrival in the United States that can be presented upon arrival, and if this cannot be done, individuals (travelers) arriving are required to undergo COVID–19 testing immediately upon arrival to the first port of entry in the United States; (3) individuals who test positive are required to isolate prior to continuing on commercial transportation to their final destination; and (4) family members of those testing positive may require adhering to self-quarantine recommendations as stipulated by CDC or state and local health authorities at the arrival location.

In addition, all Afghan evacuees covered by the exemption must also agree to comply with relevant CDC post-travel public health guidance including:

- Watch their health for symptoms of COVID–19. If they become ill during the flight to the United States or while in a U.S. airport, they should immediately report their illness.

- Take all the necessary steps to protect themselves and others during travel, such as wearing a mask to keep their nose and mouth covered when in public settings, including on public transportation and in airports and other transportation hubs until they arrive at their final destination.

- Avoid being around people who are at increased risk for severe illness for 14 days.

- Follow all federal, state, territorial, and local requirements and all other public health measures for preventing community transmission of COVID–19.

Authority: The CDC Director is issuing this Notice pursuant to Sections 361 of the Public Health Service Act, 42 U.S.C. 264, and implementing regulations at 42 CFR 71.20 and 71.31(b).

Dated: August 31, 2021.

Sherri Berger,

Chief of Staff, Centers for Disease Control and Prevention.

[FR Doc. 2021–19089 Filed 9–2–21; 8:45 am]

BILLING CODE 4163–18–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES**Centers for Medicare & Medicaid Services**

[Document Identifier: CMS–10637]

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 October 4, 2021.

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.html>.

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:* Extension of a currently approved collection; *Title of Information Collection:* Marketplace Operations; *Use:* The data collections and third-party disclosure requirements will assist HHS in determining Exchange compliance with Federal standards and monitoring QHP issuers in FFEs for compliance with Federal QHP issuer standards. The data collection will also assist HHS in monitoring Web-brokers for compliance with Federal Web-broker standards. The data collected by health insurance issuers and Exchanges will help to inform HHS, Exchanges, and health insurance issuers as to the participation of individuals, employers, and employees in the individual Exchange, the SHOP, and the premium stabilization programs. *Form Number:* CMS–10637 (OMB control number 0938–1353); *Frequency:* Annually; *Affected Public:* Private sector (Business or other for-profits); *Number of Respondents:* 3,902; *Total Annual Responses:* 3,902; *Total Annual Hours:* 2,336,190. (For policy questions regarding this collection contact: Nikolas Berkobien at 301–492–4400.)

Dated: August 31, 2021.

William N. Parham, III,
Director, Paperwork Reduction Staff, Office of Strategic Operations and Regulatory Affairs.

[FR Doc. 2021–19142 Filed 9–2–21; 8:45 am]

BILLING CODE 4120–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES**Food and Drug Administration**

[Docket No. FDA–2019–N–3402]

Advisory Committee; National Mammography Quality Assurance Advisory Committee; Renewal**AGENCY:** Food and Drug Administration, Health and Human Services (HHS).**ACTION:** Notice; renewal of advisory committee.

SUMMARY: The Food and Drug Administration (FDA) is announcing the renewal of the National Mammography Quality Assurance Advisory Committee by the Commissioner of Food and Drugs (the Commissioner). The Commissioner has determined that it is in the public interest to renew the National Mammography Quality Assurance Advisory Committee for an additional 2 years beyond the charter expiration date. The new charter will be in effect until July 7, 2023, expiration date.

DATES: Authority for the National Mammography Quality Assurance Advisory Committee will expire on July 7, 2023, unless the Commissioner formally determines that renewal is in the public interest.

FOR FURTHER INFORMATION CONTACT: Aden Asefa, Office of Management, Center for Devices and Radiological Health, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 66, Rm. 5214, Silver Spring, MD 20993–0002, 301–796–0400, email: aden.asefa@fda.hhs.gov.

SUPPLEMENTARY INFORMATION: Pursuant to 41 CFR 102–3.65 and approval by the Department of Health and Human Services pursuant to 45 CFR part 11 and by the General Services Administration, FDA is announcing the renewal of the National Mammography Quality Assurance Advisory Committee (the Committee). The committee is a non-discretionary Federal advisory committee established to provide advice to the Commissioner.

The Commissioner is charged with the administration of the Federal Food, Drug and Cosmetic Act and various provisions of the Public Health Service Act. The Mammography Quality Standards Act of 1992 amends the Public Health Service Act to establish national uniform quality and safety standards for mammography facilities. The National Mammography Quality Assurance Advisory Committee advises the Secretary and, by delegation, the Commissioner or designee in discharging their responsibilities with

respect to establishing a mammography facilities certification program. The Committee shall advise the HHS Secretary and the Commissioner or designee on:

(A) Developing appropriate quality standards and regulations for mammography facilities;

(B) Developing appropriate standards and regulations for bodies accrediting mammography facilities under this program;

(C) Developing regulations with respect to sanctions;

(D) Developing procedures for monitoring compliance with standards;

(E) Establishing a mechanism to investigate consumer complaints;

(F) Reporting new developments concerning breast imaging which should be considered in the oversight of mammography facilities;

(G) Determining whether there exists a shortage of mammography facilities in rural and health professional shortage areas and determining the effects of personnel on access to the services of such facilities in such areas;

(H) Determining whether there will exist a sufficient number of medical physicists after October 1, 1999; and

(I) Determining the costs and benefits of compliance with these requirements.

The Committee shall consist of a core of 15 members, including the Chair. Members and the Chair are selected by the Commissioner or designee from among physicians, practitioners, and other health professionals, whose clinical practice, research specialization, or professional expertise includes a significant focus on mammography. Members will be invited to serve for overlapping terms of up to 4 years. Almost all members of this committee serve as Special Government Employees. The core of voting members shall include at least four individuals from among national breast cancer or consumer health organizations with expertise in mammography, and at least two practicing physicians who provide mammography services. In addition to the voting members, the Committee shall include two nonvoting industry representative members who have expertise in mammography equipment. The Committee may include one technically qualified member, selected by the Commissioner or designee, who is identified with consumer interests.

Further information regarding the most recent charter and other information can be found at <https://www.fda.gov/AdvisoryCommittees/CommitteesMeetingMaterials/Radiation-EmittingProducts/NationalMammographyQualityAssuranceAdvisoryCommittee/>

[ucm520365.htm](https://www.fda.gov/oc/ucm520365.htm) or by contacting the Designated Federal Officer (see **FOR FURTHER INFORMATION CONTACT**). In light of the fact that no change has been made to the committee name or description of duties, no amendment will be made to 21 CFR 14.100.

This notice is issued under the Federal Advisory Committee Act (5 U.S.C. app.). For general information related to FDA advisory committees, please visit us at <https://www.fda.gov/AdvisoryCommittees/default.htm>.

Dated: August 31, 2021.

Lauren K. Roth,

Acting Principal Associate Commissioner for Policy.

[FR Doc. 2021-19108 Filed 9-2-21; 8:45 am]

BILLING CODE 4164-01-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA-2014-D-0609]

Agency Information Collection Activities; Proposed Collection; Comment Request; Drug Supply Chain Security Act Implementation

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice.

SUMMARY: The Food and Drug Administration (FDA or Agency) is announcing an opportunity for public comment on the proposed collection of certain information by the Agency. 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 of an existing collection of information, and to allow 60 days for public comment in response to the notice. This notice solicits comments on information collection associated with the Federal Food, Drug, and Cosmetic Act (FD&C Act).

DATES: Submit either electronic or written comments on the collection of information by November 2, 2021.

ADDRESSES: You may submit comments as follows. Please note that late, untimely filed comments will not be considered. Electronic comments must be submitted on or before November 2, 2021. The <https://www.regulations.gov> electronic filing system will accept comments until 11:59 p.m. Eastern Time at the end of November 2, 2021. Comments received by mail/hand delivery/courier (for written/paper

submissions) will be considered timely if they are postmarked or the delivery service acceptance receipt is on or before that date.

Electronic Submissions

Submit electronic comments in the following way:

- **Federal eRulemaking Portal:** <https://www.regulations.gov>. Follow the instructions for submitting comments. Comments submitted electronically, including attachments, to <https://www.regulations.gov> will be posted to the docket unchanged. Because your comment will be made public, you are solely responsible for ensuring that your comment does not include any confidential information that you or a third party may not wish to be posted, such as medical information, your or anyone else's Social Security number, or confidential business information, such as a manufacturing process. Please note that if you include your name, contact information, or other information that identifies you in the body of your comments, that information will be posted on <https://www.regulations.gov>.

- If you do not wish to submit a comment with confidential information that you do not wish to be made available to the public, submit the comment as a written/paper submission and in the manner detailed (see "Written/Paper Submissions" and "Instructions").

Written/Paper Submissions

Submit written/paper submissions as follows:

- **Mail/Hand Delivery/Courier (for written/paper submissions):** Dockets Management Staff (HFA-305), Food and Drug Administration, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.

- For written/paper comments submitted to the Dockets Management Staff, FDA will post your comment, as well as any attachments, except for information submitted, marked and identified, as confidential, if submitted as detailed in "Instructions."

Instructions: All submissions received must include the Docket No. FDA-2014-D-0609 for "Agency Information Collection Activities; Proposed Collection; Comment Request; Drug Supply Chain Security Act Implementation." Received comments, those filed in a timely manner (see **ADDRESSES**), will be placed in the docket and, except for those submitted as "Confidential Submissions," publicly viewable at <https://www.regulations.gov> or at the Dockets Management Staff between 9 a.m. and 4 p.m., Monday through Friday, 240-402-7500.

- **Confidential Submissions—**To submit a comment with confidential

information that you do not wish to be made publicly available, submit your comments only as a written/paper submission. You should submit two copies total. One copy will include the information you claim to be confidential with a heading or cover note that states “THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION.” The Agency will review this copy, including the claimed confidential information, in its consideration of comments. The second copy, which will have the claimed confidential information redacted/blacked out, will be available for public viewing and posted on <https://www.regulations.gov>. Submit both copies to the Dockets Management Staff. If you do not wish your name and contact information to be made publicly available, you can provide this information on the cover sheet and not in the body of your comments and you must identify this information as “confidential.” Any information marked as “confidential” will not be disclosed except in accordance with 21 CFR 10.20 and other applicable disclosure law. For more information about FDA’s posting of comments to public dockets, see 80 FR 56469, September 18, 2015, or access the information at: <https://www.govinfo.gov/content/pkg/FR-2015-09-18/pdf/2015-23389.pdf>.

Docket: For access to the docket to read background documents or the electronic and written/paper comments received, go to <https://www.regulations.gov> and insert the docket number, found in brackets in the heading of this document, into the “Search” box and follow the prompts and/or go to the Dockets Management Staff, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852, 240-402-7500.

FOR FURTHER INFORMATION CONTACT: Domini Bean, Office of Operations, Food and Drug Administration, Three White Flint North, 10A-12M, 11601 Landsdown St., North Bethesda, MD 20852, 301-796-5733, PRASStaff@fda.hhs.gov.

SUPPLEMENTARY INFORMATION: Under the PRA (44 U.S.C. 3501–3521), Federal Agencies must obtain approval from the Office of Management and Budget (OMB) for each collection of information they conduct or sponsor. “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 provide a 60-day notice in the **Federal Register** concerning each

proposed collection of information, including each proposed extension of an existing collection of information, before submitting the collection to OMB for approval. To comply with this requirement, FDA is publishing notice of the proposed collection of information set forth in this document.

With respect to the following collection of information, FDA invites comments on these topics: (1) Whether the proposed collection of information is necessary for the proper performance of FDA’s functions, including whether the information will have practical utility; (2) the accuracy of FDA’s estimate of the burden of the proposed collection of information, 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 respondents, including through the use of automated collection techniques, when appropriate, and other forms of information technology.

Drug Supply Chain Security Act Implementation

OMB Control Number 0910-0806—Revision

This information collection helps to support implementation of section 582 of the Federal Food, Drug, and Cosmetic Act (FD&C Act) (21 U.S.C. 360eee-1). Enacted in 2013, the Drug Supply Chain Security Act (DSCSA) (Title II of Pub. L. 113-54) amended section 582 of the FD&C Act and outlines steps to build an electronic, interoperable system to identify and trace certain prescription drugs as they are distributed in the United States. The DSCSA is intended to enhance FDA’s ability to help protect consumers from exposure to drugs that may be counterfeit, stolen, contaminated, or otherwise harmful. Respondents to the information collection are manufacturers, wholesalers, dispensers, and repackagers, as defined in section 581 of the FD&C Act (21 U.S.C. 360eee), of pharmaceutical drug products.

To assist respondents with statutory requirements set forth in section 582 pertaining to notifications of illegitimate products or products with a high risk of illegitimacy, we developed Form FDA 3911 entitled “Drug Notification” along with the corresponding instructional document “INSTRUCTIONS FOR COMPLETION OF FORM FDA 3911—DRUG NOTIFICATION.” Form FDA 3911 and the instructions are available from, and may be completed using, our website at [*drug-supply-chain-security-act-dscsa/drug-notifications-frequently-asked-questions*. Form FDA 3911 is intended to facilitate notifications governed by section 582 by providing a uniform format for initial notifications, followup notifications, and requests for the termination of a notification.](https://www.fda.gov/drugs/</p>
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Section 582 of the FD&C Act also provides for FDA issuance of guidance documents to facilitate implementation of the DSCSA. To that end, we continue to develop guidance documents to assist respondents with information collection provisions set forth in section 582. The procedural guidance document entitled “Drug Supply Chain Security Act Implementation: Identification of Suspect Product and Notification” (June 2021; available at: <https://www.fda.gov/regulatory-information/search-fda-guidance-documents/drug-supply-chain-security-act-implementation-identification-suspect-product-and-notification>) is intended to assist respondents in identifying suspect products, as defined at section 581, and with terminating notifications of illegitimate product or products with a high risk of illegitimacy. As explained in the guidance document, beginning January 1, 2015, certain trading partners (*i.e.*, manufacturers, repackagers, wholesale distributors, or dispensers), upon determining that a product in their possession or control is a suspect product, must quarantine the product while they promptly conduct an investigation to determine whether the product is an illegitimate product, must notify FDA if they determine that the product is illegitimate product, and must notify certain trading partners of the illegitimate product as prescribed by section 582. Manufacturers must also notify FDA and certain immediate trading partners after determining that a product in their possession or control has a high risk of being illegitimate product.

Similarly, we developed the draft guidance document “Waivers, Exceptions, and Exemptions From the Requirements of Section 582 of the Federal Food, Drug, and Cosmetic Act” (May 2018; available at: <https://www.fda.gov/regulatory-information/search-fda-guidance-documents/waivers-exceptions-and-exemptions-requirements-section-582-federal-food-drug-and-cosmetic-act>). The draft guidance explains Agency established processes by which: (1) A trading partner may request a waiver from certain requirements in section 582 if it would result in an undue economic hardship or for emergency medical reasons; (2) a manufacturer or repackager may request an exception to

the section 582 requirements related to product identifiers if a product is packaged in a container too small or otherwise unable to accommodate a label with sufficient space to bear the required information; and (3) FDA may determine other products or transactions that shall be exempt from requirements of section 582.

FDA has recently published the draft guidance document “Enhanced Drug Distribution Security at the Package Level Under the Drug Supply Chain Security Act” (June 2021; available at: <https://www.fda.gov/regulatory-information/search-fda-guidance-documents/enhanced-drug-distribution-security-package-level-under-drug-supply-chain-security-act>). The draft guidance clarifies the enhanced system requirements listed in section 582(g)(1) of the FD&C Act. This draft guidance also outlines and provides recommendations on the system attributes necessary for enabling the secure tracing of product at the package level, including allowing for the use of verification, inference, and aggregation, as necessary. FDA has also published a draft guidance document entitled “DSCSA Standards for the Interoperable Exchange of Information for Tracing of Certain Human, Finished, Prescription Drugs: How to Exchange Product Tracing Information” (November 2014;

available at: <https://www.fda.gov/regulatory-information/search-fda-guidance-documents/dscsa-standards-interoperable-exchange-information-tracing-certain-human-finished-prescription-drugs>). This draft guidance establishes initial standards for the interoperable exchange of product tracing information, in paper or electronic format, for compliance with sections 582(a) through (e) of the FD&C Act.

Two additional guidance documents help to further explain the statutory requirements of section 582. The “Product Identifiers under the Drug Supply Chain Security Act—Questions and Answers” guidance for industry (June 2021; available at: <https://www.fda.gov/regulatory-information/search-fda-guidance-documents/product-identifiers-under-drug-supply-chain-security-act-questions-and-answers>) is intended to address anticipated questions regarding product identifiers that are required under section 582 for packages and homogenous cases of certain drug products. The “Verification Systems Under the Drug Supply Chain Security Act for Certain Prescription Drugs” draft guidance (October 2018; available at <https://www.fda.gov/regulatory-information/search-fda-guidance-documents/verification-systems-under->

[drug-supply-chain-security-act-certain-prescription-drugs](https://www.fda.gov/regulatory-information/search-fda-guidance-documents/drug-supply-chain-security-act-certain-prescription-drugs)) provides recommendations for a robust verification system for the determination, quarantine, and investigation of suspect products, as well as the quarantine, notification, and disposition of illegitimate products. The guidance also addresses FDA’s recommendation that trading partners submit cleared product notifications. Finally, the guidance addresses the statutory requirements for verification, including verification of saleable returns, at the package level for product identifiers on packages and homogenous cases intended to be introduced in a transaction into commerce.

FDA guidance documents are issued consistent with requirements found in section 582, as well as our Good Guidance Practice regulations found in 21 CFR 10.115, which provide for public comment at any time. In addition, since enactment of the DSCSA, our Center for Drug Evaluation and Research has developed and continues to maintain a website communicating DSCSA implementation activity, including relevant resources at: <https://www.fda.gov/drugs/drug-supply-chain-integrity/drug-supply-chain-security-act-dscsa>.

We estimate the burden of this collection of information as follows:

TABLE 1—ESTIMATED ANNUAL REPORTING BURDEN—NOTIFICATIONS TO FDA ¹

Type of respondent	Number of respondents	Number of responses per respondent	Total annual responses	Average time per response	Total hours
Manufacturers and Repackagers	100	1	100	1	100
Wholesale Distributors	138	1	138	1	138
Dispenser	12	1	12	1	12
Total			250		250

¹ There are no capital costs or operating and maintenance costs associated with this collection of information.

TABLE 2—ESTIMATED ANNUAL THIRD-PARTY DISCLOSURE BURDEN FOR NOTIFICATIONS TO TRADING PARTNERS OF AN ILLEGITIMATE PRODUCT ¹

Type of respondent	Number of respondents	Number of disclosures per respondent	Total disclosures	Average time per disclosure	Total hours
Manufacturers and Repackagers	100	30	3,000	* 0.20	600
Wholesale Distributors	138	1,175	162,150	* 0.20	32,430
Dispensers	12	2	24	* 0.20	5
Total			165,174		33,035

¹ There are no capital costs or operating and maintenance costs associated with this collection of information.

* (12 minutes.)

TABLE 3—ESTIMATED ANNUAL REPORTING BURDEN FOR CONSULTATION WITH FDA AND TERMINATION OF NOTIFICATION ¹

Type of respondent	Number of respondents	Number of responses per respondent	Total annual responses	Average time per response	Total hours
Manufacturers and Repackagers	100	1	100	1	100
Wholesale Distributors	138	1	138	1	138
Dispensers	12	1	12	1	12
Total			250		250

¹ There are no capital costs or operating and maintenance costs associated with this collection of information.

TABLE 4—ESTIMATED ANNUAL THIRD-PARTY DISCLOSURE BURDEN FOR NOTIFICATIONS TO TRADING PARTNERS OF AN ILLEGITIMATE PRODUCT TERMINATION ¹

Type of respondent	Number of respondents	Number of disclosures per respondent	Total disclosures	Average time per disclosure	Total hours
Manufacturers and Repackagers	100	30	3,000	* 0.20	600
Wholesale Distributors	138	1,175	162,150	* 0.20	32,430
Dispensers	12	2	24	* 0.20	5
Total			165,174		33,035

¹ There are no capital costs or operating and maintenance costs associated with this collection of information.

* (12 minutes.)

TABLE 5—ESTIMATED ANNUAL REPORTING BURDEN FOR REQUESTS FOR WAIVERS, EXCEPTIONS, OR EXEMPTIONS ¹

Type of respondent	Number of respondents	Number of responses per respondent	Total annual responses	Average time per response	Total hours
Requests to FDA for a Waiver, Exception, or Exemption ...	20	1	20	80	1,600
Notifications to FDA of a Material Change in Circumstances Warranting the Waiver, Exception, or Exemption	1	1	1	16	16
Requests to FDA to Renew a Waiver, Exception, or Exemption	1	1	1	16	16
Total			22		1,632

¹ There are no capital costs or operating and maintenance costs associated with this collection of information.

Based on illegitimate product notifications already received, we estimate a total of 250 respondents to the information collection. Our database for establishment and drug product listing suggests that many companies perform activities of both manufacturers and repackagers and therefore we have combined our estimated number of respondent manufacturers and repackagers. In addition, because statutory provisions specifically define “dispensers” to include retail pharmacies, hospital pharmacies, and groups of chain pharmacies, our estimate of the number of dispensers is intended to reflect the overall estimated number of respondents we believe to be subject to the requirements under section 582(d) of the FD&C Act. Because manufacturers, repackagers, and wholesale distributors are collectively responsible for prescription drugs from the point of manufacturing through distribution in the drug supply chain,

we assume that these three trading partners submit most notifications of illegitimate products. Upon evaluation of those notifications received in fiscal year (FY) 2020 and, thus far, in FY 2021, we assume those 250 respondents are comprised of 40 percent manufacturers (100), 55 percent wholesale distributors (138), and 5 percent pharmacies (12). We assume that annual notifications will vary from zero to two for manufacturers and repackagers, as well as from pharmacies, but that most of companies will make no notifications. Although our establishment and drug product listing database currently reflects approximately 1,400 manufacturers and repackagers, we estimate only 100 manufacturers and repackagers will notify us of illegitimate products an average of one time per year.

Relying on data from the National Association of Chain Drug Stores, the National Community Pharmacists

Association, and the American Hospital Association, we assume there are approximately 67,000 pharmacy sites in the United States. Based on a review of data, we estimate 12 pharmacies will notify FDA of illegitimate product an average of 1 time per year.

According to the Healthcare Distribution Alliance (formerly known as Healthcare Distribution Management Association), approximately 30 wholesale distributors are responsible for over 90 percent of drug distributions. Based on sales, and because FDA is estimating that over 1,570 small wholesale distributors may be responsible for the remaining 10 percent of drug sales, we estimate that wholesale distributors will be responsible for making approximately an average of 1 notification per year to account for the estimated 138 notifications that FDA will receive regarding illegitimate product. We

assume wholesale distributors will expend 1 hour for each notification.

Because the extent of distribution of any illegitimate product will vary, we assume a wide distribution for each illegitimate product for purposes of establishing our burden estimate. We estimate that, for each notification that a manufacturer or repackager makes to FDA, the manufacturer or repackager will notify approximately 30 trading partners (relying on the number of distributors). This formula results in approximately 3,000 notifications annually to trading partners of manufacturers and repackagers. This estimate includes the notifications by manufacturers and repackagers who have determined that an illegitimate product is in their possession or control, as well as notifications by manufacturers who have determined that a product poses a high risk of illegitimacy.

We assume that a large wholesale distributor may have up to 4,500 trading partners, where a small wholesale distributor may have 200 trading partners, averaging approximately 2,350. We had originally estimated that a wholesale distributor would notify all 2,350 trading partners for each of the illegitimate products identified. However, as a result of our experience with the collection and informal feedback from industry, we have lowered our estimate to reflect that 138 respondents will make 1,175 disclosures for a total of 162,150 disclosures annually and that each disclosure will require approximately 12 minutes, for a total of 32,430 hours annually.

We estimate that a pharmacy purchases prescription drugs from an average of two wholesale distributors. Therefore, a pharmacy would notify 2 trading partners for each of the 12 illegitimate products identified. This estimate results in approximately 24 notifications annually to pharmacy trading partners.

We estimate that the burden for notifying trading partners of an illegitimate product and the number of trading partners notified will be the same as the estimates for notification of termination. The estimated total burden hours to notify trading partners that the notification is terminated is approximately 33,035 hours annually.

We assume a comparable amount of time is required to provide the information necessary for requesting to terminate a notification. The time required to investigate and resolve an illegitimate product notification will vary, but we assume that each notification will eventually be terminated. We assume that the number

of requests for termination of a notification per year will be the same as the original number of notifications for a given year. The estimated total burden hours to make requests for termination of notifications to FDA is 250 hours annually.

Based on communications we have had with trading partners and stakeholders since the 2013 enactment of the DSCSA, we estimate that 20 trading partners or stakeholders will submit approximately 20 requests for a waiver, an exception, or an exemption. Also based on feedback from industry stakeholders, we estimate that respondents will expend an average of 80 hours to prepare and submit each request and to submit any additional followup information that we may request. We estimate the total burden as approximately 1,600 hours.

We estimate that we will receive from approximately one respondent approximately one notification or other information informing us that there has or has not been a material change in the circumstances that warranted the waiver, exception, or exemption and that each notification will require approximately 16 hours to prepare and submit to us. We estimate the total burden as approximately 16 hours.

We estimate that we will receive approximately one renewal request from approximately one respondent and that each request will require approximately 16 hours to prepare and submit to us. We estimate the total burden as approximately 16 hours.

Our estimated burden for the information collection reflects an overall increase of 56,116 hours and a corresponding increase of 271,638 responses annually. We attribute this adjustment to an increase in the number of illegitimate product notification submissions we received in the last couple of years and the number of such submissions we have received so far this fiscal year.

Dated: August 25, 2021.

Lauren K. Roth,

Acting Principal Associate Commissioner for Policy.

[FR Doc. 2021-19061 Filed 9-2-21; 8:45 am]

BILLING CODE 4164-01-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA-2012-N-0536]

Agency Information Collection Activities; Submission for Office of Management and Budget Review; Comment Request; Medical Device User Fee Cover Sheet, Form FDA 3601 and Device Facility User Fee Cover Sheet, Form FDA 3601a

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice.

SUMMARY: The Food and Drug Administration (FDA, Agency, or we) is announcing that a proposed collection of information has been submitted to the Office of Management and Budget (OMB) for review and clearance under the Paperwork Reduction Act of 1995.

DATES: Submit written comments (including recommendations) on the collection of information by October 4, 2021.

ADDRESSES: To ensure that comments on the information collection are received, OMB recommends that written comments be submitted to <https://www.reginfo.gov/public/do/PRAMain>. Find this particular information collection by selecting “Currently under Review—Open for Public Comments” or by using the search function. The OMB control number for this information collection is 0910-0511. Also include the FDA docket number found in brackets in the heading of this document.

FOR FURTHER INFORMATION CONTACT:

Amber Sanford, Office of Operations, Food and Drug Administration, Three White Flint North, 10A-12M, 11601 Landsdown St., North Bethesda, MD 20852, 301-796-8867, PRAStaff@fda.hhs.gov.

SUPPLEMENTARY INFORMATION: In compliance with 44 U.S.C. 3507, FDA has submitted the following proposed collection of information to OMB for review and clearance.

Medical Device User Fee Cover Sheet, Form FDA 3601 and Device Facility User Fee Cover Sheet, Form FDA 3601a

OMB Control Number 0910-0511—Revision

The Federal Food, Drug, and Cosmetic Act, as amended by the Medical Device User Fee and Modernization Act of 2002 (Pub. L. 107-250), and the Medical Device User Fee Amendments of 2007 (Title II of the Food and Drug

Administration Amendments Act of 2007), authorizes FDA to collect user fees for certain medical device applications. Under this authority, companies pay a fee for certain new medical device applications or supplements submitted to the Agency for review. Because the submission of user fees concurrently with applications and supplements is required, the review of an application cannot begin until the fee is submitted. Form FDA 3601, the “Medical Device User Fee Cover Sheet,” is designed to provide the minimum necessary information to determine whether a fee is required for review of an application, to determine the amount of the fee required, and to account for and track user fees. The form provides a cross-reference between the fees submitted for an application with the actual submitted application by using a unique number tracking system. The information collected is used by FDA’s Center for Devices and Radiological Health and FDA’s Center for Biologics Evaluation and Research to initiate the administrative screening of new medical device applications and supplemental applications.

We are revising the information collection to add Form FDA 3601a, the “Device Facility User Fee Cover Sheet.” Owners or operators of places of business (also called establishments or facilities) that are involved in the production and distribution of medical devices intended for use in the United States are required to register annually with FDA, a process known as establishment registration (21 CFR part 807, subparts A through D). (The information collection for medical device establishment registration and listing is approved under OMB control number 0910–0625.) All establishments required to register must pay a user fee. Form FDA 3601a, the “Device Facility User Fee Cover Sheet,” is designed to collect payments for the annual establishment registration fee for medical device establishments.

The total number of annual responses for Form FDA 3601 is based on the average number of cover sheet submissions received by FDA in recent years. The number of received annual responses includes cover sheets for applications that were qualified for small businesses and fee waivers or

reductions. The estimated hours per response are based on past FDA experience with the various cover sheet submissions and range from 5 to 30 minutes. For this analysis, we estimate 18 minutes per coversheet.

The total number of annual responses for Form FDA 3601a is based on the average number of cover sheet submissions received by FDA in recent years. Based on past FDA experience with various cover sheet submissions, we estimate 10 minutes per response.

In the **Federal Register** of June 12, 2020 (85 FR 35939), FDA published a 60-day notice requesting public comment on the proposed collection of information. Although two comments were received, only one was responsive to the four collection of information topics solicited.

FDA’s response to the comment is that the establishment registration fee is not eligible for a reduced small business fee. This can be found on our website at: <https://www.fda.gov/medical-devices/how-study-and-market-your-device/device-registration-and-listing>.

FDA estimates the burden of this collection of information as follows:

TABLE 1—ESTIMATED ANNUAL REPORTING BURDEN^{1 2}

FDA Form No.	Number of respondents	Number of responses per respondent	Total annual responses	Average burden per response	Total hours
3601	6,182	1	6,182	0.30 (18 minutes)	1,855
3601a	24,086	1	24,086	0.17 (10 minutes)	4,095
Total .....	.....	.....	30,268	.....	5,950

¹ There are no capital costs or operating and maintenance costs associated with this collection of information.

² Numbers have been rounded.

Our estimated burden for the information collection reflects an overall increase of 4,036 hours and a corresponding increase of 23,889 responses/records. We attribute these increases to two factors: We have revised the burden estimate to include Form FDA 3601a and we have adjusted the number of respondents for Form FDA 3601 to reflect our current data.

Dated: August 31, 2021.

Lauren K. Roth,

Acting Principal Associate Commissioner for Policy.

[FR Doc. 2021–19113 Filed 9–2–21; 8:45 am]

BILLING CODE 4164–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2018–N–1857]

Agency Information Collection Activities; Submission for Office of Management and Budget Review; Comment Request; Current Good Manufacturing Practice, Hazard Analysis, and Risk-Based Preventive Controls for Human Food, and Current Good Manufacturing Practice, Hazard Analysis, and Risk-Based Preventive Controls for Food for Animals

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice.

SUMMARY: The Food and Drug Administration (FDA, Agency, or we) is announcing that a proposed collection

of information has been submitted to the Office of Management and Budget (OMB) for review and clearance under the Paperwork Reduction Act of 1995.

DATES: Submit written comments (including recommendations) on the collection of information by October 4, 2021.

ADDRESSES: To ensure that comments on the information collection are received, OMB recommends that written comments be submitted to <https://www.reginfo.gov/public/do/PRAMain>. Find this particular information collection by selecting “Currently under Review—Open for Public Comments” or by using the search function. The OMB control number for this information collection is 0910–0751. Also include the FDA docket number found in brackets in the heading of this document.

FOR FURTHER INFORMATION CONTACT: Domini Bean, Office of Operations, Food and Drug Administration, Three White Flint North, 10A–12M, 11601 Landsdown St., North Bethesda, MD 20852, 301–796–5733, PRASStaff@fda.hhs.gov.

SUPPLEMENTARY INFORMATION: In compliance with 44 U.S.C. 3507, FDA has submitted the following proposed collection of information to OMB for review and clearance.

Current Good Manufacturing Practice and Hazard Analysis, and Risk-Based Preventive Controls for Human Food—21 CFR Part 117; Current Good Manufacturing Practice and Hazard Analysis, and Risk-Based Preventive Controls for Food for Animals—21 CFR Part 507

OMB Control Number 0910–0751—Revision

This information collection supports FDA regulations setting forth criteria and definitions applicable to human food and to animal food, as established under the FDA Food Safety and Modernization Act (FSMA) (Pub. L. 111–353). Congress enacted FSMA in response to dramatic changes in the global food system and in our understanding of foodborne illness and its consequences, including the realization that preventable foodborne illness is both a significant public health problem and a threat to the economic well-being of the food system. The purpose of the regulations is to prevent the introduction of adulterated and/or misbranded products into the marketplace and ensure the safety of

both human foods and animal food in accordance with sections 402 and 403 of the Federal Food, Drug, and Cosmetic Act (FD&C Act) (21 U.S.C. 342 and 343). Generally, domestic and foreign food facilities that are required to register in accordance with section 415 of the FD&C Act (21 U.S.C. 350d) must comply with these requirements, unless an exemption applies. It is important to note, however, that applicability of the current good manufacturing practice requirements for animal food is dependent upon whether a facility is required to register, while the applicability of the current good manufacturing practice requirements for human food is not dependent upon whether a facility is required to register. Regulations governing human food are set forth in part 117 (21 CFR part 117), while regulations governing animal food are found in part 507 (21 CFR part 507). Respondents to the information collection are those who manufacture, prepare, pack, or hold food intended for humans or animals.

The regulations include recordkeeping necessary to demonstrate compliance with the requirements; however, respondents that meet the definition of a “qualified facility,” under 21 CFR 117.3 and 507.3, are subject to reporting. To be subject to the modified requirements set forth in part 117, subpart D and part 507, subpart A for human food and animal food, respectively, respondents must attest to their status. To assist respondents in this regard, we have developed Forms FDA 3942a (Quality Facility Attestation: Human Food) and 3942b (Quality Facility Attestation: Animal Food),

available for downloading from our website at: <https://www.fda.gov/food/registration-food-facilities-and-other-submissions/qualified-facility-attestation>.

Section 418(l)(2)(B)(ii) of the FD&C Act (21 U.S.C. 350g(l)(2)(B)(ii)) directs us to issue guidance on documentation required to determine status as a qualified facility. Accordingly, we issued a guidance for industry entitled “Determination of Status as a Qualified Facility Under part 117: Current Good Manufacturing Practice, Hazard Analysis, and Risk-Based Preventive Controls for Human Food and part 507: Current Good Manufacturing Practice, Hazard Analysis, and Risk-Based Preventive Controls for Food for Animals,” also available for downloading from our website at: <https://www.fda.gov/regulatory-information/search-fda-guidance-documents/guidance-industry-determination-status-qualified-facility>. The guidance discusses the content, format, frequency, and timing of submissions. For efficiency of Agency operations, we are now accounting for burden we attribute to reporting associated with Forms FDA 3942a and 3942b, currently approved under OMB control number 0910–0854, with this information collection.

In the **Federal Register** of March 16, 2021 (86 FR 14436), we published a 60-day notice requesting public comment on the proposed collection of information. No comments were received.

We estimate the burden of this collection of information as follows:

TABLE 1—ESTIMATED ANNUAL REPORTING BURDEN ¹

21 CFR section; reporting	Number of respondents	Number of responses per respondent	Total annual responses	Average burden per response	Total hours
117.201(c); qualified facility as reported on Form FDA 3942a.	37,134	² 0.5	18,567	0.5 (30 minutes)	9,284
507.7(c); qualified facility as reported on Form FDA 3942b.	1,120	0.5	560	0.5 (30 minutes)	280
Total .....	.....	.....	.....	.....	9,564

¹ There are no capital costs or operating and maintenance costs associated with this collection of information.

² Reporting occurs biennially.

TABLE 2—ESTIMATED ANNUAL RECORDKEEPING BURDEN: HUMAN FOODS ¹

21 CFR section; activity	Number of recordkeepers	Number of records per recordkeeper	Total annual records	Average burden per recordkeeping	Total hours
117.126(c) and 117.170(d); food safety plan and reanalysis.	46,685	1	46,685	110	5,135,350
117.136; assurance records	16,285	1	16,285	0.25 (15 minutes)	4,071
117.145(c); monitoring records	8,143	730	5,944,390	0.05 (3 minutes)	297,220

TABLE 2—ESTIMATED ANNUAL RECORDKEEPING BURDEN: HUMAN FOODS ¹—Continued

21 CFR section; activity	Number of recordkeepers	Number of records per recordkeeper	Total annual records	Average burden per recordkeeping	Total hours
117.150(d); corrective actions and corrections records.	16,285	2	32,570	1	32,570
117.155(b); verification records	8,143	244	1,986,892	0.05 (3 minutes)	99,345
117.160; validation records	3,677	6	22,062	0.25 (15 minutes)	5,515
117.475(c)(7)–(9); supplier records.	16,285	10	162,850	4	651,400
117.180(d); training records for preventive controls qualified individual.	46,685	1	46,685	0.25 (15 minutes)	11,671
Total .....	.....	.....	.....	.....	6,237,142

¹ There are no capital costs or operating and maintenance costs associated with this collection of information.

TABLE 3—ESTIMATED ANNUAL RECORDKEEPING BURDEN: ANIMAL FOOD ¹

21 CFR section; activity	Number of recordkeepers	Number of records per recordkeeper	Total annual records	Average burden per recordkeeping	Total hours ²
Subpart A—General Provisions					
507.4(d); documentation of animal food safety and hygiene training.	7,469	0.75	5,579	0.05 (3 minutes)	279
Subpart C—Hazard Analysis and Risk-Based Preventive Controls					
507.31 through 507.55; food safety plan—including hazard analysis, preventive controls, and procedures for monitoring, corrective actions, verification, recall plan, validation, reanalysis, modifications, and implementation records.	7,469	519	3,876,411	0.1 (6 minutes)	387,641
Subpart E—Supply Chain Program					
507.105 through 507.175; written supply-chain program—including records documenting program.	7,469	519	3,876,411	0.1 (6 minutes)	387,641
Subpart F—Requirements Applying to Records That Must Be Established and Maintained					
507.200 through 507.215; general requirements, additional requirements applying to food safety plan, requirements for record retention, use of existing records, and special requirements applicable to written assurance.	7,469	519	3,876,411	0.1 (6 minutes)	387,641
Total .....	.....	.....	11,635,372	.....	1,163,258

¹ There are no capital costs or operating and maintenance costs associated with this collection of information.

² Total hours have been rounded.

TABLE 4—ESTIMATED ANNUAL THIRD-PARTY DISCLOSURE BURDEN: HUMAN FOODS ¹

21 CFR section; activity	Number of respondents	Number of disclosures per respondent	Total annual disclosures	Average burden per disclosure	Total hours
117.201(e); disclosure of food manufacturing facility address.	37,134	1	37,134	0.25 (15 minutes)	9,284

¹ There are no capital costs or operating and maintenance costs associated with this collection of information.

TABLE 5—ESTIMATED ANNUAL THIRD-PARTY DISCLOSURE BURDEN: ANIMAL FOOD ¹

21 CFR section; activity	Number of respondents	Number of disclosures per respondent	Total annual disclosures	Average burden per disclosure	Total hours
507.27(b); labeling for the animal food product contains the specific information and instructions needed so the food can be safely used for the intended animal species.	330	10	3,300	0.25 (15 minutes)	825
507.7(e)(1); change labels on products with labels.	1,120	4	4,480	1	4,480
507.7(e)(2); change address on labeling (sales documents) for qualified facilities.	974	1	974	1	974
507.25(a)(2); animal food, including raw materials, other ingredients, and rework, is accurately identified.	373	312	116,376	0.01 (36 seconds)	1,163.76
507.28(b); holding and distribution of human food byproducts for use as animal food.	40,798	2	81,596	0.25 (15 minutes)	20,399
Total					27,841.76

¹ There are no capital costs or operating and maintenance costs associated with this collection of information.

Based on a review of the information collection since our last request for OMB approval, we have made slight adjustments to reflect a decrease in third-party disclosure burden associated with animal food. In this submission we provide a cumulative estimate for related disclosure activities that we had previously accounted for separately.

Dated: August 31, 2021.

Lauren K. Roth,

Acting Principal Associate Commissioner for Policy.

[FR Doc. 2021–19116 Filed 9–2–21; 8:45 am]

BILLING CODE 4164–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2021–N–0897]

Oncologic Drugs Advisory Committee; Notice of Meeting; Establishment of a Public Docket; Request for Comments

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice; establishment of a public docket; request for comments.

SUMMARY: The Food and Drug Administration (FDA) announces a forthcoming public advisory committee meeting of the Oncologic Drugs Advisory Committee. The general function of the committee is to provide advice and recommendations to FDA on regulatory issues. The meeting will be open to the public. FDA is establishing a docket for public comment on this document.

DATES: The meeting will be held on October 28, 2021, from 10:30 a.m. to 3 p.m. Eastern Time.

ADDRESSES: Please note that due to the impact of this COVID–19 pandemic, all meeting participants will be joining this advisory committee meeting via an online teleconferencing platform. Answers to commonly asked questions about FDA advisory committee meetings may be accessed at: <https://www.fda.gov/AdvisoryCommittees/AboutAdvisoryCommittees/ucm408555.htm>.

FDA is establishing a docket for public comment on this meeting. The docket number is FDA–2021–N–0897.

The docket will close on October 27, 2021. Submit either electronic or written comments on this public meeting by October 27, 2021. Please note that late, untimely filed comments will not be considered. Electronic comments must be submitted on or before October 27, 2021. The <https://www.regulations.gov> electronic filing system will accept comments until 11:59 p.m. Eastern Time at the end of October 27, 2021. Comments received by mail/hand delivery/courier (for written/paper submissions) will be considered timely if they are postmarked or the delivery service acceptance receipt is on or before that date.

Comments received on or before October 14, 2021, will be provided to the committee. Comments received after that date will be taken into consideration by FDA. In the event that the meeting is cancelled, FDA will continue to evaluate any relevant applications or information, and consider any comments submitted to the docket, as appropriate.

You may submit comments as follows:

Electronic Submissions

Submit electronic comments in the following way:

- **Federal eRulemaking Portal:** <https://www.regulations.gov>. Follow the instructions for submitting comments. Comments submitted electronically, including attachments, to <https://www.regulations.gov> will be posted to the docket unchanged. Because your comment will be made public, you are solely responsible for ensuring that your comment does not include any confidential information that you or a third party may not wish to be posted, such as medical information, your or anyone else's Social Security number, or confidential business information, such as a manufacturing process. Please note that if you include your name, contact information, or other information that identifies you in the body of your comments, that information will be posted on <https://www.regulations.gov>.

- If you want to submit a comment with confidential information that you do not wish to be made available to the public, submit the comment as a written/paper submission and in the manner detailed (see "Written/Paper Submissions" and "Instructions").

Written/Paper Submissions

Submit written/paper submissions as follows:

- **Mail/Hand Delivery/Courier (for written/paper submissions):** Dockets Management Staff (HFA-305), Food and Drug Administration, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.

- For written/paper comments submitted to the Dockets Management Staff, FDA will post your comment, as well as any attachments, except for information submitted, marked and identified, as confidential, if submitted as detailed in "Instructions."

Instructions: All submissions received must include the Docket No. FDA-2021-N-0897 for "Oncologic Drugs Advisory Committee; Notice of Meeting; Establishment of a Public Docket; Request for Comments." Received comments, those filed in a timely manner (see **ADDRESSES**), will be placed in the docket and, except for those submitted as "Confidential Submissions," publicly viewable at <https://www.regulations.gov> or at the Dockets Management Staff between 9 a.m. and 4 p.m., Monday through Friday, 240-402-7500.

- **Confidential Submissions—**To submit a comment with confidential information that you do not wish to be made publicly available, submit your comments only as a written/paper submission. You should submit two

copies total. One copy will include the information you claim to be confidential with a heading or cover note that states "THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION." FDA will review this copy, including the claimed confidential information, in its consideration of comments. The second copy, which will have the claimed confidential information redacted/blacked out, will be available for public viewing and posted on <https://www.regulations.gov>. Submit both copies to the Dockets Management Staff. If you do not wish your name and contact information to be made publicly available, you can provide this information on the cover sheet and not in the body of your comments and you must identify the information as "confidential." Any information marked as "confidential" will not be disclosed except in accordance with 21 CFR 10.20 and other applicable disclosure law. For more information about FDA's posting of comments to public dockets, see 80 FR 56469, September 18, 2015, or access the information at: <https://www.govinfo.gov/content/pkg/FR-2015-09-18/pdf/2015-23389.pdf>.

Docket: For access to the docket to read background documents or the electronic and written/paper comments received, go to <https://www.regulations.gov> and insert the docket number, found in brackets in the heading of this document, into the "Search" box and follow the prompts and/or go to the Dockets Management Staff, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852, 240-402-7500.

FOR FURTHER INFORMATION CONTACT: She-Chia Chen, Center for Drug Evaluation and Research, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 31, Rm. 2417, Silver Spring, MD 20993-0002, 240-402-5343, Fax: 301-847-8533, ODAC@fda.hhs.gov, or FDA Advisory Committee Information Line, 1-800-741-8138 (301-443-0572 in the Washington, DC area). A notice in the **Federal Register** about last minute modifications that impact a previously announced advisory committee meeting cannot always be published quickly enough to provide timely notice. Therefore, you should always check FDA's website at <https://www.fda.gov/AdvisoryCommittees/default.htm> and scroll down to the appropriate advisory committee meeting link, or call the advisory committee information line to learn about possible modifications before coming to the meeting.

SUPPLEMENTARY INFORMATION:

Agenda: The meeting presentations will be heard, viewed, captioned, and recorded through an online

teleconferencing platform. The committee will discuss new drug application (NDA) 214383, PEPAXTO (melphalan flufenamide) for injection submitted by Oncopeptides AB, approved under 21 CFR 314.500 (subpart H, accelerated approval regulations), in combination with dexamethasone for the treatment of adult patients with relapsed or refractory multiple myeloma who have received at least four prior lines of therapy and whose disease is refractory to at least one proteasome inhibitor, one immunomodulatory agent, and one CD38-directed monoclonal antibody.

The committee will hear an update where the confirmatory trial demonstrated a worse overall survival in the melphalan flufenamide treatment arm compared to the control arm. Confirmatory studies are post-marketing studies to verify and describe the clinical benefit of a drug after it receives accelerated approval. Based on the update provided, the committee will have a general discussion focused on next steps for the product including whether the indication should remain on the market while additional trial(s) are conducted.

FDA intends to make background material available to the public no later than 2 business days before the meeting. If FDA is unable to post the background material on its website prior to the meeting, the background material will be made publicly available on FDA's website at the time of the advisory committee meeting. Background material and the link to the online teleconference meeting room will be available at <https://www.fda.gov/AdvisoryCommittees/Calendar/default.htm>. Scroll down to the appropriate advisory committee meeting link. The meeting will include slide presentations with audio components to allow the presentation of materials in a manner that most closely resembles an in-person advisory committee meeting.

Procedure: Interested persons may present data, information, or views, orally or in writing, on issues pending before the committee. All electronic and written submissions submitted to the Docket (see **ADDRESSES**) on or before October 14, 2021, will be provided to the committee. Oral presentations from the public will be scheduled between approximately 1 p.m. to 2 p.m. Eastern Time. Those individuals interested in making formal oral presentations should notify the contact person and submit a brief statement of the general nature of the evidence or arguments they wish to present, the names and addresses of proposed participants, and an indication of the approximate time

requested to make their presentation on or before October 5, 2021. Time allotted for each presentation may be limited. If the number of registrants requesting to speak is greater than can be reasonably accommodated during the scheduled open public hearing session, FDA may conduct a lottery to determine the speakers for the scheduled open public hearing session. The contact person will notify interested persons regarding their request to speak by October 6, 2021.

For press inquiries, please contact the Office of Media Affairs at fdadoma@fda.hhs.gov or 301-796-4540.

FDA welcomes the attendance of the public at its advisory committee meetings and will make every effort to accommodate persons with disabilities. If you require accommodations due to a disability, please contact She-Chia Chen (see **FOR FURTHER INFORMATION CONTACT**) at least 7 days in advance of the meeting.

FDA is committed to the orderly conduct of its advisory committee meetings. Please visit our website at <https://www.fda.gov/AdvisoryCommittees/AboutAdvisoryCommittees/ucm111462.htm> for procedures on public conduct during advisory committee meetings.

Notice of this meeting is given under the Federal Advisory Committee Act (5 U.S.C. app. 2).

Dated: August 30, 2021.

Lauren K. Roth,

Acting Principal Associate Commissioner for Policy.

[FR Doc. 2021-19024 Filed 9-2-21; 8:45 am]

BILLING CODE 4164-01-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA-2019-N-4844]

“Ruby Chocolate” Deviating From Identity Standard; Temporary Permit for Market Testing

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice.

SUMMARY: The Food and Drug Administration (FDA or we) is announcing the extension of a temporary permit issued to Barry Callebaut U.S.A. LLC (the applicant) to market test products (designated as “ruby chocolate”) that deviate from the U.S. standards of identity for cacao products. The extension allows the applicant to continue to evaluate commercial viability of the product and

to collect data on consumer acceptance of the product in support of a petition to establish a standard of identity for “ruby chocolate.” We also invite other interested parties to participate in the market test.

DATES: The new expiration date of the permit will be either the effective date of a final rule establishing a standard of identity for “ruby chocolate” that may result from the petition or 30 days after denial of the petition.

FOR FURTHER INFORMATION CONTACT:

Marjan Morravej, Center for Food Safety and Applied Nutrition (HFS-820), Food and Drug Administration, 5001 Campus Dr., College Park, MD 20740, 240-402-2371; or Carrol Bascus, Center for Food Safety and Applied Nutrition, Office of Regulations and Policy (HFS-024), Food and Drug Administration, 5001 Campus Dr., College Park, MD 20740, 240-402-2378.

SUPPLEMENTARY INFORMATION: In accordance with § 130.17 (21 CFR 130.17), we issued a temporary permit to Barry Callebaut U.S.A. LLC, 600 West Chicago Ave, Suite 860, Chicago, IL 60654, to market test products identified as “ruby chocolate” that deviate from the requirements of the standards of identity for cacao products in part 163 (21 CFR part 163) (84 FR 64541, November 22, 2019). We issued the permit to facilitate market testing of products that deviate from the requirements of the standard of identity for cacao products issued under section 401 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 341). The permit covers limited interstate marketing tests of products identified as “ruby chocolate.” These test products deviate from the U.S. standards of identity for cacao products (§§ 163.111, 163.123, 163.124, 163.130, 163.135, 163.140, and 163.145).

For the purpose of this permit, “ruby chocolate” is the solid or semi-plastic food prepared by mixing and grinding cacao fat with one or more of the cacao ingredients (namely, chocolate liquor, breakfast cocoa, cocoa, and low-fat cocoa), citric acid, one or more of optional nutritive carbohydrate sweeteners. “Ruby chocolate” contains not less than 1.5 percent nonfat cacao solids, not less than 2.5 percent by weight of milk fat, not less than 12 percent by weight of total milk solids, not more than 1.5 percent of emulsifying agents, and not more than 5 percent of whey or whey products. It may also contain other ingredients such as antioxidants approved for food use, spices, natural and artificial flavorings, and other seasonings. However, these other ingredients cannot imitate the

flavor of chocolate, milk, butter, berry, or another fruit. Additionally, “ruby chocolate” contains no added coloring. The test product “ruby chocolate” contains the principal ingredients used in most of the current standards for cacao products under part 163; however, it deviates from the current standard of identify for chocolate products in terms of its final composition, taste, and color.

On February 19, 2021, the applicant asked us to extend the temporary permit so the applicant could have more time to market test the “ruby chocolate” and gain additional consumer acceptance in support of the petition to establish a standard for “ruby chocolate.” We find that it is in the interest of consumers to extend the permit for continued market testing of “ruby chocolate” to gain additional information on consumer expectations and acceptance. Therefore, under § 130.17(i), we are extending the temporary permit granted to Barry Callebaut U.S.A. LLC for temporary marketing of approximately 60 million pounds (27,215,540 kilograms) of “ruby chocolate” to provide continued market testing of the specified amount of product for the applicant on an annual basis. The test products will bear the name “ruby chocolate.” The new expiration date of the permit will be either the effective date of a final rule establishing a standard of identity for “ruby chocolate” that may result from the petition or 30 days after denial of the petition. All other conditions and terms of this permit remain the same.

In addition, we invite interested persons to participate in the market test under the conditions of the permit, except for the designated area of distribution. Any person who wishes to participate in the extended market test should notify, in writing, the Branch Chief, Product Evaluation Labeling Branch, Division of Food Labeling and Standards, Office of Nutrition and Food Labeling, Center for Food Safety and Applied Nutrition (HFS-820), Food and Drug Administration, 5001 Campus Dr., College Park, MD 20740. The notification must describe the amount to be distributed, the area of distribution, and include the labeling that will be used for the test product (see § 130.17(i)). For information on what to include in the notification to FDA, see § 130.17(c). Test products must be labeled in accordance with 21 CFR part 101.

Dated: August 20, 2021.

Lauren K. Roth,

Acting Principal Associate Commissioner for Policy

[FR Doc. 2021-19096 Filed 9-2-21; 8:45 am]

BILLING CODE 4164-01-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Meeting of the Advisory Committee on Blood and Tissue Safety and Availability

AGENCY: Office of the Assistant Secretary for Health, Office of the Secretary, Department of Health and Human Services.

ACTION: Notice.

SUMMARY: The U.S. Department of Health and Human Services is hereby giving notice that the Advisory Committee on Blood and Tissue Safety and Availability (ACBTSA) will hold a virtual meeting. The meeting will be open to the public. The committee will discuss and vote on recommendations to improve the supply chain and data infrastructure that supports the blood industry, especially during public health emergencies. This meeting will build upon the presentations and discussions held during the 53rd ACBTSA meeting from August 17-18, 2021.

DATES: The meeting will take place virtually on Thursday, September 23, 2021 from approximately 1:00 p.m.-4:00 p.m. Eastern Time (ET). Meeting times are tentative and subject to change. The confirmed times and agenda items for the meeting will be posted on the ACBTSA web page at <https://www.hhs.gov/oidp/advisory-committee/blood-tissue-safety-availability/meetings/2021-09-23/index.html> when this information becomes available.

FOR FURTHER INFORMATION CONTACT: James Berger, Designated Federal Officer for the ACBTSA; Office of Infectious Disease and HIV/AIDS Policy, Office of the Assistant Secretary for Health, Department of Health and Human Services, Mary E. Switzer Building, 330 C Street SW, Suite L600, Washington, DC 20024. Email: ACBTSA@hhs.gov.

SUPPLEMENTARY INFORMATION: ACBTSA is a discretionary Federal advisory committee. ACBTSA The Committee is governed by the provisions of the Federal Advisory Committee Act (FACA), Public Law 92-463, as amended (5 U.S.C. app), which sets forth standards for the formation and use of advisory committees. On the day of the meeting, please go to <https://www.hhs.gov/live/index.html> to view

the meeting. The public will have an opportunity to present their views to the ACBTSA by submitting a written public comment. Comments should be pertinent to the meeting discussion. Persons who wish to provide written public comment should review instructions at <https://www.hhs.gov/oidp/advisory-committee/blood-tissue-safety-availability/meetings/2021-09-23/index.html> and respond by midnight September 16, 2021, ET. Written public comments will be accessible to the public on the ACBTSA web page prior to the meeting.

ACBTSA functions to provide advice to the Secretary through the Assistant Secretary for Health on a range of policy issues to include: (1) Identification of public health issues through surveillance of blood and tissue safety issues with national survey and data tools; (2) identification of public health issues that affect availability of blood, blood products, and tissues; (3) broad public health, ethical, and legal issues related to the safety of blood, blood products, and tissues; (4) the impact of various economic factors (e.g., product cost and supply) on safety and availability of blood, blood products, and tissues; (5) risk communications related to blood transfusion and tissue transplantation; and (6) identification of infectious disease transmission issues for blood, organs, blood stem cells and tissues. The Committee has met regularly since its establishment in 1997.

Dated: August 27, 2021.

James J. Berger,

Designated Federal Officer, Advisory Committee on Blood and Tissue Safety and Availability, Office of Infectious Disease and HIV/AIDS Policy.

[FR Doc. 2021-19026 Filed 9-2-21; 8:45 am]

BILLING CODE 4150-28-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Federal Licensing of Office of Refugee Resettlement Facilities Request for Information

AGENCY: Office of Refugee Resettlement (ORR), Administration for Children and Families (ACF), Department of Health and Human Services (HHS).

ACTION: Request for information.

SUMMARY: The Unaccompanied Children (UC) Program is responsible for the administration of childcare facilities throughout the country that care for unaccompanied children arriving in the United States prior to those children being placed with viable sponsors in the

United States. To inform a strategic and impactful plan for the administration of these facilities HHS is issuing this Request for Information (RFI). The RFI solicits specific input regarding options for a Federal licensure process to ensure continued program operations.

DATES: To be considered, public comments must be received electronically no later than October 4, 2021.

ADDRESSES: Public comments should be submitted online at <http://www.regulations.gov>. All submissions must be submitted to the Docket named ACF-2021-0001 to "Request for Information (RFI) from Non-Federal Stakeholders: Federal Licensing of ORR Facilities." Comments submitted electronically, including attachments, will be posted to the docket unchanged and available to view by the public. Evidence and information supporting your comment can be submitted as attachments. Please provide your contact information or organization name on the web-based form for possible follow up from HHS. There is a 5,000-character limit on comments and maximum number (10) of attached files and maximum size (10 MB) of each attached file.

FOR FURTHER INFORMATION CONTACT:

Toby Biswas, Senior Supervisory Policy Counsel, Division of Policy and Procedures, Office of Refugee Resettlement, Administration for Children and Families, Department of Health and Human Services, Washington, DC, (202) 205-4440 or ucpolicy@acf.hhs.gov.

SUPPLEMENTARY INFORMATION: ORR facilities are currently administered through a nationwide network of grantee providers that care for unaccompanied children on a day-to-day basis. These facilities are subject to Federal ORR policies and regulations regarding their operations as well as applicable State-based licensure regulations regarding the operation of childcare facilities in each jurisdiction.

The Flores Settlement Agreement (FSA) generally requires that ORR promptly place unaccompanied children into a State licensed child-care program. As of July 2021, ORR operates over 200 licensed care provider facilities in 22 states under approximately 50 separate grants executed under Cooperative Agreements between ORR and the grantee care providers. Each State has its own State licensing standards.

The Director of ORR and the Secretary of HHS have broad authority to oversee policies for the care of unaccompanied children, including by identifying a

sufficient number of qualified individuals, entities, and facilities to house unaccompanied children; overseeing the infrastructure and personnel at facilities that ORR places unaccompanied children; and conducting investigations and inspections of the facilities that house unaccompanied children. *See* 6 U.S.C. 279(b)(1)–(2); 8 U.S.C. 1232.

Accordingly, the Director has authority to develop, implement, and oversee the licensing or other approval of facilities that house unaccompanied children pursuant to a set of uniform Federal standards. Historically, ORR has not developed or implemented a Federal licensing or approval system and instead has funded State-licensed care facilities.

On May 31, 2021, Texas Governor Greg Abbott issued an emergency proclamation directing the Texas Health and Human Service Commission (HHSC) to “discontinue state licensing of any child-care facility in this state that shelters or detains [unaccompanied children] under a contract with the federal government.” The May 31 proclamation directs HHSC to “deny a license application for any new child-care facility that shelters or detains [unaccompanied children] under a contract with the federal government, to renew any existing such licenses for no longer than a 90-day period following the date of this order, and to provide notice and initiate a 90-day period beginning on the date of this order to wind down any existing such licenses.”¹

On July 13, 2021, HHSC issued an emergency rule implementing the May 31 Proclamation, which creates a temporary exemption to Texas’s State licensure requirement for child-care facilities that shelter unaccompanied children in Federal custody. *See* 26 T.A.C. section 745.115. The emergency rule—and the exemption it provides—are only effective for 120 days and can only be renewed for an additional 60 days. The emergency rule directed facilities with an existing license serving unaccompanied children to provide notice to HHCS by July 31, 2021, indicating whether they intended to continue serving unaccompanied children after August 30, 2021, and if so, whether they intended to relinquish their licenses and continue operating as an exempt, unlicensed program, or whether they intended to retain their licenses and continue serving

unaccompanied children by separately operating an exempt program to serve their unaccompanied child population. *See* 26 T.A.C. section 745.10301. The same day, HHSC issued updated guidance regarding the May 31 proclamation.² It is unclear if the Texas legislature intends to provide a permanent exemption when the emergency rule expires.

ORR is committed to providing the highest level of services to all children in ORR facilities and to treating all unaccompanied children with dignity, respect, and special concern for their particular vulnerability. As such, ORR is exploring the possibility of providing Federal licenses to ORR facilities where State law declines to license or otherwise exempts from licensure programs that contract or have a grant with ORR for the provision of physical care and services for unaccompanied children. HHS is considering assigning the responsibility of licensing or approving ORR facilities to a component outside of ORR, such as in ACF, and having that component be responsible for investigations and inspections of the ORR facilities, as well as monitor compliance.

Any such HHS component would also monitor compliance with all necessary adopted standards independently of any direct ORR oversight. Specifically, this component would be responsible for investigations and inspections of ORR facilities and issuance of licenses under this plan. This HHS component might contract with an outside entity to perform some of the responsibilities discussed herein, while ultimately maintaining oversight over the outside entity.

Additionally, ORR is interested in determining whether accreditation through an independent accreditation agency could likewise accomplish the goal of providing applicable standards without Federal licensing.

The RFI seeks public input on the challenges posed by the current State-based system of licensures that requires facilities to comply with a variety of complex rules that vary by State and—as demonstrated by the Texas proclamation—exposes ORR facilities to licensing discrimination by State regulatory officials based on their affiliation with the Federal Government. The RFI also seeks input on what sort of licensing regime, and which responsible HHS component, would

best serve the needs of current service providers, including any interests in standardization of licensing requirements, while also preserving independence and objectivity in oversight from ORR. The RFI also seeks input regarding how best to preserve independence from ORR in monitoring compliance of existing standards in ORR facilities as well as any additional commentary that would be relevant.

Responses may address one or more of the areas below:

1. What challenges do facilities face in complying with the State-based licensing scheme as currently operating around the country?
2. What sort of independent entity do you see as best positioned to provide the services currently provided by State licensing entities?
3. Comments on having one entity responsible for issuing licenses and a second entity responsible for investigations and inspections.
4. When should a provider seek a Federal license as opposed to a State license?
5. Views on the possibility of dual (State and Federal) licensure and/or Federal accreditation of State licensed facilities to ensure compliance with minimum Federal standards?
6. Suggestions on how to improve information sharing between State and Federal partners?
7. What challenges would be posed to existing ORR facilities if ORR were to seek a Federal license on a facility’s behalf?
8. What types of standards should be adopted for licensure (the list is non-exhaustive, and commenters should please include recommendations on additional categories)?
 - a. Minimum standards for facilities
 - b. Admission, orientation, reunification, and release processes
 - c. Child rights
 - d. Services, including needs assessment, development of care plans, developmental and educational services, and legal services
 - e. Organization and administration
 - f. Reporting and recordkeeping
 - g. Training
 - h. Monitoring and oversight
 - i. Caregiver-to-child staffing ratios
 - j. Medical and dental care, family planning services, and emergency healthcare services
 - k. Mental health and behavior management
 - l. Visitation and contact with family members
 - m. Safeguarding children
 - n. Physical plant
 - o. Rescission and denial of licenses
9. How would an independent licensing entity best provide independence and objectivity from ORR in performing its critical task of monitoring compliance with all existing standards?
10. What proposed rules and processes should be applied for an independent investigatory agency to investigate and inspect federally licensed facilities?
11. What are some possible benefits of Federal licensure?

¹ May 31, 2021, Emergency Proclamation, available at: https://gov.texas.gov/uploads/files/press/DISASTER_border_security_IMAGE_05-31-2021.pdf.

² July 13, 2021, Updated Guidance on the Governor’s Disaster Proclamation, available at: <https://www.hhs.texas.gov/sites/default/files/documents/doing-business-with-hhs/provider-portal/protective-services/ccl/ccl-gov-declaring-disaster.pdf>.

12. What are some possible challenges of Federal licensure?

13. How would Federal licensure impact operations and other requirements, such as grant/contract or insurance requirements?

14. What agency or entity should investigate and inspect federally licensed facilities?

15. Comments regarding a Federal licensing scheme versus a Federal accreditation plan.

16. How can considerations for an ORR Federal licensing, accreditation, and/or monitoring scheme inform additional or aligned guidance and standards for other full-time child-caring facilities supported by ORR or HHS?

17. What information should ORR provide to the public on ORR-funded or ORR-licensed shelter facilities?

18. What resources should ORR consider if it develops a Federal licensing, accreditation, and/or monitoring program?

19. Would a Federal licensing or accreditation program need to work differently in different care environments, such as residential childcare institutions, group homes, and child behavioral health facilities?

20. Would you recommend any alternatives to a Federal licensing or accreditation scheme?

21. Any additional topics you wish to provide input on.

The information received will inform the planning for executing a new Federal licensing scheme or accreditation program.

Dated: September 1, 2021.

Cindy Huang,

Director, Office of Refugee Resettlement.

[FR Doc. 2021-19263 Filed 9-1-21; 4:15 pm]

BILLING CODE 4184-45-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Meetings of the Presidential Advisory Council on Combating Antibiotic-Resistant Bacteria

AGENCY: Office of the Assistant Secretary for Health, Office of the Secretary, Department of Health and Human Services.

ACTION: Notice.

SUMMARY: As stipulated by the Federal Advisory Committee Act, the Department of Health and Human Services (HHS) is hereby giving notice that two meetings are scheduled to be held for the Presidential Advisory Council on Combating Antibiotic-Resistant Bacteria (PACCARB). The meetings will be open to the public via WebEx and teleconference; a pre-registered public comment session will be held during both meetings. Pre-registration is required for members of the public who wish to attend the meetings via WebEx/teleconference.

Individuals who wish to send in their written public comment should send an email to CARB@hhs.gov. Registration information is available on the website <http://www.hhs.gov/paccarb> and must be completed by October 1, 2021 for the October 6, 2021 virtual Public Meeting; and, by November 29, 2021 for the November 30–December 1, 2021 virtual Public Meeting. Additional information about registering for the meeting and providing public comment can be obtained at <http://www.hhs.gov/paccarb> on the Upcoming Meetings page.

DATES: The October meeting is scheduled to be held on October 6, 2021, from 10:00 a.m. to 11:00 a.m. ET (times are tentative and subject to change). The November/December meeting is scheduled to be held on November 30, 2021 from 10:00 a.m. to 3:00 p.m. and December 1, 2021, from 10:00 a.m. to 3:00 p.m. ET (times are tentative and subject to change). The confirmed times and agenda items for both meetings will be posted on the website for the PACCARB at <http://www.hhs.gov/paccarb> when this information becomes available. Pre-registration for attending the meeting is strongly suggested and should be completed no later than October 1, 2021 for the October meeting and November 29, 2021 for the November/December meeting.

ADDRESSES: Instructions regarding attending this meeting virtually will be posted at least one week prior to the meeting at: <http://www.hhs.gov/paccarb>.

FOR FURTHER INFORMATION CONTACT:

Jomana Musmar, M.S., Ph.D., Designated Federal Officer, Presidential Advisory Council on Combating Antibiotic-Resistant Bacteria, Office of the Assistant Secretary for Health, U.S. Department of Health and Human Services, Room L616, Switzer Building, 330 C St. SW, Washington, DC 20024. Phone: 202-746-1512; Email: CARB@hhs.gov.

SUPPLEMENTARY INFORMATION: The Presidential Advisory Council on Combating Antibiotic-Resistant Bacteria (PACCARB), established by Executive Order 13676, is continued by Section 505 of Public Law 116-22, the Pandemic and All-Hazards Preparedness and Advancing Innovation Act of 2019 (PAHPAIA). Activities and duties of the Advisory Council are governed by the provisions of the Federal Advisory Committee Act (FACA), Public Law 92-463, as amended (5 U.S.C. app.), which sets forth standards for the formation and use of federal advisory committees.

The PACCARB shall advise and provide information and recommendations to the Secretary regarding programs and policies intended to reduce or combat antibiotic-resistant bacteria that may present a public health threat and improve capabilities to prevent, diagnose, mitigate, or treat such resistance. The PACCARB shall function solely for advisory purposes.

Such advice, information, and recommendations may be related to improving: The effectiveness of antibiotics; research and advanced research on, and the development of, improved and innovative methods for combating or reducing antibiotic resistance, including new treatments, rapid point-of-care diagnostics, alternatives to antibiotics, including alternatives to animal antibiotics, and antimicrobial stewardship activities; surveillance of antibiotic-resistant bacterial infections, including publicly available and up-to-date information on resistance to antibiotics; education for health care providers and the public with respect to up-to-date information on antibiotic resistance and ways to reduce or combat such resistance to antibiotics related to humans and animals; methods to prevent or reduce the transmission of antibiotic-resistant bacterial infections; including stewardship programs; and coordination with respect to international efforts in order to inform and advance the United States capabilities to combat antibiotic resistance.

The October 6, 2021 public meeting will be held virtually and is dedicated to deliberation and vote of the letter with recommendations from the Immediate Action Subcommittee of the Advisory Council. The meeting agenda will be posted on the PACCARB website at <http://www.hhs.gov/paccarb> when it has been finalized. All agenda items are tentative and subject to change.

The November 31, 2021 and December 1, 2021 public meeting will be held virtually and will be dedicated to addressing the current situation regarding antimicrobial resistance as well as to a presentation from the National Academies of Sciences, Engineering, and Medicine on their report, Examining the Long-term Health and Economic Effects of Antimicrobial Resistance in the United States. The meeting agenda will be posted on the PACCARB website at <http://www.hhs.gov/paccarb> when it has been finalized. All agenda items are tentative and subject to change.

Instructions regarding attending both meetings virtually will be posted one

week prior to each meeting at: <http://www.hhs.gov/paccarb>.

Members of the public will have the opportunity to provide comments live during the October meeting via conference line by pre-registering online at <http://www.hhs.gov/paccarb>. Pre-registration is required for participation in this session with limited spots available. Written public comments can also be emailed to CARB@hhs.gov by midnight October 1, 2021 and should be limited to no more than one page. All public comments received prior to October 1, 2021, will be provided to Advisory Council members.

Members of the public will have the opportunity to provide comments live during the November 30, 2021 and December 1, 2021 public meeting via conference line by pre-registering online at <http://www.hhs.gov/paccarb>. There will be two separate sessions available for public comment: An Innovation Spotlight will be held on November 30, 2021 where companies and/or organizations involved in combating antibiotic resistance have an opportunity to present their work to members of the Advisory Council; and on December 1, 2021, where all members of the general public are welcome to provide oral comment during this separate session. Pre-registration is required for participation in these sessions with limited spots available. Further information about these two sessions can be found online at <http://www.hhs.gov/paccarb>. Written public comments can also be emailed to CARB@hhs.gov by midnight November 29, 2021 and should be limited to no more than one page. All public comments received prior to November 29, 2021, will be provided to Advisory Council members.

Dated: August 26, 2021.

Jomana F. Musmar,

Designated Federal Officer, Presidential Advisory Council on Combating Antibiotic-Resistant Bacteria, Office of the Assistant Secretary for Health.

[FR Doc. 2021-19027 Filed 9-2-21; 8:45 am]

BILLING CODE 4150-44-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Allergy and Infectious Diseases; Notice of Closed Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meeting.

The meeting 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: National Institute of Allergy and Infectious Diseases Special Emphasis Panel; NIAID Investigator Initiated Program Project Applications (P01 Clinical Trial Not Allowed).

Date: September 27–28, 2021.

Time: 10:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institute of Allergy and Infectious Diseases, National Institutes of Health, 5601 Fishers Lane, Room 3E70A, Rockville, MD 20892 (Virtual Meeting).

Contact Person: Soheyla Saadi, Ph.D., Scientific Review Officer, Scientific Review Program, Division of Extramural Activities, National Institute of Allergy and Infectious Diseases, National Institutes of Health, 5601 Fishers Lane, Room 3E70A, Rockville, MD 20852, (240) 669-5178, saadisoh@niaid.nih.gov.

(Catalogue of Federal Domestic Assistance Program Nos. 93.855, Allergy, Immunology, and Transplantation Research; 93.856, Microbiology and Infectious Diseases Research, National Institutes of Health, HHS)

Dated: August 31, 2021.

Melanie J. Pantoja,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2021-19110 Filed 9-2-21; 8:45 am]

BILLING CODE 4140-01-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Mental Health; 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: National Institute of Mental Health Special Emphasis Panel; Clinical Trials to Test the Effectiveness of Treatment, Preventive, and Services Interventions (R01, Collaborative R01, R34).

Date: October 1, 2021.

Time: 9:30 a.m. to 5:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Neuroscience Center, 6001 Executive Boulevard, Rockville, MD 20852 (Telephone Conference Call).

Contact Person: Marcy Ellen Burstein, Ph.D., Scientific Review Officer, Division of Extramural Activities, National Institute of Mental Health, NIH, Neuroscience Center, 6001 Executive Blvd., Room 6143, MSC 9606, Bethesda, MD 20892-9606, 301-443-9699, bursteinme@mail.nih.gov.

Name of Committee: National Institute of Mental Health Special Emphasis Panel; Early Phase Trials of Pharmacological and Device Based Interventions.

Date: October 5, 2021.

Time: 11:00 a.m. to 5:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Neuroscience Center, 6001 Executive Boulevard, Rockville, MD 20852 (Telephone Conference Call).

Contact Person: Nicholas Gaiano, Ph.D., Review Branch Chief, Division of Extramural Activities, National Institute of Mental Health, NIH, Neuroscience Center/Room 6150/MS 9606, 6001 Executive Boulevard, Bethesda, MD 20892-9606, 301-443-2742, nick.gaiano@nih.gov.

Name of Committee: National Institute of Mental Health Special Emphasis Panel; Pilot Effectiveness Trials of Interventions for Preschoolers with ADHD (R34).

Date: October 5, 2021.

Time: 12:00 p.m. to 3:30 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Neuroscience Center, 6001 Executive Boulevard, Rockville, MD 20852 (Telephone Conference Call).

Contact Person: Rebecca Steiner Garcia, Ph.D., Scientific Review Officer, Division of Extramural Activities, National Institute of Mental Health, NIH, Neuroscience Center, 6001 Executive Blvd., Room 6149, MSC 9608, Bethesda, MD 20892-9608, 301-443-4525, steinerr@mail.nih.gov.

Name of Committee: National Institute of Mental Health Special Emphasis Panel; Non-Pharmacological Clinical Trials.

Date: October 8, 2021.

Time: 9:30 a.m. to 5:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Neuroscience Center, 6001 Executive Boulevard, Rockville, MD 20852 (Telephone Conference Call).

Contact Person: Nicholas Gaiano, Ph.D., Review Branch Chief, Division of Extramural Activities, National Institute of Mental Health, NIH, Neuroscience Center/Room

6150/MSO 9606, 6001 Executive Boulevard, Bethesda, MD 20892-9606, 301-443-2742, nick.gaiano@nih.gov.

(Catalogue of Federal Domestic Assistance Program No. 93.242, Mental Health Research Grants, National Institutes of Health, HHS)

Dated: August 31, 2021.

Melanie J. Pantoja,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2021-19109 Filed 9-2-21; 8:45 am]

BILLING CODE 4140-01-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Allergy and Infectious Diseases; Notice of Closed Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meeting.

The meeting 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 contract proposals and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the contract proposals, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: National Institute of Allergy and Infectious Diseases Special Emphasis Panel; National Institute of Allergy and Infectious Diseases (NIAID) Clinical Site Monitoring Center (CSMC).

Date: September 9, 2021.

Time: 10:00 a.m. to 5:00 p.m.

Agenda: To review and evaluate contract proposals.

Place: National Institute of Allergy and Infectious Diseases, National Institutes of Health, 5601 Fishers Lane, Room 3G53, Rockville, MD 20892 (Virtual Meeting).

Contact Person: Konrad Krzewski, Ph.D., Scientific Review Officer, Scientific Review Program, National Institute of Allergy and Infectious Diseases, National Institutes of Health, 5601 Fishers Lane, Room 3G53, Rockville, MD 20852, 240-747-7526, konrad.krzewski@nih.gov.

This notice is being published less than 15 days prior to the meeting due to the timing limitations imposed by the review and funding cycle.

(Catalogue of Federal Domestic Assistance Program Nos. 93.855, Allergy, Immunology, and Transplantation Research; 93.856, Microbiology and Infectious Diseases Research, National Institutes of Health, HHS)

Dated: August 31, 2021.

Melanie J. Pantoja,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2021-19105 Filed 9-2-21; 8:45 am]

BILLING CODE 4140-01-P

DEPARTMENT OF HOMELAND SECURITY

[Docket No. DHS-2021-0030]

Privacy Act of 1974; System of Records

AGENCY: Office of the Immigration Detention Ombudsman, U.S.

Department of Homeland Security.

ACTION: Notice of a new system of records.

SUMMARY: In accordance with the Privacy Act of 1974, the U.S. Department of Homeland Security (DHS) proposes to establish a new DHS system of records titled, "DHS/Office of the Immigration Detention Ombudsman (OIDO)-001 Office of the Immigration Detention Ombudsman System of Records." This system of records allows DHS/OIDO to collect and maintain records related to cases brought forth by individuals or investigations regarding potential violations of law, individual rights, standards of professional conduct, contract terms, or policy related to immigration detention by any officer or employee of U.S. Customs and Border Protection (CBP) or U.S. Immigration and Customs Enforcement (ICE), or any contracted, subcontracted, or cooperating entity personnel. Additionally, DHS is issuing a Notice of Proposed Rulemaking to exempt this system of records from certain provisions of the Privacy Act, elsewhere in the **Federal Register**. This newly established system will be included in DHS's inventory of record systems.

DATES: Submit comments on or before October 4, 2021. This new system will be effective upon publication. Routine uses will be effective October 4, 2021.

ADDRESSES: You may submit comments, identified by docket number DHS-2021-0030 by one of the following methods:

- *Federal e-Rulemaking Portal:* <http://www.regulations.gov>. Follow the instructions for submitting comments.

- *Fax:* 202-343-4010.

- *Mail:* Lynn Parker Dupree, Chief Privacy Officer, Privacy Office, U.S. Department of Homeland Security, Washington, DC 20528-0655.

Instructions: All submissions received must include the agency name and docket number DHS-2021-0030. All

comments received will be posted without change to <http://www.regulations.gov>, including any personal information provided.

Docket: For access to the docket to read background documents or comments received, go to <http://www.regulations.gov>.

FOR FURTHER INFORMATION CONTACT: For general and privacy questions, please contact: Lynn Parker Dupree, (202) 343-1717, Privacy@hq.dhs.gov, Chief Privacy Officer, Privacy Office, U.S. Department of Homeland Security, Washington, DC 20528-0655.

SUPPLEMENTARY INFORMATION:

I. Background

The U.S. Department of Homeland Security (DHS) Office of the Immigration Detention Ombudsman (OIDO) is giving notice that it proposes to establish a new DHS system of records notice (SORN) titled, "DHS/OIDO-001 Office of the Immigration Detention Ombudsman System of Records." OIDO is an independent component within DHS tasked with reviewing and resolving individual complaints and providing independent oversight of immigration detention facilities, including conducting announced and unannounced inspections, reviewing contract terms for immigration detention facilities and services, and making recommendations and reporting to Congress on findings. OIDO was established by Congress in Section 106 of the Consolidated Appropriations Act, 2020 (Pub. L. 116-93, 133 Stat. 2504 (Dec. 20, 2019), as codified by 6 U.S.C. 205, which outlined OIDO's core responsibilities:

- Establish and administer an independent, neutral, and confidential process to receive, investigate, resolve, and provide redress, including referral for investigation to the Office of Inspector General, referral to U.S. Citizenship and Immigration Services (USCIS) for immigration relief, or any other action determined appropriate, for cases in which Department officers or other personnel, or contracted, subcontracted, or cooperating entity personnel, are found to have engaged in misconduct or violated the rights of individuals in immigration detention;
- Establish an accessible and standardized process regarding complaints against any officer or employee of U.S. Customs and Border Protection (CBP) or U.S. Immigration and Customs Enforcement (ICE), or any contracted, subcontracted, or cooperating entity personnel, for violations of law, standards of

professional conduct, contract terms, or policy related to immigration detention;

- Conduct unannounced inspections of detention facilities holding individuals in federal immigration custody, including those owned or operated by units of state or local government and privately-owned or operated facilities;

- Review, examine, and make recommendations to address concerns or violations of contract terms identified in reviews, audits, investigations, or detainee interviews regarding immigration detention facilities and services;

- Provide assistance to individuals affected by potential misconduct, excessive force, or violations of law or detention standards by DHS officers or other personnel, or contracted, subcontracted, or cooperating entity personnel; and

- Ensure that the functions performed by the Ombudsman are complementary to existing functions within the DHS.

In order to accomplish those responsibilities, OIDO is creating this system of records to collect and maintain records related to individual complaints from or about individuals in immigration detention regarding potential violations of law, individual rights, standards of professional conduct, contract terms, or policy related to immigration detention by any officer or employee of CBP or ICE, or any contracted, subcontracted, or cooperating entity personnel. The DHS/OIDO system of records covers information that is received by OIDO in response to individuals submitting a complaint via OIDO's Case Intake Form. The form is currently paper-based and in the future will be fillable electronically. This form is not required to submit a case to OIDO; however, a properly completed form ensures that OIDO receives the necessary information to assist with a case. OIDO will use and maintain the data collected within OIDO's case management system to manage, process, track, and respond to complaints and inform and manage investigations.

OIDO will use information collected to triage the complaint and link it with any previous cases related to the same detainee, as well as for proper consent, jurisdiction, and exigent circumstances. The information will also be used to verify information about the complaint in systems maintained by ICE, CBP, and other DHS headquarters offices. Once assigned for resolution, OIDO will review the data provided, conduct necessary background research about the complaint, and engage with DHS components (primarily ICE and CBP) to

come to a resolution. To facilitate the resolution process, information in this system of records may be shared with DHS components and offices (and occasionally other Departments involved in the immigration process, including the Departments of State and Justice) for identification, verification, and corroboration purposes. OIDO will then communicate the result to the submitter of the complaint, to the extent the submitter of the complaint is permitted to receive any of the Privacy Act protected information that is subject to this SORN or other applicable and relevant SORNs. As a follow up to complaints and/or areas of concern, OIDO may also use data to inform future investigations and recommendations.

Consistent with DHS's information sharing mission, information stored in the DHS/OIDO-001 Office of the Immigration Detention Ombudsman System of Records may be shared with other DHS Components that have a need to know the information to carry out their national security, law enforcement, immigration, intelligence, or other homeland security functions. In addition, DHS/OIDO may share information with appropriate federal, state, local, tribal, territorial, foreign, or international government agencies consistent with the routine uses set forth in this system of records notice.

This newly established system will be included in DHS's inventory of record systems.

II. Privacy Act

The fair information practice principles found in the Privacy Act underpin the statutory framework governing the means by which Federal Government agencies collect, maintain, use, and disseminate individuals' records. The Privacy Act applies to information that is maintained in a "system of records." A "system of records" is a group of any records under the control of an agency from which information is retrieved by the name of an individual or by some identifying number, symbol, or other identifying particular assigned to the individual. In the Privacy Act, an individual is defined as U.S. citizens and lawful permanent residents. Additionally, the Judicial Redress Act (JRA) provides covered persons with a statutory right to make requests for access and amendment to covered records, as defined by the JRA, along with judicial review for denials of such requests. In addition, the JRA prohibits disclosures of covered records, except as otherwise permitted by the Privacy Act.

Below is the description of the DHS/OIDO-001 Office of the Immigration

Detention Ombudsman System of Records.

In accordance with 5 U.S.C. 552a(r), DHS has provided a report of this system of records to the Office of Management and Budget and to Congress.

SYSTEM NAME AND NUMBER:

U.S. Department of Homeland Security (DHS)/Office of the Immigration Detention Ombudsman (OIDO)-001 Office of the Immigration Detention Ombudsman System of Records.

SECURITY CLASSIFICATION:

Unclassified.

SYSTEM LOCATION:

Records are maintained at the Office of the Immigration Detention Ombudsman Headquarters in Washington, DC, field offices, and other intake locations.

SYSTEM MANAGER(S):

Immigration Detention Ombudsman, Office of the Immigration Detention Ombudsman, U.S. Department of Homeland Security, Washington, DC 20528, detentionombudsman@hq.dhs.gov.

AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

Section 106 of the Consolidated Appropriations Act, 2020, Public Law 116-93, 133 Stat. 2504 (Dec. 20, 2019; 6 U.S.C 205).

PURPOSE(S) OF THE SYSTEM:

The purpose of this system is to allow DHS/OIDO to collect and maintain records to investigate potential violations of law, individual rights, standards of professional conduct, contract terms, or policy related to immigration detention by any officer or employee of CBP, ICE, or any contracted, subcontracted, or cooperating entity personnel.

CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

The categories of individuals covered by this system of records include:

- Persons who contact OIDO to allege complaints from or about individuals in immigration detention regarding the potential violation of immigration detention standards or other potential misconduct by DHS, its employees, contractors, grantees, or others acting under the authority of the Department. These individuals may include the person currently or formerly detained or individuals who submit a complaint on behalf of that individual, including an attorney or representative. An individual may submit a complaint anonymously.

- DHS employees, contractors, grantees, volunteers, or others acting under the authority of the Department alleged to be involved in any such violations or misconduct.

- Third parties directly or indirectly involved in the alleged incident and identified as relevant persons to an investigation.

CATEGORIES OF RECORDS IN THE SYSTEM:

- Submitter's full name, including any aliases;
- Submitter's contact information, including mailing addresses, email addresses, and phone numbers;
- Law Firm/Organization if the submitter is an attorney or accredited representative;
- Detainee's full name, including any aliases;
- Detainee's A-Number;
- Detainee's contact information, including mailing addresses, email addresses, and phone numbers;
- Detainee's sex;
- Detainee's date of birth;
- Detainee's country of birth and country(s) of citizenship;
- Detainee's detention history, including facility name and dates detained;
- Incident date;
- Compliant/incident number;
- Complaint description;
- Complaint category (e.g., abuse, disability accommodation, language access, legal representation, personal property, medical concerns, religious accommodation);
- Subject of the complaint (e.g., adult, family unit, or minor child, and names of other family members involved);
- Prior actions taken to remedy the problem; and
- Consent of the detainee for OIDO to disclose information in the file to a designated representative, if applicable.

Submitters may offer more information than is specifically requested by OIDO, such as the detainee's Visa number or Passport number as part of their submissions or descriptions of the complaint. Documentation provided to support complaints may also include legal and medical records or other records, such as those related to disability accommodations, personal property, or the conditions of detention.

Throughout the course of its investigations, OIDO may also collect:

- Evidentiary documents and material, comments, records, photographs, and reports relating to the alleged complaint and to the resolution of the complaint;
- Investigation notes, including written and audio/video recordings of

interviews with detainees, third parties involved in the complaint, and facility personnel;

- Interviewee's full name and contact information;
- Interviewee's position/title and current duty station (if applicable);
- Documentation concerning requests for additional information needed to complete the investigation;
- Letters, memoranda, and other documents alleging violation of immigration detention standards or other potential misconduct from complainants;
- Internal letters, memoranda, and other communications within DHS related to complaints; and
- Results of an investigation of a complaint.

RECORD SOURCE CATEGORIES:

Records are obtained from detainees, their representatives (e.g., family, legal), or other persons submitting cases on a detainee's behalf in person or via forms submitted by mail, email, fax, or, in the future, electronically; and by telephone. OIDO also accepts anonymous complaints. Information may be collected from DHS employees and/or contractors that are interviewed during an OIDO investigation. Additional information may be collected from other DHS components, databases, or systems (primarily ICE and CBP), and other government agencies, such as the Departments of State and Justice.

ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND PURPOSES OF SUCH USES:

In addition to those disclosures generally permitted under 5 U.S.C. 552a(b) of the Privacy Act, all or a portion of the records or information contained in this system may be disclosed outside DHS as a routine use pursuant to 5 U.S.C. 552a(b)(3) as follows:

A. To the Department of Justice (DOJ), including the U.S. Attorneys' Offices, or other federal agencies conducting litigation or proceedings before any court, adjudicative, or administrative body, when it is relevant or necessary to the litigation and one of the following is a party to the litigation or has an interest in such litigation:

1. DHS or any component thereof;
2. Any employee or former employee of DHS in his/her official capacity;
3. Any employee or former employee of DHS in his/her individual capacity, only when DOJ or DHS has agreed to represent the employee; or
4. The United States or any agency thereof.

B. To a congressional office from the record of an individual in response to

an inquiry from that congressional office made at the request of the individual to whom the record pertains.

C. To the National Archives and Records Administration (NARA) or General Services Administration pursuant to records management inspections being conducted under the authority of 44 U.S.C. 2904 and 2906.

D. To an agency or organization for the purpose of performing audit or oversight operations as authorized by law, but only such information as is necessary and relevant to such audit or oversight function.

E. To appropriate agencies, entities, and persons when (1) DHS suspects or has confirmed that there has been a breach of the system of records; (2) DHS has determined that as a result of the suspected or confirmed breach there is a risk of harm to individuals, DHS (including its information systems, programs, and operations), the Federal Government, or national security; and (3) the disclosure made to such agencies, entities, and persons is reasonably necessary to assist in connection with DHS's efforts to respond to the suspected or confirmed breach or to prevent, minimize, or remedy such harm.

F. To another federal agency or federal entity, when DHS determines that information from this system of records is reasonably necessary to assist the recipient agency or entity in (1) responding to a suspected or confirmed breach or (2) preventing, minimizing, or remedying the risk of harm to individuals, the recipient agency or entity (including its information systems, programs, and operations), the Federal Government, or national security, resulting from a suspected or confirmed breach.

G. To an appropriate federal, state, tribal, local, international, or foreign law enforcement agency or other appropriate authority charged with investigating or prosecuting a violation or enforcing or implementing a law, rule, regulation, or order, when a record, either on its face or in conjunction with other information, indicates a violation or potential violation of law, which includes criminal, civil, or regulatory violations and such disclosure is proper and consistent with the official duties of the person making the disclosure.

H. To contractors and their agents, grantees, experts, consultants, and others performing or working on a contract, service, grant, cooperative agreement, or other assignment for DHS, when necessary to accomplish an agency function related to this system of records. Individuals provided information under this routine use are

subject to the same Privacy Act requirements and limitations on disclosure as are applicable to DHS officers and employees.

I. To an attorney or representative who is acting on behalf of an individual covered by this system of records to obtain the individual's information submitted to OIDO.

J. To appropriate federal, state, local, tribal, or foreign governmental agencies or multilateral governmental organizations, with the approval of the Chief Privacy Officer, when DHS is aware of a need to use relevant data, that relate to the purpose(s) stated in this SORN, for purposes of testing new technology.

POLICIES AND PRACTICES FOR STORAGE OF RECORDS:

DHS/OIDO stores records in this system electronically or on paper in secure facilities in a locked drawer behind a locked door. The records may be stored on magnetic disc, tape, and digital media.

POLICIES AND PRACTICES FOR RETRIEVAL OF RECORDS:

DHS/OIDO may retrieve records by any of the personal identifiers listed above, such as name, A-Number, date of birth, or complaint number.

POLICIES AND PRACTICES FOR RETENTION AND DISPOSAL OF RECORDS:

DHS/OIDO is in the process of drafting a proposed records retention schedule for the information maintained. DHS/OIDO is currently working with NARA to establish the records retention schedule and will adhere to it once finalized.

ADMINISTRATIVE, TECHNICAL, AND PHYSICAL SAFEGUARDS:

DHS/OIDO safeguards records in this system according to applicable rules and policies, including all applicable DHS automated systems security and access policies. DHS/OIDO has imposed strict controls to minimize the risk of compromising the information that is being stored. Access to the computer system containing the records in this system is limited to those individuals who have a need to know the information for the performance of their official duties and who have appropriate clearances or permissions.

RECORD ACCESS PROCEDURES:

The Secretary of Homeland Security has exempted this system from the notification, access, and amendment procedures of the Privacy Act, and the Judicial Redress Act if applicable, because it is a law enforcement system. However, DHS/OIDO will consider

individual requests to determine whether or not information may be released. Thus, individuals seeking access to and notification of any record contained in this system of records, or seeking to contest its content, may submit a request in writing to the Chief Privacy Officer or Chief Freedom of Information Act Officer, whose contact information can be found at <http://www.dhs.gov/foia> under "Contact Information." If an individual believes more than one component maintains Privacy Act records concerning him or her, the individual may submit the request to the Chief Privacy Officer and Chief Freedom of Information Act Officer, U.S. Department of Homeland Security, Washington, DC 20528-0655. Even if neither the Privacy Act nor the Judicial Redress Act provide a right of access, certain records about you may be available under the Freedom of Information Act.

When an individual is seeking records about himself or herself from this system of records or any other Departmental system of records, the individual's request must conform with the Privacy Act regulations set forth in 6 CFR part 5. The individual must first verify his/her identity, meaning that the individual must provide his/her full name, current address, and date and place of birth. The individual must sign the request, and the individual's signature must either be notarized or submitted under 28 U.S.C. 1746, a law that permits statements to be made under penalty of perjury as a substitute for notarization. While no specific form is required, an individual may obtain forms for this purpose from the Chief Privacy Officer and Chief Freedom of Information Act Officer, <http://www.dhs.gov/foia> or 1-866-431-0486. In addition, the individual should:

- Explain why he or she believes the Department would have information being requested;
- Identify which component(s) of the Department he or she believes may have the information;
- Specify when the individual believes the records would have been created; and
- Provide any other information that will help the FOIA staff determine which DHS component agency may have responsive records;

If the request is seeking records pertaining to another living individual, the request must include an authorization from the individual whose record is being requested, authorizing the release to the requester.

Without the above information, the component(s) may not be able to conduct an effective search, and the

individual's request may be denied due to lack of specificity or lack of compliance with applicable regulations.

CONTESTING RECORD PROCEDURES:

For records covered by the Privacy Act or covered JRA records, individuals may make a request for amendment or correction of a record of the Department about the individual by writing directly to the Department component that maintains the record, unless the record is not subject to amendment or correction. The request should identify each particular record in question, state the amendment or correction desired, and state why the individual believes that the record is not accurate, relevant, timely, or complete. The individual may submit any documentation that would be helpful. If the individual believes that the same record is in more than one system of records, the request should state that and be addressed to each component that maintains a system of records containing the record. Even if neither the Privacy Act nor the Judicial Redress Act provide a right of access, individuals may seek to amend records following the "access procedures" above. DHS/OIDO, in its discretion, may choose to make the requested amendment. However, neither this system of records notice, nor DHS/OIDO making a requested amendment, confers to individuals any right to access, contest, or amend records not covered by the Privacy Act or JRA.

NOTIFICATION PROCEDURES:

See "Record Access Procedures" above.

EXEMPTIONS PROMULGATED FOR THE SYSTEM:

The Secretary of Homeland Security, pursuant to 5 U.S.C. 552a(k)(2) and (k)(5), has exempted this system from the following provisions of the Privacy Act, 5 U.S.C. 552a(c)(3); (d); (e)(1), (e)(4)(G), (e)(4)(H), (e)(4)(I); and (f). Additionally, when this system receives a record from another system exempted in that source system under 5 U.S.C. 552a(j)(2), (k)(2), and (k)(5), DHS will claim the same exemptions for those records that are claimed for the original primary systems of records from which they originated and claims any additional exemptions set forth here.

HISTORY:

None.

Lynn Parker Dupree,

Chief Privacy Officer, U.S. Department of Homeland Security.

[FR Doc. 2021-18798 Filed 9-2-21; 8:45 am]

BILLING CODE 4410-10-P

DEPARTMENT OF HOMELAND SECURITY**Transportation Security Administration****Extension of Agency Information Collection Activity Under OMB Review: Exercise Information System**

AGENCY: Transportation Security Administration, DHS.

ACTION: 30-Day notice.

SUMMARY: This notice announces that the Transportation Security Administration (TSA) has forwarded the Information Collection Request (ICR), Office of Management and Budget (OMB) control number 1652-0057, abstracted below, to OMB for review and approval of an extension of the currently approved collection under the Paperwork Reduction Act (PRA). The ICR describes the nature of the information collection and its expected burden for the TSA Exercise Information System (EXIS®). EXIS® is a web portal designed to serve stakeholders in the transportation industry in regard to security training exercises. EXIS® provides stakeholders with transportation security exercise scenarios and objectives, best practices and lessons learned, and a repository of the user's own historical exercise data for use in future exercises. It also allows stakeholders to design and evaluate their own security exercises based on the unique needs of their specific transportation mode or method of operation. The use of, and submission of information into, EXIS® is completely voluntary.

DATES: Send your comments by October 4, 2021. A comment to OMB is most effective 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 Review—Open for Public Comments" or by using the find function.

FOR FURTHER INFORMATION CONTACT: Christina A. Walsh, TSA PRA Officer, Information Technology (IT), TSA-11, Transportation Security Administration, 6595 Springfield Center Drive, Springfield, VA 20598-6011; telephone (571) 227-2062; email TSAPRA@tsa.dhs.gov.

SUPPLEMENTARY INFORMATION:

TSA published a **Federal Register** notice, with a 60-day comment period

soliciting comments, of the following collection of information on May 3, 2021, 86 FR 23419.

Comments Invited

In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*), 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 OMB control number. The ICR documentation will be available at <http://www.reginfo.gov> upon its submission to OMB. Therefore, in preparation for OMB review and approval of the following information collection, TSA is soliciting comments to—

(1) Evaluate whether the proposed information requirement is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(2) Evaluate the accuracy of the agency's estimate of the burden;

(3) Enhance the quality, utility, and clarity of the information to be collected; and

(4) Minimize the burden of the collection of information on those who are to respond, including using appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

Information Collection Requirement

Title: EXIS®.

Type of Request: Extension of a currently approved collection.

OMB Control Number: 1652-0057.

Form(s): NA.

Affected Public: Transportation System Sector.

Abstract: EXIS® is a voluntary, online tool developed by TSA to support the mission of a program developed and implemented by TSA to fulfill requirements of the *Implementing Recommendations of the 9/11 Commission Act of 2007* concerning security exercises.¹ These statutory programs led to the development of the Intermodal Security Training Exercise Program (I-STEP) for the Transportation Systems Sector (TSS). Within the I-STEP program, EXIS® is an interactive resource for the TSS.

Number of Respondents: 14,700.

¹ See Public Law 110-53 (121 Stat. 255; Aug 3, 2007) at secs. 1407 (public transportation, codified at 6 U.S.C. 1136(a)), 1516 (railroads, codified at 6 U.S.C. 1166), and 1533 (over-the-road buses, codified at 6 U.S.C. 1183).

Estimated Annual Burden Hours: An estimated 7,091 hours annually.

Christina A. Walsh,

TSA Paperwork Reduction Act Officer, Office of Information Technology.

[FR Doc. 2021-19021 Filed 9-2-21; 8:45 am]

BILLING CODE 9110-05-P

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

[Docket No. FR-7034-N-50]

30-Day Notice of Proposed Information Collection: Section 811 Project Rental Assistance for Persons with Disabilities; OMB Control No.: 2502-0608

AGENCY: Office of the Chief Information Officer, HUD.

ACTION: Notice.

SUMMARY: HUD has submitted the proposed information collection requirement described below to the Office of Management and Budget (OMB) for review, in accordance with the Paperwork Reduction Act. The purpose of this notice is to allow for an additional 30 days of public comment. Please disregard the 60-Day Notice that was published on August 17, 2021. This 30-Day Notice corresponds with the 60-Day Notice published on December 11, 2020.

DATES: Comments Due Date: October 4, 2021.

ADDRESSES: Interested persons are invited to submit comments regarding this proposal. 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/StartPrintedPage15501PRAMain. 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: Colette Pollard, Reports Management Officer, QDAM, Department of Housing and Urban Development, 451 7th Street SW, Washington, DC 20410; email Colette.Pollard@hud.gov or telephone 202-402-3400. This is not a toll-free number. Persons with hearing or speech impairments may access this number through TTY by calling the toll-free Federal Relay Service at (800) 877-8339.

Copies of available documents submitted to OMB may be obtained from Ms. Pollard.

SUPPLEMENTARY INFORMATION: This notice informs the public that HUD has

submitted to OMB a request for approval of the information collection described in Section A. The **Federal Register** notice that solicited public comment on the information collection for a period of 60 days was published on December 11, 2020 at 85 FR 80133.

A. Overview of Information Collection

Title of Information Collection: Section 811 Project Rental Assistance for Persons with Disabilities.

OMB Approval Number: 2502–0608.

Type of Request: Reinstatement of an expired collection.

Form Number: SF–424, SF–LLL, HUD–2880, HUD–92235, HUD–92236, HUD–92237, HUD–92238, HUD–92240, HUD–92239, HUD–92241, HUD–92243, HUD–93205.

Description of the need for the information and proposed use: The collection of this information is necessary to the Department to assist HUD in determining applicant eligibility and capacity to award and administer the HUD PRA funds within statutory and program criteria. A thorough evaluation of an applicant’s submission is necessary to protect the Government’s financial interest.

Respondents: Business or other for-profit State, Local or Tribal Government, Not-for-profit institutions.

Estimated Number of Respondents: 2,285.

Estimated Number of Responses: 2,375.

Frequency of Response: Annually or quarterly.

Average Hours per Response: Varies from 10 minutes to 20 hours.

Total Estimated Burden: 4,248.

B. Solicitation of Public Comment

This notice is soliciting comments from members of the public and affected parties concerning the collection of information described in Section A on the following:

(1) Whether the proposed 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 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 those who are to respond, including through the use of appropriate automated collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

(5) 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.

HUD encourages interested parties to submit comment in response to these questions.

C. Authority

Section 3507 of the Paperwork Reduction Act of 1995, 44 U.S.C. 3507.

Colette Pollard,

Department Reports Management Officer, Office of the Chief Information Officer.

[FR Doc. 2021–19076 Filed 9–2–21; 8:45 am]

BILLING CODE 4210–67–P

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

[Docket No. FR–7034–N–48]

30-Day Notice of Proposed Information Collection: Production of Material or Provision of Testimony in Response to Demands in Legal Proceedings Among Private Litigants OMB Control No.: 2510–0014

AGENCY: Office of the Chief Information Officer, HUD.

ACTION: Notice.

SUMMARY: HUD is seeking approval from the Office of Management and Budget (OMB) for the information collection described below. In accordance with the Paperwork Reduction Act, HUD is requesting comment from all interested parties on the proposed collection of information. The purpose of this notice is to allow for 30 days of public comment.

DATES: *Comments Due Date:* October 4, 2021.

ADDRESSES: Interested persons are invited to submit comments regarding this proposal. Written comments and recommendations for the proposed information collection should be sent within 30 days of publication of this

notice to *OIRA_submission@omb.eop.gov* or *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:

Anna P. Guido, Reports Management Officer, QMAC, Department of Housing and Urban Development, 451 7th Street SW, Washington, DC 20410; email her at *Anna.P.Guido@hud.gov* or telephone 202–402–5535. This is not a toll-free number. Person with hearing or speech impairments may access this number through TTY by calling the toll-free Federal Relay Service at (800) 877–8339. Copies of available documents submitted to OMB may be obtained from Ms. Guido.

SUPPLEMENTARY INFORMATION: This notice informs the public that HUD is seeking approval from OMB for the information collection described in Section A.

The **Federal Register** notice that solicited public comment on the information collection for a period of 60 days was published on June 14, 2021 at 86 FR 31521.

A. Overview of Information Collection

Title of Information Collection: Production of Material or Provision of Testimony in Response to Demands in Legal Proceedings Among Private Litigants.

OMB Approval Number: 2510–0014.

Type of Request: Extension of a currently approved collection.

Form Number: HUD–11 with instruction, HUD–11–SP con instrucciones.

Description of the need for the information and proposed use: Section 15.203 of HUD’s regulations in 24 CFR specify the manner in which demands for documents and testimony from the Department should be made. Providing the information specified in 24 CFR 15.203 allows the Department to more promptly identify documents and testimony which a requestor may be seeking and determine whether the Department will be able to produce such documents and testimony.

Information collection	Number of respondents	Frequency of response	Responses per annum	Burden hour per response	Annual burden hours	Hourly cost per response	Annual cost
§ 15.203	106.00	1.00	106.00	1.50	159.00	\$53.00	\$8,427.00

B. Solicitation of Public Comment

This notice is soliciting comments from members of the public and affected parties concerning the collection of information described in Section A on the following:

- (1) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;
- (2) If the information will be processed and used in a timely manner;
- (3) The accuracy of the agency's estimate of the burden of the proposed collection of information;
- (4) Ways to enhance the quality, utility, and clarity of the information to be collected; and
- (5) Ways to minimize the burden of the collection of information on those who are to respond; including through the use of appropriate automated collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

HUD encourages interested parties to submit comment in response to these questions.

C. Authority

Section 3507 of the Paperwork Reduction Act of 1995, 44 U.S.C. chapter 35.

Anna P. Guido,

*Department Reports Management Officer,
Office of the Chief Information Officer.*

[FR Doc. 2021-19083 Filed 9-2-21; 8:45 am]

BILLING CODE 4210-67-P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[FWS-R8-ES-2021-N180;
FXES1113080000-212-FF08E00000]

**Endangered and Threatened Species;
Receipt of Recovery Permit
Applications**

AGENCY: Fish and Wildlife Service,
Interior.

ACTION: Notice of receipt of permit applications; request for comments.

SUMMARY: We, the U.S. Fish and Wildlife Service, have received applications for permits to conduct activities intended to enhance the propagation or survival of endangered or threatened species under the Endangered Species Act. We invite the public and local, State, Tribal, and Federal agencies to comment on these applications. Before issuing any of the requested permits, we will take into consideration any information that we receive during the public comment period.

DATES: We must receive your written comments on or before October 4, 2021.

ADDRESSES:

Document availability and comment submission: Submit requests for copies of the applications and related documents and submit any comments by one of the following methods. All requests and comments should specify the applicant name(s) and application number(s) (e.g., TEXXXXXX).

- *Email:* permitsr8es@fws.gov.
- *U.S. Mail:* Susie Tharratt, Regional Recovery Permit Coordinator, U.S. Fish and Wildlife Service, 2800 Cottage Way, Room W-2606, Sacramento, CA 95825.

FOR FURTHER INFORMATION CONTACT: Susie Tharratt, via phone at 760-414-6561, via email at permitsr8es@fws.gov, or via the Federal Relay Service at 1-800-877-8339 for TTY assistance.

SUPPLEMENTARY INFORMATION: We, the U.S. Fish and Wildlife Service, invite the public to comment on applications for permits under section 10(a)(1)(A) of the Endangered Species Act, as amended (ESA; 16 U.S.C. 1531 *et seq.*). The requested permits would allow the applicants to conduct activities intended to promote recovery of species that are listed as endangered or threatened under the ESA.

Background

With some exceptions, the ESA prohibits activities that constitute take

of wildlife species listed as endangered and, by regulation, certain wildlife species listed as threatened unless a Federal permit is issued that allows such activity. The ESA's definition of "take" includes such activities as pursuing, harassing, trapping, capturing, or collecting, in addition to hunting, shooting, harming, wounding, or killing.

A recovery permit issued by us under section 10(a)(1)(A) of the ESA authorizes the permittee to conduct activities with endangered or threatened species for scientific purposes that promote recovery or for enhancement of propagation or survival of the species. These activities often include such prohibited actions as capture and collection. Our regulations implementing section 10(a)(1)(A) for these permits are found in the Code of Federal Regulations at 50 CFR 17.22 for endangered wildlife species, 50 CFR 17.32 for threatened wildlife species, 50 CFR 17.62 for endangered plant species, and 50 CFR 17.72 for threatened plant species.

Permit Applications Available for Review and Comment

Proposed activities in the following permit requests are for the recovery and enhancement of propagation or survival of the species in the wild. The ESA requires that we invite public comment before issuing these permits. Accordingly, we invite local, State, Tribal, Federal agencies and the public to submit written data, views, or arguments with respect to these applications. The comments and recommendations that will be most useful and likely to influence agency decisions are those supported by quantitative information or studies.

Application No.	Applicant, city, state	Species	Location	Take activity	Permit action
ES-839480	Richard Zembal, Laguna Hills, California.	<ul style="list-style-type: none"> • California least tern (<i>Sterna antillarum browni</i>). • Least Bell's vireo (<i>Vireo bellii pusillus</i>). • Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>). • San Bernardino Merriam's kangaroo rat (<i>Dipodomys merriami parvus</i>). • Stephens' kangaroo rat (<i>Dipodomys stephensi</i> (incl. <i>D. cascus</i>)). 	CA	Play taped vocalization, monitor nests, remove brown-headed cowbird (<i>Molothrus ater</i>) eggs and chicks from parasitized nests, capture, handle, band, remove from wild, translocate, and release.	Renew and Amend.

Application No.	Applicant, city, state	Species	Location	Take activity	Permit action
PER0016953	Jim Rocks, San Diego, California.	<ul style="list-style-type: none"> • Quino checkerspot butterfly (<i>Euphydryas editha quino</i>). • Conservancy fairy shrimp (<i>Branchinecta conservatio</i>). • Longhorn fairy shrimp (<i>Branchinecta longiantenna</i>). • San Diego fairy shrimp (<i>Branchinecta sandiegonensis</i>). • Riverside fairy shrimp (<i>Streptocephalus woottoni</i>). • Vernal pool tadpole shrimp (<i>Lepidurus packardii</i>). 	CA	Pursue, capture, handle, collect vouchers, and release.	Renew.
PER0016955	Melanie Rocks, San Diego, California.	<ul style="list-style-type: none"> • Quino checkerspot butterfly (<i>Euphydryas editha quino</i>). • Conservancy fairy shrimp (<i>Branchinecta conservatio</i>). • Longhorn fairy shrimp (<i>Branchinecta longiantenna</i>). • San Diego fairy shrimp (<i>Branchinecta sandiegonensis</i>). • Riverside fairy shrimp (<i>Streptocephalus woottoni</i>). • Vernal pool tadpole shrimp (<i>Lepidurus packardii</i>). 	CA	Pursue, capture, handle, collect vouchers, and release.	Renew.
PER0017052	Bio-Studies, Inc., San Diego, California.	<ul style="list-style-type: none"> • <i>Monardella viminea</i> (<i>M. linoidea</i> subsp. v.) (willow monardella). • <i>Arctostaphylos glandulosa</i> subsp. <i>crassifolia</i> (Del Mar manzanita). • <i>Chorizanthe orcuttiana</i> (Orcutt's spineflower). • <i>Fremontodendron mexicanum</i> (Mexican flannelbush). • <i>Ambrosia pumila</i> (San Diego ambrosia). • <i>Eryngium aristulatum</i> var. <i>parishii</i> (San Diego button-celery). • <i>Pogogyne abramsii</i> (San Diego mesa mint). • <i>Orcuttia californica</i> (California Orcutt grass). • <i>Chloropyron maritimum</i> subsp. <i>maritimum</i> (<i>Cordylanthus maritimus</i> subsp. <i>maritimus</i>) (salt marsh bird's beak). 	CA	Remove and reduce to possession from lands under Federal jurisdiction.	Renew.
PER0017053	Tansley Team, Inc., Sheridan, California.	<ul style="list-style-type: none"> • Conservancy fairy shrimp (<i>Branchinecta conservatio</i>). • Longhorn fairy shrimp (<i>Branchinecta longiantenna</i>). • San Diego fairy shrimp (<i>Branchinecta sandiegonensis</i>). • Riverside fairy shrimp (<i>Streptocephalus woottoni</i>). • Vernal pool tadpole shrimp (<i>Lepidurus packardii</i>). • Solano grass (<i>Tuctoria mucronata</i>). 	CA	Capture, handle, collect vouchers, identify eggs, hydrate, release, and remove and reduce to possession from lands under Federal jurisdiction.	Renew.
ES-69046B	Jim Asmus, Vista, California.	<ul style="list-style-type: none"> • San Diego fairy shrimp (<i>Branchinecta sandiegonensis</i>). • Riverside fairy shrimp (<i>Streptocephalus woottoni</i>). 	CA	Capture, handle, collect vouchers, and release.	Renew.

Application No.	Applicant, city, state	Species	Location	Take activity	Permit action
ES-796271	Shana Dodd, San Diego, California.	<ul style="list-style-type: none"> Pacific pocket mouse (<i>Perognathus longimembris pacificus</i>). San Bernardino Merriam's kangaroo rat (<i>Dipodomys merriami parvus</i>). 	CA	Capture, handle, mark, and release.	Renew.
ES-90002A	Todd Wong, Sacramento, California.	<ul style="list-style-type: none"> California tiger salamander (Santa Barbara County and Sonoma County distinct population segments (DPSs)) (<i>Ambystoma californiense</i>). Conservancy fairy shrimp (<i>Branchinecta conservatio</i>). Longhorn fairy shrimp (<i>Branchinecta longiantenna</i>). San Diego fairy shrimp (<i>Branchinecta sandiegonensis</i>). Riverside fairy shrimp (<i>Streptocephalus woottoni</i>). Vernal pool tadpole shrimp (<i>Lepidurus packardii</i>). 	CA, OR	Capture, handle, collect vouchers, and release.	Renew.
ES-61175B	Lindsay Willrick, San Diego, California.	<ul style="list-style-type: none"> Quino checkerspot butterfly (<i>Euphydryas editha quino</i>). 	CA	Pursue	Renew.
ES-749872	David Germano, Bakersfield, California.	<ul style="list-style-type: none"> Blunt-nosed leopard lizard (<i>Gambelia silus</i>). Fresno kangaroo rat (<i>Dipodomys nitratooides exilis</i>). Pacific pocket mouse (<i>Perognathus longimembris pacificus</i>). Tipton kangaroo rat (<i>Dipodomys nitratooides nitratooides</i>). 	CA	Capture, handle, mark, and release.	Renew.
ES-27460A	Brian Zitt, Huntington Beach, California.	<ul style="list-style-type: none"> Tidewater goby (<i>Eucyclogobius newberryi</i>). Arroyo (=arroyo southwestern) toad (<i>Anaxyrus californicus</i>). Unarmored threespine stickleback (<i>Gasterosteus aculeatus williamsoni</i>). Mountain yellow-legged frog (southern California distinct population segment (DPS)) (<i>Rana muscosa</i>). 	CA	Capture, handle, and release ...	Renew.
ES-61720B	Resource Conservation District of Santa Cruz County, Capitola, California.	<ul style="list-style-type: none"> California tiger salamander (Santa Barbara County and Sonoma County distinct population segments (DPSs)) (<i>Ambystoma californiense</i>). Santa Cruz long-toed salamander (<i>Ambystoma macrodactylum croceum</i>). 	CA	Capture, handle, collect voucher or tissue, mark, release, and restore habitat.	Renew.

Public Availability of Comments

Written comments we receive become part of the record associated with this action. 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 request in your comment that we withhold your personal identifying information from public review, we cannot guarantee that we

will be able to do so. All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public disclosure in their entirety.

Next Steps

If we decide to issue permits to any of the applicants listed in this notice, we will publish a notice in the **Federal Register**.

Authority

We publish this notice under section 10(c) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Peter Erickson,

Acting Regional Ecological Services Program Leader, California—Great Basin Region 10 (formerly Pacific Southwest Regional Office—Region 8).

[FR Doc. 2021-19137 Filed 9-2-21; 8:45 am]

BILLING CODE 4333-15-P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[FWS-R1-ES-2021-N186;
FXES11130100000-212-FF01E00000]

Endangered Species; Receipt of Recovery Permit Applications

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of receipt of permit applications; request for comments.

SUMMARY: We, the U.S. Fish and Wildlife Service, have received applications for permits to conduct activities intended to enhance the propagation and survival of endangered species under the Endangered Species Act of 1973, as amended. We invite the public and local, State, Tribal, and Federal agencies to comment on these applications. Before issuing the requested permits, we will take into consideration any information that we receive during the public comment period.

DATES: We must receive your written comments on or before October 4, 2021.

ADDRESSES: *Document availability and comment submission:* Submit a request for a copy of the application and related documents and submit any comments by one of the following methods. All requests and comments should specify the applicant name and application number (e.g., Dana Ross TE-08964A-2):

- *Email:* permitsR1ES@fws.gov.
- *U.S. Mail:* Marilet Zablan, Program Manager, Restoration and Endangered Species Classification, Ecological Services, U.S. Fish and Wildlife Service, Portland Regional Office, 911 NE 11th Avenue, Portland, OR 97232-4181.

FOR FURTHER INFORMATION CONTACT: Colleen Henson, Regional Recovery Permit Coordinator, Ecological Services, (503) 231-6131 (phone); permitsR1ES@fws.gov (email). Individuals who are hearing or speech impaired may call the Federal Relay Service at 1-800-877-8339 for TTY assistance.

SUPPLEMENTARY INFORMATION: We, the U.S. Fish and Wildlife Service, invite the public to comment on applications for permits under section 10(a)(1)(A) of the Endangered Species Act, as amended (ESA; 16 U.S.C. 1531 *et seq.*). The requested permits would allow the applicants to conduct activities intended to promote recovery of species that are listed as endangered under the ESA.

Background

With some exceptions, the ESA prohibits activities that constitute take of listed species unless a Federal permit is issued that allows such activity. The ESA’s definition of “take” includes such activities as pursuing, harassing, trapping, capturing, or collecting, in addition to hunting, shooting, harming, wounding, or killing.

A recovery permit issued by us under section 10(a)(1)(A) of the ESA authorizes the permittee to conduct activities with endangered or threatened species for scientific purposes that promote recovery or for enhancement of propagation or survival of the species. These activities often include such prohibited actions as capture and collection. Our regulations implementing section 10(a)(1)(A) for these permits are found in the Code of Federal Regulations (CFR) at 50 CFR 17.22 for endangered wildlife species, 50 CFR 17.32 for threatened wildlife species, 50 CFR 17.62 for endangered plant species, and 50 CFR 17.72 for threatened plant species.

Permit Applications Available for Review and Comment

Proposed activities in the following permit requests are for the recovery and enhancement of propagation or survival of the species in the wild. The ESA requires that we invite public comment before issuing these permits. Accordingly, we invite local, State, Tribal, and Federal agencies and the public to submit written data, views, or arguments with respect to these applications. The comments and recommendations that will be most useful and likely to influence agency decisions are those supported by quantitative information or studies.

Application No.	Applicant, city, state	Species	Location	Take activity	Permit action
PER0014798	Montana Fish, Wildlife and Parks, Libby, MT.	Kootenai River white sturgeon (<i>Acipenser transmontanus</i>).	Montana ...	Harass by survey, capture, handle, hold, mark, biosample, tag, and release.	Renew and Amend.
PER0017915	Hawaii Wildlife Fund, Paia, HI.	Hawksbill sea turtle (<i>Eretmochelys imbricata</i>); Olive ridley sea turtle (<i>Lepidochelys olivacea</i>).	Hawaii	Harass by survey, monitor nests, capture, handle, tag, bio-sample, attach transmitters, photograph, place temperature data loggers in nests, excavate hatched nests, relocate nests (hawksbill sea turtles only), and salvage.	Renew.

Public Availability of Comments

Written comments we receive become part of the administrative record associated with this action. 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 request in your comment that we withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so. All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public disclosure in their entirety.

Next Steps

If we decide to issue a permit to an applicant listed in this notice, we will publish a notice in the **Federal Register**.

Authority

We publish this notice under section 10(c) of the Endangered Species Act of

1973, as amended (16 U.S.C. 1531 *et seq.*).

Katherine Norman,

Assistant Regional Director—Ecological Services, Pacific Region.

[FR Doc. 2021–19136 Filed 9–2–21; 8:45 am]

BILLING CODE 4333–15–P

DEPARTMENT OF THE INTERIOR

Bureau of Ocean Energy Management

[Docket No.: BOEM–2021–0052]

Notice of Intent To Prepare an Environmental Impact Statement for the Proposed Sunrise Wind Farm Project on the Northeast Atlantic Outer Continental Shelf; Extension of Comment Period and Corrections

AGENCY: Bureau of Ocean Energy Management, Interior.

ACTION: Notice; extension of comment period and corrections.

SUMMARY: On August 31, 2021, the Bureau of Ocean Energy Management (BOEM) published the “Notice of Intent to Prepare an Environmental Impact Statement for the Proposed Sunrise Wind Farm Project on the Northeast Atlantic Outer Continental Shelf” in the *Federal Register* (86 FR 48763). The NOI announced that BOEM will prepare an environmental impact statement (EIS) as part of its review of a construction and operations plan submitted by Sunrise Wind LLC and provided project information. The NOI stated that comments received by September 30, 2021, will be considered. This notice corrects two statements in the NOI regarding the agreement with the New York State Energy Research and Development Authority (NYSERDA) and the proposed foundation types. In addition, this notice extends the comment period.

DATES: Comments received by October 4, 2021, will be considered.

ADDRESSES: Comments must be submitted in writing in any of the following ways:

- Delivered by mail or delivery service, enclosed in an envelope labeled “Sunrise Wind COP EIS,” and addressed to Program Manager, Office of Renewable Energy, Bureau of Ocean Energy Management, 45600 Woodland Road, Sterling, Virginia 20166; or
- *Through the regulations.gov web portal:* Navigate to <http://www.regulations.gov> and search for Docket No. BOEM–2021–0052. Click on the “Comment Now!” button to the right of the document link. Enter your

information and comment, then click “Submit.”

FOR FURTHER INFORMATION CONTACT:

Michelle Morin, BOEM Office of Renewable Energy Programs, 45600 Woodland Road, Sterling, Virginia 20166, (703) 787–1722 or michelle.morin@boem.gov.

SUPPLEMENTARY INFORMATION:

Technical Corrections

In the *Federal Register* dated August 31, 2021, on page 48764 in the first column, line 64, under the heading “Purpose and Need for the Proposed Action,” BOEM originally included the following sentences: “This Project will help the State of New York achieve the aggressive clean energy goals set forth in the Clean Energy Standards Order and the Climate Leadership and Community Protection Act through a power purchase agreement (PPA) contract with the New York State Energy Research and Development Authority to deliver 880 MW of offshore wind energy. Sunrise Wind may modify its PPA contract with NYSERDA to deliver up to 924 MW of offshore wind energy.”

BOEM is replacing that language with these corrected sentences: “This Project will help the State of New York achieve the aggressive clean energy goals set forth in the Clean Energy Standards Order and the Climate Leadership and Community Protection Act through an Offshore Wind Renewable Energy Certificate Purchase and Sale Agreement (OREC) with the New York State Energy Research and Development Authority to deliver 880 MW of offshore wind energy. Sunrise Wind has the ability under the OREC to deliver a maximum project capacity of 924 MW of offshore wind energy.”

In the same edition of the *Federal Register*, on page 48765, first column, line 2, under the heading “Preliminary Proposed Action and Alternatives,” (which begins on previous page), BOEM included the sentence: “The wind turbine generator foundations may be monopiles or gravity base structures with associated support and access structures, in some combination or entirely of one kind.”

BOEM is replacing that language with this corrected sentence: “The wind turbine generators will use monopile foundations and the OCS–DC will be on a piled jacket foundation.”

William Yancey Brown,

Chief Environmental Officer, Bureau of Ocean Energy Management.

[FR Doc. 2021–19143 Filed 9–2–21; 8:45 am]

BILLING CODE 4310–MR–P

DEPARTMENT OF JUSTICE

Antitrust Division

United States v. Zen-Noh Grain Corporation, et al.; Response to Public Comments

Pursuant to the Antitrust Procedures and Penalties Act, 15 U.S.C. 16(b)–(h), the United States hereby publishes below the Response to Public Comments on the Proposed Final in *United States v. Zen-Noh Grain Corporation, et al.*, Civil Action No. 1:21–cv–01482–RJL, which was filed in the United States District Court for the District of Columbia on August 30, 2021, together with a copy of the two comments received by the United States.

A copy of the comments and the United States’ response to the comments is available at <https://www.justice.gov/atr/case/us-v-zen-noh-grain-corp-and-bunge-north-america-inc>. Copies of the comments and the United States’ response are available for inspection at the Office of the Clerk of the United States District Court for the District of Columbia. Copies of these materials may also be obtained from the Antitrust Division upon request and payment of the copying fee set by Department of Justice regulations.

Suzanne Morris,

Chief, Premerger and Division Statistics, Antitrust Division.

United States District Court for the District of Columbia

United States of America, Plaintiff, v. Zen-Noh Grain Corp., and Bunge North America, Inc., Defendants.

Civil Action No.:1:21–cv–01482 (RJL)

Response of Plaintiff United States to Public Comments on the Proposed Final Judgment

Pursuant to the requirements of the Antitrust Procedures and Penalties Act (the “APPA” or “Tunney Act”), 15 U.S.C. 16, the United States hereby responds to the two public comments received regarding the proposed Final Judgment in this case. After careful consideration of the submitted comments, the United States continues to believe that the divestiture required by the proposed Final Judgment provides an effective and appropriate remedy for the antitrust violation alleged in the Complaint and is therefore in the public interest. The United States will move the Court for entry of the proposed Final Judgment after the public comments and this response have been published as required by 15 U.S.C. 16(d).

I. Procedural History

On April 21, 2020, Zen-Noh Grain Corp. (“ZGC”) agreed to acquire 35 operating and 13 idled U.S. grain elevators from Bunge North America, Inc. (“Bunge”) (“collectively, “Defendants”) for approximately \$300 million (“the Transaction”). The United States filed a civil antitrust Complaint on June 1, 2021, seeking to enjoin the proposed Transaction. The Complaint alleges that the likely effect of the Transaction would be to substantially lessen competition for purchases of corn and soybeans in nine geographic areas of the United States in violation of Section 7 of the Clayton Act, 15 U.S.C. 18. *See* Dkt. No.1.

At the same time the Complaint was filed, the United States filed a proposed Final Judgment and an Asset Preservation and Hold Separate Stipulation and Order (“Stipulation and Order”) in which the United States and Defendants consent to entry of the proposed Final Judgment after compliance with the requirements of the APPA. *See* Dkt. Nos. 2–2, 2–1. The proposed Final Judgment requires the Defendants to divest certain grain elevators and related assets of Bunge or ZGC affiliate CGB Enterprises, Inc. (“the Divestiture Assets”) to Viserion Grain LLC and Viserion International Holdco LLC (“Viserion”), or to another acquirer or acquirers acceptable to the United States, within 30 calendar days after entry of the Stipulation and Order.

Pursuant to the APPA’s requirements, on June 1, 2021, the United States also filed a Competitive Impact Statement describing the transaction and the proposed Final Judgment. *See* Dkt. No. 3. On June 8, 2021, the United States published the Complaint, proposed Final Judgment, and Competitive Impact Statement in the **Federal Register**, *see* 86 FR 30479 (June 8, 2021), and caused notice regarding the same, together with directions for the submission of written comments relating to the proposed Final Judgment, to be published in *The Washington Post* and *St. Louis Post-Dispatch*, from June 4, 2021, through June 10, 2021. On July 1, 2021, the Court entered the Stipulation and Order. *See* Dkt. No. 14. On July 7, 2021, Defendant ZGC effectuated the divestiture contemplated by the proposed Final Judgment by selling the prescribed assets to Viserion. The 60-day period for public comment ended on August, 9, 2021. The United States received two comments, attached as Exhibits A and B.

II. The Complaint and the Amended Proposed Final Judgment

The Complaint alleges that ZGC’s proposed acquisition of certain grain elevator assets from Bunge would likely eliminate competition between the Defendants to purchase grain from farmers in numerous markets along the Mississippi River and its tributaries. In particular, the Complaint alleges that in nine geographic areas, a Bunge river elevator and a nearby ZGC (or ZGC affiliate CGB) elevator represent two of only a handful of grain purchasing alternatives for area farmers. In those nine geographic areas, ZGC and Bunge currently compete aggressively to win farmers’ business by offering better prices and more attractive amenities such as faster grain drop-off services and better grain grading. Unless remedied, the Transaction will eliminate competition between ZGC and Bunge in those locations in violation of Section 7 of the Clayton Act, 15 U.S.C. 18.

The proposed Final Judgment is designed to remedy the likely harm to competition alleged in the Complaint by requiring a divestiture that will establish an independent, economically viable competitor for the purchase of corn and soybeans in the nine affected geographic markets. The proposed Final Judgment requires the Defendants to divest nine elevators within 30 days after the entry of the Stipulation by the Court to Viserion or another acquirer or acquirers approved by the United States. In each of those nine geographic markets, a Bunge elevator competes head to head with one or more ZGC or CGB elevators.

The Divestiture Assets include the real property, buildings, facilities, and other structures associated with the nine grain elevators. The Divestiture Assets also encompass all existing grain inventories at the elevators, and all contracts and other agreements that relate exclusively to the elevators that will be divested.

The Divestiture Assets must be divested in such a way as to satisfy the United States in its sole discretion that the assets can and will be operated by the purchaser as a viable, ongoing business that can compete effectively in the market for the purchase of corn and the market for the purchase of soybeans. The Defendants proposed Viserion as the acquirer, and, after rigorous evaluation, the United States approved Viserion as the divestiture buyer.

The proposed Final Judgment allows the acquirer, at its option, to enter into a transition services agreement with Defendants for a period of up to six

months. As explained in the Competitive Impact Statement, the transition services covered by the proposed Final Judgment are those that might reasonably be necessary to ensure that an acquirer or acquirers can readily and promptly use the assets to compete in the relevant markets. *See* Dkt. No. 3 at 10 at 12.

III. Standard of Judicial Review

The Clayton Act, as amended by the APPA, requires that proposed consent judgments in antitrust cases brought by the United States be subject to a 60-day comment period, after which the Court shall determine whether entry of the proposed Final Judgment “is in the public interest.” 15 U.S.C. 16(e)(1). In making that determination, the Court, in accordance with the statute as amended in 2004, is required to consider:

(A) The competitive impact of such judgment, including termination of alleged violations, provisions for enforcement and modification, duration of relief sought, anticipated effects of alternative remedies actually considered, whether its terms are ambiguous, and any other competitive considerations bearing upon the adequacy of such judgment that the court deems necessary to a determination of whether the consent judgment is in the public interest; and

(B) the impact of entry of such judgment upon competition in the relevant market or markets, upon the public generally and individuals alleging specific injury from the violations set forth in the complaint including consideration of the public benefit, if any, to be derived from a determination of the issues at trial.

15 U.S.C. 16(e)(1)(A) & (B). In considering these statutory factors, the Court’s inquiry is necessarily a limited one as the government is entitled to “broad discretion to settle with the defendant within the reaches of the public interest.” *United States v. Microsoft Corp.*, 56 F.3d 1448, 1461 (D.C. Cir. 1995); *United States v. U.S. Airways Grp., Inc.*, 38 F. Supp. 3d 69, 75 (D.D.C. 2014) (explaining that the “court’s inquiry is limited” in APPA settlements); *United States v. InBev N.V./S.A.*, No. 08–1965 (JR), 2009 U.S. Dist. LEXIS 84787, at *3 (D.D.C. Aug. 11, 2009) (noting that a court’s review of a consent judgment is limited and only inquires “into whether the government’s determination that the proposed remedies will cure the antitrust violations alleged in the complaint was reasonable, and whether the mechanisms to enforce the final judgment are clear and manageable”).

Under the APPA, a court considers, among other things, the relationship between the remedy secured and the specific allegations in the government’s

complaint, whether the proposed Final Judgment is sufficiently clear, whether its enforcement mechanisms are sufficient, and whether it may positively harm third parties. *See Microsoft*, 56 F.3d at 1458–62. With respect to the adequacy of the relief secured by the proposed Final Judgment, a court may not “make de novo determination of facts and issues.” *United States v. W. Elec. Co.*, 993 F.2d 1572, 1577 (D.C. Cir. 1993) (quotation marks omitted); *see also Microsoft*, 56 F.3d at 1460–62; *United States v. Alcoa, Inc.*, 152 F. Supp. 2d 37, 40 (D.D.C. 2001); *United States v. Enova Corp.*, 107 F. Supp. 2d 10, 16 (D.D.C. 2000); *InBev*, 2009 U.S. Dist. LEXIS 84787, at *3. Instead, “[t]he balancing of competing social and political interests affected by a proposed antitrust consent decree must be left, in the first instance, to the discretion of the Attorney General.” *W. Elec. Co.*, 993 F.2d at 1577 (quotation marks omitted).

“The court should bear in mind the flexibility of the public interest inquiry: the court’s function is not to determine whether the resulting array of rights and liabilities is one that will best serve society, but only to confirm that the resulting settlement is within the reaches of the public interest.” *Microsoft*, 56 F.3d at 1460 (quotation marks omitted); *see also United States v. Deutsche Telekom AG*, No. 19–2232 (TJK), 2020 WL 1873555, at *7 (D.D.C. Apr. 14, 2020). More demanding requirements would “have enormous practical consequences for the government’s ability to negotiate future settlements,” contrary to congressional intent. *Microsoft*, 56 F.3d at 1456. “The Tunney Act was not intended to create a disincentive to the use of the consent decree.” *Id.*

The United States’ predictions about the efficacy of the remedy are to be afforded deference by the Court. *See, e.g., Microsoft*, 56 F.3d at 1461 (recognizing courts should give “due respect to the Justice Department’s . . . view of the nature of its case”); *United States v. Iron Mountain, Inc.*, 217 F. Supp. 3d 146, 152–53 (D.D.C. 2016) (“In evaluating objections to settlement agreements under the Tunney Act, a court must be mindful that [t]he government need not prove that the settlements will perfectly remedy the alleged antitrust harms[;] it need only provide a factual basis for concluding that the settlements are reasonably adequate remedies for the alleged harms.”) (internal citations omitted); *United States v. Republic Servs., Inc.*, 723 F. Supp. 2d 157, 160 (D.D.C. 2010) (noting “the deferential review to which the government’s proposed remedy is accorded”); *United States v. Archer-*

Daniels-Midland Co., 272 F. Supp. 2d 1, 6 (D.D.C. 2003) (“A district court must accord due respect to the government’s prediction as to the effect of proposed remedies, its perception of the market structure, and its view of the nature of the case.”). The ultimate question is whether “the remedies [obtained by the Final Judgment are] so inconsonant with the allegations charged as to fall outside of the ‘reaches of the public interest.’” *Microsoft*, 56 F.3d at 1461 (quoting *W. Elec. Co.*, 900 F.2d at 309).

Moreover, the Court’s role under the APPA is limited to reviewing the remedy in relationship to the violations that the United States has alleged in its complaint, and does not authorize the Court to “construct [its] own hypothetical case and then evaluate the decree against that case.” *Microsoft*, 56 F.3d at 1459; *see also U.S. Airways*, 38 F. Supp. 3d at 75 (noting that the court must simply determine whether there is a factual foundation for the government’s decisions such that its conclusions regarding the proposed settlements are reasonable); *InBev*, 2009 U.S. Dist. LEXIS 84787, at *20 (“[T]he ‘public interest’ is not to be measured by comparing the violations alleged in the complaint against those the court believes could have, or even should have, been alleged.”). Because the “court’s authority to review the decree depends entirely on the government’s exercising its prosecutorial discretion by bringing a case in the first place,” it follows that “the court is only authorized to review the decree itself,” and not to “effectively redraft the complaint” to inquire into other matters that the United States did not pursue. *Microsoft*, 56 F.3d at 1459–60.

In its 2004 amendments to the APPA, Congress made clear its intent to preserve the practical benefits of using consent judgments proposed by the United States in antitrust enforcement, Public Law 108–237, 221, and added the unambiguous instruction that “[n]othing in this section shall be construed to require the court to conduct an evidentiary hearing or to require the court to permit anyone to intervene.” 15 U.S.C. 16(e)(2); *see also U.S. Airways*, 38 F. Supp. 3d at 76 (indicating that a court is not required to hold an evidentiary hearing or to permit intervenors as part of its review under the APPA). This language explicitly wrote into the statute what Congress intended when it first enacted the APPA in 1974. As Senator Tunney explained: “[t]he court is nowhere compelled to go to trial or to engage in extended proceedings which might have the effect of vitiating the benefits of prompt and less costly settlement through the

consent decree process.” 119 Cong. Rec. 24,598 (1973) (statement of Sen. Tunney). “A court can make its public interest determination based on the competitive impact statement and response to public comments alone.” *U.S. Airways*, 38 F. Supp. 3d at 76 (citing *Enova Corp.*, 107 F. Supp. 2d at 17).

IV. Summary of the Comments and the United States’ Response

The United States received two public comments in response to the proposed Final Judgment: One from Missouri Attorney General Eric Schmitt and another from Mr. Mark Calmer, an Iowa farmer and small agricultural business owner. Consistent with the allegations in the United States’ Complaint, both comments express concern that ZGC’s proposed acquisition of certain Bunge elevators will reduce competition for the purchase of soybeans and corn along the Mississippi River. Missouri Attorney General Schmitt’s comment expresses support for the divestiture outlined in the proposed Final Judgment. Mr. Calmer’s comment does not express concerns about the adequacy of the divestiture outlined in the proposed Final Judgment nor concerns with Viserion as the proposed acquirer.

In his comment, Missouri Attorney General Schmitt emphasizes that, as highlighted in the Complaint, the Transaction would “eliminat[e] crucial competition” for the purchase of grain from farmers in Southeast Missouri. Attorney General Schmitt further states his support for the proposed Final Judgment, noting that “[i]f entered, the proposed judgment would replace the competition between Zen-Noh and Bunge by establishing an independent player in the market that will compete for the purchase of grain. This competition will help ensure that Missouri’s farmers receive a fair price for the crops that they sell.” *See Exhibit A.*

Mr. Calmer, a farmer located in Manson, Iowa, expresses concern about increasing concentration in a number of agricultural markets, including the grain export, beef packing, fertilizer and chemical, and seed industries. With respect to grain elevator operations along the Mississippi River, Mr. Calmer states that if the Transaction goes through, it will greatly reduce competition for grain purchases. Mr. Calmer does not discuss the terms of the proposed Final Judgment. *See Exhibit B.* The proposed Final Judgment will preserve competition for the purchase of grain: Where ZGC and Bunge elevators have overlapping draw areas with few competitors, one of their facilities will

be divested. In Iowa, for example, the parties are selling Bunge's elevator in McGregor to an independent competitor to maintain competition for farmers in that area.

Nothing in either comment warrants a change to the proposed Final Judgment or supports a conclusion that the proposed Final Judgment is not in the public interest. As required by the APPA, the comments, with the authors' contact information removed, and this response will be published in the **Federal Register**.

V. Conclusion

After careful consideration of the public comments, the United States continues to believe that the proposed Final Judgment provides an effective and appropriate remedy for the antitrust violation alleged in the Complaint and is therefore in the public interest. The United States will move this Court to enter the Final Judgment after the comments and this response are published as required by 15 U.S.C. 16(d).

Dated: August 30, 2021.

Respectfully submitted,

For Plaintiff United States of America

Jill Ptacek,

Attorney for the United States, U.S. Department of Justice, Antitrust Division, 450 Fifth Street NW, Suite 8000, Washington, DC 20530, Tel: (202) 307-6607, Email: jill.ptacek@usdoj.gov.

ATTORNEY GENERAL OF MISSOURI

ERIC SCHMITT

July 15, 2021

VIA ELECTRONIC MAIL

Robert Lepore, Esq.,
Chief, Transportation, Energy, and Agriculture Section, Antitrust Division, Department of Justice, 450 Fifth Street NW, Suite 8000, Washington, DC 20530, Robert.Lepore@usdoj.gov.

Re: *United States v. Zen-Noh Grain Corporation and Bunge North America, Inc.*, No. 1:21-cv-01482, Comments of Missouri Attorney General Eric Schmitt

Dear Mr. Lepore:

The farmers of Missouri rely on robust competition among purchasers of grain to obtain fair compensation for their crops. Without robust competition, the farmers' livelihood and their ability to continue supplying vital crops to our country are threatened.

The proposed acquisition by Zen-Noh Grain Corporation ("Zen-Noh") of grain elevators from Bunge North America, Inc. ("Bunge") poses an existential threat to the farmers of Missouri by eliminating crucial competition between Zen-Noh and Bunge for the purchase of corn and soybeans. Missouri farmers have expressed concern that, post-acquisition, Zen-Noh would control seven consecutive grain terminals along the lower

Mississippi River. Indeed, as the Antitrust Division notes in its Complaint, the acquisition would concentrate 95% (in 2019) of Pemiscot County's corn and soybean output within one buyer. In short, by eliminating one of the few buyers of grain in the Missouri Bootheel, the acquisition will lead to lower prices paid to Missouri farmers.

In light of the unacceptable threat to competition posed by the acquisition, I write on behalf of my constituents in Southeast Missouri to express my support for the proposed divestiture of grain elevators to a suitable buyer. If entered, the proposed judgment would replace the competition between Zen-Noh and Bunge by establishing an independent player in the market that will compete for the purchase of grain. This competition will help ensure that Missouri's farmers receive a fair price for the crops that they sell.

I respectfully request that the Court enter the proposed judgment to restore competition for the purchase of grain in Southeast Missouri.

Respectfully submitted,
Eric Schmitt,

Attorney General, State of Missouri, Supreme Court Building, 207 W. High Street, P.O. Box 899, Jefferson City, MO 65102, Phone: (573) 751-3321, Fax: (573) 751-0774, www.ago.mo.gov.

Robert Lepore, Chief, Transportation, Energy and Agriculture Section, Anti-Trust Division, United States Department of Justice, Suite 8000, Liberty Square Building, 450 Fifth Street NW, Washington, DC 20530

Dear Sir,

Thank you for inviting me as a farmer and Ag business owner to submit my concerns and comments to your department as invited in an article in the High Plains Journal dated June 7, 2021 regarding the Department of Justice and Zen-Noh. I appreciate your time and attention to this critical matter.

I started farming in 1972. We are an Iowa farming operation. Our background includes approximately 5000 acres of farmland, an Ag retail operation, an Ag drainage business and our son has a 500 head cattle feedlot operation.

We are part of the small businesses that made this country. We employ 12 full-time employees divided between the different entities. We also employ part-time help seasonally. For years, we have felt that Anti-Trust laws were not protecting our family operated Ag businesses.

Export Houses

When foreign companies align themselves with grain export houses, they don't have to offer competitive prices for our products. We need competition to keep prices competitive and allow for the average farm operation to have a profit. More grain dealers, more export houses, more packers, more fertilizer and chemical import companies are needed to keep the American farm engine running. We need free trade to keep our costs sustainable.

If export houses are monopolized along the Mississippi and other waterways, I can no longer bid multiple locations and discern competitive pricing. If the 48 Bunge elevator sales go through it greatly reduces our

competition for bids. By Zen-Noh purchasing those elevators, they no longer have to bid competitively from other export houses controlling a large market share. From where we sit on the farm, it appears they are exploiting grain merchandisers by limiting competition.

This isn't the only industry that we see Anti-Trust laws not being honored.

Cattle Industry

As we look at the cattle industry. There are basically 3 packers left. JBS, the Brazilian-owned and controlled packer is profiting \$1000 per head right now while the producer is losing \$200-\$400/head because our government has let the packers monopolize this industry. They don't have to bid up on cattle because they know they are the only game in town.

Fertilizer and Chemical Industries

Another instance is the fertilizer and chemical industry. The same thing has been allowed to happen, being controlled by 3 major companies. Last season we did have some relief because of foreign imports of fertilizer. However the MOSAIC company complained, filed a law-suit to lessen import by implementing strong tariffs. Our government officials went along with it without regard to the family farmer's struggle with prices. In less than a year, phosphorus fertilizer prices went from \$285/ton FOB Dubuque, Iowa on the Mississippi to \$645/ton. That is a 227% increase in less than 12 months.

Seed and Grain Industries

Another Ag sector being controlled is the seed industry. Foreign countries are buying up small and large seed companies. Look at Bayer (German owned), Syngenta (China owned), all monopolizing this critical industry while our government allows foreign ownership and control.

Non-Profit Organizations

Another thing happening in our area and across the United States is the activity of allowing Non-profit organizations to buy farmland. Non-profit organizations do not pay the state or federal taxes the average farm operation has to pay. Locally we are seeing the Latter Day Saints Church (Mormon) buying tillable and production farmland under the operating name of Deseret Trust Company. Other Non-profit entity names the Mormon church controls include Farm Reserve Incorporated. We have several young farmers in central Iowa trying to either get into farming or buy enough land to grow their operation large enough to sustain the business. They can not bid and win against these large Non-profits and their seemingly unlimited funds.

As you are probably aware, Bill Gates controls another Non-profit owning and controlling exorbitant amounts of farmland. These groups buy the land, raising the cash rent so high the young and local farmer can not get a foothold. It is a rare bank that is going to go along with the risk associated with a young farmer paying higher cash rent than is profitable. We, as local farmers, have to compete with these Non-profits and it is not a level playing field.

Non-profits are milking our state and federal governments out of approximately \$100-\$150/acre per year of state and local taxes. By our accounts, because these Non-profits do not pay the local and state taxes, their burden is passed along to the local farmer, smaller communities and rural areas.

It is time for an investigation into these Non-profit organizations

Steel Industry

Previous administrations have stopped foreign imports which caused Us steel prices to skyrocket as major suppliers were only in our country. This lack of competition has doubled the steel price—leading to increased burden on farming operations. We need both. We support competition.

Finally, please stop allowing our country to be sold piece by piece to foreign entities. It seems of national interest that foreign ownership of our resources is unwise for economic and security reasons. Family-owned, hard-working Ag business are giving up the fight and giving in to the pressure of foreign ownership and the dollars it represents. We support legislation that would limit foreign investors ownership and control of American farmland and the inputs to support the industry around it.

From where we sit, it would be easy to believe that large corporations are allowed to merge with other conglomerates to the benefit of the individuals, governments and share-holders while Americans are unprotected even though Anti-Trust laws have been established but seemingly unenforced and ignored.

Please understand the need to open up imports and free trade! We as farmers have to compete with our products being exported to foreign markets, while our side has controlled input prices by tariffs being leveled by our government siding with big business. We see the economic impact of our government allowing monopolies without regard to Anti-Trust laws.

I invite more discussion on these matters. Feel free to call my cell [redacted]. I also want to personally invite you to be on the grounds of our small business and operations. I would welcome the conversation.

Thank you,
Mark Calmer
[Redacted]

[FR Doc. 2021-19097 Filed 9-2-21; 8:45 am]

BILLING CODE 4410-11-P

DEPARTMENT OF JUSTICE

Antitrust Division

Notice Pursuant to the National Cooperative Research and Production Act of 1993—R Consortium, Inc.

Notice is hereby given that, on August 13, 2021, pursuant to Section 6(a) of the National Cooperative Research and Production Act of 1993, 15 U.S.C. 4301 *et seq.* (“the Act”), R Consortium, Inc. (“R Consortium”) has filed written notifications simultaneously with the

Attorney General and the Federal Trade Commission disclosing changes in its membership. The notifications were filed for the purpose of extending the Act’s provisions limiting the recovery of antitrust plaintiffs to actual damages under specified circumstances. Specifically, TIBCO Software Inc., Palo Alto, CA; and Moore Foundation, Palo Alto, CA, have withdrawn as parties to this venture.

No other changes have been made in either the membership or planned activity of the group research project. Membership in this group research project remains open, and R Consortium intends to file additional written notifications disclosing all changes in membership.

On September 15, 2015, R Consortium filed its original notification pursuant to Section 6(a) of the Act. The Department of Justice published a notice in the **Federal Register** pursuant to Section 6(b) of the Act on October 2, 2015 (80 FR 59815).

The last notification was filed with the Department on March 22, 2021. A notice was published in the **Federal Register** pursuant to Section 6(b) of the Act on April 8, 2021 (86 FR 18323).

Suzanne Morris,

Chief, Premerger and Division Statistics, Antitrust Division.

[FR Doc. 2021-19038 Filed 9-2-21; 8:45 am]

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DEPARTMENT OF JUSTICE

Federal Bureau of Investigation

[OMB Number: 1110-NEW]

Agency Information Collection Activities; Proposed eCollection, eComments Requested; Law Enforcement Suicide Data Collection

AGENCY: Federal Bureau of Investigation, Department of Justice.

ACTION: 60-Day notice.

SUMMARY: The Department of Justice, Federal Bureau of Investigation, Criminal Justice Information Services Division, will be submitting the following information collection request to the Office of Management and Budget for review and approval in accordance with the Paperwork Reduction Act of 1995.

DATES: Comments are encouraged and will be accepted for 60 days until November 2, 2021.

FOR FURTHER INFORMATION CONTACT: If you have additional comments especially on the estimated public burden or associated response time,

suggestions, or need a copy of the proposed information collection instrument with instructions or additional information, please contact Mrs. Amy C. Blasher, Unit Chief, Federal Bureau of Investigation, Criminal Justice Information Services Division, Module D-1, 1000 Custer Hollow Road, Clarksburg, West Virginia 26306; acblasher@fbi.gov.

SUPPLEMENTARY INFORMATION: Written comments and suggestions from the public and affected agencies concerning the proposed collection of information are encouraged. Your comments should address one or more of the following four points:

- Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the Federal Bureau of Investigation, including whether the information will have practical utility;
- Evaluate the accuracy of the agency’s estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;
- Evaluate how the quality, utility, and clarity of the information to be collected can be enhanced; and
- 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, *e.g.*, permitting electronic submission of responses.

Overview of This Information Collection

1. *Type of Information Collection:* Establishment of a New Collection.
2. *The Title of the Form/Collection:* Law Enforcement Suicide Data Collection.
3. *The agency form number, if any, and the applicable component of the Department sponsoring the collection:* There is no form number for this collection. The applicable component within the Department of Justice is the Criminal Justice Information Services Division, in the Federal Bureau of Investigation.
4. *Affected public who will be asked or required to respond, as well as a brief abstract:*
Primary: Law enforcement agencies.
Abstract: This collection is needed to collect data on incidents of law enforcement officer suicides and attempted suicides from law enforcement agencies, as defined by the *Law Enforcement Suicide Data Collection Act*.

5. *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond:* The Federal Bureau of Investigation Uniform Crime Reporting Program’s Law Enforcement Suicide Data Collection Estimation: It is estimated the Law Enforcement Suicide Data Collection will generate 250 responses per year with an estimated response time of 60 minutes per response.

6. *An estimate of the total public burden (in hours) associated with the collection:* There are approximately 450 hours, annual burden, associated with this information collection. This includes 200 hours of additional burden for agency feedback and development needs.

If additional information is required contact: Melody Braswell, Department Clearance Officer, United States Department of Justice, Justice Management Division, Policy and Planning Staff, Two Constitution Square, 145 N Street NE, 3E.405A, Washington, DC 20530.

Dated: August 31, 2021.

Melody Braswell,

Department Clearance Officer for PRA, U.S. Department of Justice.

[FR Doc. 2021–19095 Filed 9–2–21; 8:45 am]

BILLING CODE 4410–02–P

DEPARTMENT OF JUSTICE

Notice of Lodging of Proposed Consent Decree Under the Clean Air Act

On August 30, 2021, the Department of Justice lodged a Consent Decree with the United States District Court for the District of Arizona in *United States v. Gear Box Z, Inc.*, Civ. No. 3:20–08003–PCT–JJT.

The proposed Consent Decree settles claims brought by the United States for violations of the Clean Air Act arising from Defendant’s manufacture, offers for sale, and sale of motor vehicle parts that bypass, defeat, and/or render inoperative the vehicle’s installed emission controls, commonly known as “defeat devices.” See 42 U.S.C. 7522(a)(3)(B). The Consent Decree resolves these claims and prohibits Defendant and its two owners (collectively, “the GBZ Parties”) from: (1) Manufacturing, selling, or installing defeat devices; (2) investing in or obtaining revenue from defeat devices, including from other companies or ventures; and (3) providing technical support or honoring warranty claims for defeat device products. In addition, the

Consent Decree requires the GBZ Parties destroy any remaining defeat devices in their inventory or possession, surrender all intellectual property associated with defeat devices to EPA, and report periodically on their future involvement in the automotive industry. It also requires the GBZ Parties to pay a civil penalty of \$10,000, which was based on their financial situation.

The publication of this notice opens a period for public comment on the proposed Consent Decree. Comments should be addressed to the Assistant Attorney General, Environment and Natural Resources Division and should refer to *United States v. Gear Box Z, Inc.*, D.J. Ref. No. 90–5–2–1–12138. All comments must be submitted no later than thirty (30) days after the publication date of this notice. Comments may be submitted either by email or by mail:

To submit comments:	Send them to:
By email	<i>pubcomment-ees.enrd@usdoj.gov.</i>
By mail	Assistant Attorney General, U.S. DOJ—ENRD, P.O. Box 7611, Washington, DC 20044–7611.

During the public comment period, the proposed Consent Decree may be examined and downloaded at this Justice Department website: <https://www.justice.gov/enrd/consent-decrees>. We will provide a paper copy of the proposed Consent Decree upon written request and payment of reproduction costs. Please mail your request and payment to: Consent Decree Library, U.S. DOJ—ENRD, P.O. Box 7611, Washington, DC 20044–7611.

Please enclose a check or money order for \$11.75 (25 cents per page reproduction cost) payable to the United States Treasury.

Lori Jonas,

Assistant Section Chief, Environmental Enforcement Section, Environment and Natural Resources Division.

[FR Doc. 2021–19020 Filed 9–2–21; 8:45 am]

BILLING CODE 4410–15–P

DEPARTMENT OF LABOR

Employment and Training Administration

Notice of a Change in Status of the Extended Benefit (EB) Program for California, Connecticut, Illinois, Nevada, and Texas

AGENCY: Employment and Training Administration, Labor.

ACTION: Notice.

This notice announces a change in benefit period eligibility under the EB program that has occurred since the publication of the last notice regarding the States’ EB status:

- Based on the data released by the Bureau of Labor Statistics on August 20, 2021, the seasonally-adjusted Total Unemployment Rate (TUR) for Connecticut fell below the 8.0 percent threshold necessary to remain “on” a High Unemployment Period in EB. Therefore beginning September 11, 2021, the maximum potential entitlement for claimants on EB in Connecticut will decrease from 20 weeks to 13 weeks. Also, the seasonally-adjusted TUR for Texas fell below the 6.5 percent threshold necessary to remain “on” EB, thus the EB payable period for Texas will end on September 11, 2021.

- In addition, language in state laws which conditioned the applicability of the TUR trigger on full Federal funding resulted in “off” indicators for California, Illinois, and Nevada for the week ending August 21, 2021. This will end any payable period associated with the TUR trigger for these states on September 11, 2021.

The trigger notice covering state eligibility for the EB program can be found at: http://ows.doleta.gov/unemploy/claims_arch.as.

Information for Claimants

The duration of benefits payable in the EB program, and the terms and conditions on which they are payable, are governed by the Federal-State Extended Unemployment Compensation Act of 1970, as amended, and the operating instructions issued to the states by the U.S. Department of Labor.

Persons who believe they may be entitled to EB, or who wish to inquire about their rights under the program, should contact their State Workforce Agency.

FOR FURTHER INFORMATION CONTACT: U.S. Department of Labor, Employment and Training Administration, Office of Unemployment Insurance Room S–4524, Attn: Thomas Stengle, 200

Constitution Avenue NW, Washington, DC 20210, telephone number (202) 693-2991 (this is not a toll-free number) or by email: Stengle.Thomas@dol.gov.

Signed in Washington, DC.

Lenita Jacobs-Simmons,
Acting Assistant Secretary, Labor.

[FR Doc. 2021-19070 Filed 9-2-21; 8:45 am]

BILLING CODE 4510-FW-P

DEPARTMENT OF LABOR

Employment and Training Administration

Notice of a Change in Status of the Extended Benefit (EB) Program for New York

AGENCY: Employment and Training Administration, Labor.

ACTION: Notice.

This notice announces a change in benefit period eligibility under the EB program that has occurred since the publication of the last notice regarding the States' EB status:

- New York State's law conditioned the applicability of Total Unemployment Rate (TUR) trigger on full Federal funding of EB benefits. The full Federal funding of the EB benefits is scheduled to expire September 6, 2021, resulting in the termination of the TUR trigger for New York and an "off" indicator effective August 15, 2021. Therefore, this will end any payable period associated with the TUR for New York on September 5, 2021.

The trigger notice covering state eligibility for the EB program can be found at: http://ows.doleta.gov/unemploy/claims_arch.as.

Information for Claimants

The duration of benefits payable in the EB program, and the terms and conditions on which they are payable, are governed by the Federal-State Extended Unemployment Compensation Act of 1970, as amended, and the operating instructions issued to the states by the U.S. Department of Labor. In the case of a state beginning an EB period, the State Workforce Agency will furnish a written notice of potential entitlement to each individual who has exhausted all rights to regular benefits and is potentially eligible for EB (20 CFR 615.13(c)(1)).

Persons who believe they may be entitled to EB, or who wish to inquire about their rights under the program, should contact their State Workforce Agency.

FOR FURTHER INFORMATION CONTACT: U.S. Department of Labor, Employment and

Training Administration, Office of Unemployment Insurance Room S-4524, Attn: Thomas Stengle, 200 Constitution Avenue NW, Washington, DC 20210, telephone number (202) 693-2991 (this is not a toll-free number) or by email: Stengle.Thomas@dol.gov.

Signed in Washington, DC.

Lenita Jacobs-Simmons,
Acting Assistant Secretary, Labor.

[FR Doc. 2021-19069 Filed 9-2-21; 8:45 am]

BILLING CODE 4510-FW-P

DEPARTMENT OF LABOR

Employment and Training Administration

Agency Information Collection Activities; Comment Request; National Agricultural Workers Survey

ACTION: Notice.

SUMMARY: The Department of Labor's (DOL's) Employment and Training Administration (ETA) is soliciting comments concerning a proposed revision for the authority to conduct the information collection request (ICR) titled, "National Agricultural Workers Survey." This comment request is part of continuing Departmental efforts to reduce paperwork and respondent burden in accordance with the Paperwork Reduction Act of 1995 (PRA).

DATES: Consideration will be given to all written comments received by November 2, 2021.

ADDRESSES: A copy of this ICR with applicable supporting documentation, including a description of the likely respondents, proposed frequency of response, and estimated total burden, may be obtained free by contacting Mr. Daniel Carroll by telephone at 202-693-2795 (this is not a toll-free number), TTY 1-877-889-5627 (this is not a toll-free number), or by email at carroll.daniel.j@dol.gov.

Submit written comments about, or requests for a copy of, this ICR by mail or courier to the U.S. Department of Labor, Employment and Training Administration, Office of Policy Development and Research, Room N-5641, 200 Constitution Ave., NW, Washington, DC 20210; by email: carroll.daniel.j@dol.gov; or by Fax 202-693-2766.

FOR FURTHER INFORMATION CONTACT: Mr. Wayne Gordon by telephone at 202-693-3179 (this is not a toll-free number) or by email at gordon.wayne@dol.gov.

Authority: 44 U.S.C. 3506(c)(2)(A).

SUPPLEMENTARY INFORMATION: DOL, as part of continuing efforts to reduce paperwork and respondent burden, conducts a pre-clearance consultation program to provide the general public and Federal agencies an opportunity to comment on proposed and/or continuing collections of information before submitting them to the Office of Management and Budget (OMB) for final approval. This program helps to ensure requested data can be provided in the desired format, reporting burden (time and financial resources) is minimized, collection instruments are clearly understood, and the impact of collection requirements can be properly assessed.

The National Agricultural Workers Survey (NAWS) is an employment-based, annual survey of the demographic, employment, and health characteristics of hired crop workers, including those who employers hire indirectly through labor contractors. The survey began in 1988. Each year the NAWS contractor interviews between 1,500 and 3,500 crop workers. The contractor interviews crop workers three times per year to account for the seasonality of agricultural employment. ETA uses NAWS data to estimate each state's share of crop workers who are eligible for employment and training services through ETA's National Farmworker Jobs Program. Other Federal agencies similarly use the survey's data to estimate the number and characteristics of crop workers and their dependents who qualify to participate in or receive services from various migrant and seasonal farmworker programs. The United States Department of Agriculture periodically uses NAWS data, along with other data, to estimate changes in agricultural productivity.

ETA is seeking approval to continue the NAWS, with revisions. This request is to add supplemental questions to the survey to gather retrospective information on employment, health, and safety and health practices among crop workers during the Coronavirus pandemic. This collection is on behalf of the Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, under an inter-agency agreement with ETA. The additional employment information to be collected is:

- Whether the respondent missed any days of work in the last 12 months due to illness or fear of being ill.
- Where applicable, the number of missed workdays in the last 12 months that were related to COVID-19.
- Whether the respondent worked any days in the last 12 months while ill with COVID-19.

- Where applicable, the number of days in the last 12 months the respondent worked while ill with COVID-19.

- Whether the respondent or anyone in the respondent's household received a COVID-19 unemployment benefit in the last 12 months.

The additional health information to be collected is:

- Whether the respondent has been diagnosed with COVID-19.

- Whether COVID-19 prevented the respondent from seeking health care.

- Whether the respondent faced any barriers to being tested for COVID-19.

- Whether the respondent has been vaccinated against COVID-19.

- Where applicable, the reason(s) why the respondent has not been vaccinated.

- Whether the respondent screens positive for depression.

The additional safety and health information to be collected is:

- Where applicable, information on safety and health protocols in employer-provided, rent-free housing.

- Whether there are COVID-19 safety and health protocols in place at the respondent's farm job at the time of the interview.

The Wagner-Peyser Act, as amended (29 U.S.C. 49f(d) and 49l-2(a)) authorizes this information collection.

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 it is approved by OMB under the PRA 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 Control Number. See 5 CFR 1320.5(a) and 1320.6.

Interested parties are encouraged to provide comments to the contact shown in the **ADDRESSES** section. To receive consideration, you must provide written comments, which DOL will summarize and include in the request for OMB approval of the final ICR. In order to help ensure appropriate consideration, comments should mention OMB Control No. 1205-0453.

Submitted comments will also be a matter of public record for this ICR and posted on the internet, without redaction. DOL encourages commenters not to include personally identifiable information, confidential business data, or other sensitive statements/information in any comments.

DOL is particularly interested in comments that:

- Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

- Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

- Enhance the quality, utility, and clarity of the information to be collected; and

- 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, (e.g., permitting electronic submission of responses).

Agency: DOL-ETA.

Type of Review: Revision.

Title of Collection: National Agricultural Workers Survey.

Form: Primary Questionnaire.

OMB Control Number: 1205-0453.

Affected Public: Individuals and Households, Private Sector.

Estimated Number of Respondents: 4,476.

Frequency: Annual.

Total Estimated Annual Responses: 4,476.

Estimated Average Time per Response: 45 minutes.

Estimated Total Annual Burden

Hours: 1,484 hours.

Total Estimated Annual Other Cost Burden: \$0.

Lenita Jacobs-Simmons,

Acting Assistant Secretary for Employment and Training, Labor.

[FR Doc. 2021-19068 Filed 9-2-21; 8:45 am]

BILLING CODE 4510-FM-P

DEPARTMENT OF LABOR

Veterans' Employment and Training Service

Solicitation of Nominations for Appointment to the Advisory Committee on Veterans' Employment, Training, and Employer Outreach (ACVETEO)

AGENCY: Veterans' Employment and Training Service (VETS), Department of Labor (DOL).

ACTION: Solicitation of nominations.

SUMMARY: Veterans' Employment and Training Service is seeking nominations of qualified candidates to be considered for appointment as members of the

Advisory Committee on Veterans' Employment, Training, and Employer Outreach (ACVETEO, or the Committee). The Secretary of Labor will appoint at least 12, but no more than 16, members who serve as Special Government Employees. Members will consist of: (1) Seven individuals, one each from among the representatives nominated by (a) the Society for Human Resource Management, (b) the Business Roundtable, (c) National Association of State Workforce Agencies, (d) the United States Chamber of Commerce, (e) the National Federation of Independent labor union or organization and (g) the National Governors Association; (2) no more than five representatives nominated by Veterans Service Organizations that have a national employment program; and (3) no more than five individuals who are recognized authorities in the fields of business, employment, training, rehabilitation, or labor and who are not employees of DOL.

DATES: Nominations for membership on the Committee must be received no later than 11:59 p.m. EST on October 31, 2021. Packages received after this time will not be considered for the current membership cycle.

ADDRESSES: All nomination packages must be sent by email to the Designated Federal Official to ACVETEO@dol.gov subject line "2021 ACVETEO Nomination".

FOR FURTHER INFORMATION CONTACT: Mr. Gregory Green, Designated Federal Official for the ACVETEO, ACVETEO@dol.gov, (202) 693-4734. Additional information regarding the Committee, including its charter, current membership list, annual reports and meeting minutes, may be found at <https://www.dol.gov/agencies/vets/about/advisorycommittee>.

SUPPLEMENTARY INFORMATION: The ACVETEO is a Congressionally mandated advisory committee authorized under Title 38, U.S. Code, Section 4110 and subject to the Federal Advisory Committee Act, 5 U.S.C. app. 2, as amended. The ACVETEO is responsible for: Assessing employment and training needs of veterans; determining the extent to which the programs and activities of the U.S. Department of Labor meet these needs; assisting to conduct outreach to employers seeking to hire veterans; making recommendations to the Secretary, through the Assistant Secretary for Veterans' Employment and Training Service, with respect to outreach activities and employment and training needs of veterans; and carrying

out such other activities necessary to make required reports and recommendations. DOL is soliciting nominations for members to serve on the Committee. As required by statute, the members of the Committee are appointed by the Secretary from the general public. DOL seeks nominees with the following experience:

- (1) Diversity in professional and personal qualifications;
- (2) Experience in military service;
- (3) Current work with veterans;
- (4) Veterans disability subject matter expertise;
- (5) Experience working in large and complex organizations;
- (6) Experience in transition assistance;
- (7) Experience in the protection of employment and reemployment rights;
- (8) Experience in education, skills training, integration into the workforce and outreach;
- (9) Understanding of licensing and credentialing issues; and/or
- (10) Experience in military/veteran apprenticeship programs.

Requirements for Nomination Submission: Nominations should be formatted in PDF and saved as one document (one nomination per nominator). The nomination package should be submitted in the following order and include:

- (1) Letter of nomination that clearly states the name and affiliation of the nominee, the basis for the nomination (*i.e.*, specific attributes, including military service, if applicable, that qualifies the nominee for service in this capacity);
- (2) Statement from the nominee indicating willingness to regularly attend and participate in Committee meetings;
- (3) Nominee's contact information, including name, mailing address, telephone number(s), and email address;
- (4) Nominee's curriculum vitae or resume;
- (5) Summary of the nominee's experience and qualifications relative to the experience listed above;
- (6) Nominee biography;
- (7) Provide a summary of the Veterans Service Organization's (VSO) national employment program: To be considered a national employment program, the VSO must offer nationwide access to employment resources for veterans seeking employment.
- (8) Recognition as a VSO accredited by the Department of Veterans Affairs through the Office of the General Counsel, listed on this site: <https://www.va.gov/ogc/apps/accreditation/index.asp>.

(9) Statement that the nominee has no apparent conflicts of interest that would preclude membership.

(10) An affirmative statement that the nominee is not a federally registered lobbyist, and that the nominee understands that, if appointed, the nominee will not be allowed to continue to serve as an Advisory Committee member if the nominee becomes a federally registered lobbyist.

Individuals selected for appointment to the Committee will be reimbursed for per diem and travel for attending in-person Committee meetings. The Department makes every effort to ensure that the membership of its federal advisory committees is fairly balanced in terms of points of view represented. Every effort is made to ensure that a broad representation of geographic areas, gender, racial and ethnic minority groups, and the disabled are given consideration for membership. Appointment to this Committee shall be made without discrimination because of a person's race, color, religion, sex (including gender identity, transgender status, sexual orientation, and pregnancy), national origin, age, disability, or genetic information. An ethics review is conducted for each selected nominee.

Signed at Washington, DC, on August 26, 2021.

James Rodriguez,

Acting Assistant Secretary, Veterans' Employment and Training.

[FR Doc. 2021-19066 Filed 9-2-21; 8:45 am]

BILLING CODE 4510-79-P

NATIONAL FOUNDATION ON THE ARTS AND THE HUMANITIES

National Endowment for the Arts

30-Day Notice for the "NEA American Rescue Plan Act of 2021 Grants to Organizations and Grants to Local Arts Agencies for Subgranting Notices of Funding Opportunities (NOFOs)"

AGENCY: National Endowment for the Arts (NEA), National Foundation on the Arts and the Humanities.

ACTION: Notice of proposed collection; comment request.

SUMMARY: The NEA, as part of its continuing effort to reduce paperwork and respondent burden, conducts a preclearance consultation program to provide the general public and federal agencies with an opportunity to comment on proposed and/or continuing collections of information in accordance with the Paperwork Reduction Act of 1995. This program

helps to ensure that requested data is provided in the desired format; reporting burden (time and financial resources) is minimized; collection instruments are clearly understood; and the impact of collection requirements on respondents is properly assessed. Currently, the NEA is soliciting comments concerning the proposed information collection of: NEA American Rescue Plan Act of 2021 Grants to Organizations and Grants to Local Arts Agencies for Subgranting Notices of Funding Opportunities (NOFOs). Copies of this ICR, with applicable supporting documentation, may be obtained by visiting www.Reginfo.gov.

DATES: Interested persons are invited to submit comments within 30 days from the date of this publication in the **Federal Register**.

ADDRESSES: Comments should be sent to the Office of Information and Regulatory Affairs, Attn: OMB Desk Officer for the National Endowment for the Arts, Office of Management and Budget, Room 10235, Washington, DC 20503.

FOR FURTHER INFORMATION CONTACT: The Office of Information and Regulatory Affairs, Attn: OMB Desk Officer for the National Endowment for the Arts, Office of Management and Budget, Room 10235, Washington, DC 20503, (T) 202-395-7316.

SUPPLEMENTARY INFORMATION: The Office of Management and Budget (OMB) is particularly interested in comments which: (1) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (2) Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information including the validity of the methodology and assumptions used; (3) Enhance the quality, utility, and clarity of the information to be collected; and (4) Could help minimize the burden of the collection of information on those who are to respond, including through the use of electronic submission of responses through *Grants.gov*.

Agency: National Endowment for the Arts.

Title: NEA American Rescue Plan Act of 2021 Grants to Organizations and Grants to Local Arts Agencies for Subgranting Programs NOFOs.

OMB Number: 3135-0143.

Frequency: Annually.

Affected Public: Organizations.

Estimated Number of Respondents: 8,500.

Total burden hours: 59,500 hours.

Total annualized capital/startup costs: 0.

Total annual costs (operating/maintaining systems or purchasing services): 0.

Dated: August 31, 2021.

Daniel Beattie,

Director, Office of Guidelines and Panel Operations, Administrative Services, National Endowment for the Arts.

[FR Doc. 2021-19125 Filed 9-2-21; 8:45 am]

BILLING CODE 7537-01-P

NATIONAL SCIENCE FOUNDATION

Sunshine Act Meetings

The National Science Board's Committee on Strategy's Subcommittee on Technology, Innovation and Partnerships hereby gives notice of the scheduling of a teleconference for the transaction of National Science Board business pursuant to the NSF Act and the Government in the Sunshine Act.

TIME AND DATE: Wednesday, September 8, 2021, from 5:15–6:15 p.m. EDT.

PLACE: This meeting will be held by teleconference through the National Science Foundation, 2415 Eisenhower Avenue, Alexandria, VA 22314.

STATUS: Closed.

MATTERS TO BE CONSIDERED: The agenda is: Subcommittee Chair's opening remarks; Approval of minutes from the August 17, 2021, meeting; and Discussion of planning and strategy for NSF's Technology, Innovation, and Partnerships (TIP) Directorate, including plans for rollout of new programs and the cultural dimensions of TIP.

CONTACT PERSON FOR MORE INFORMATION: Point of contact for this meeting is: Chris Blair, cblair@nsf.gov, 703/292-7000. Meeting information and updates may be found at <http://www.nsf.gov/nsb/meetings/notices.jsp#sunshine>. Please refer to the National Science Board website www.nsf.gov/nsb for general information.

Chris Blair,

Executive Assistant to the National Science Board Office.

[FR Doc. 2021-19297 Filed 9-1-21; 4:15 pm]

BILLING CODE 7555-01-P

NUCLEAR REGULATORY COMMISSION

[Docket Nos. 52-025 and 52-026; NRC-2008-0252]

Southern Nuclear Operating Company Inc; Vogtle Electric Generating Plant, Units 3 and 4

AGENCY: Nuclear Regulatory Commission.

ACTION: License amendment application; opportunity to comment, request a hearing, and petition for leave to intervene.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is considering issuance of an amendment and exemption to Combined Licenses (COL) NPF-91 and NPF-92, issued to Southern Nuclear Operating Company, Inc. (SNC), and Georgia Power Company, Oglethorpe Power Corporation, MEAG Power SPVM, LLC, MEAG Power SPVJ, LLC, MEAG Power SPVP, LLC, and the City of Dalton, Georgia (collectively, SNC), for construction and operation of the Vogtle Electric Generating Plant (VEGP), Units 3 and 4, located in Burke County, Georgia.

DATES: Submit comments by October 4, 2021. 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 before this date. A request for a hearing or petition for leave to intervene must be filed by November 2, 2021.

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-2008-0252. 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:* Office of Administration, Mail Stop: TWFN-7-A60M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Program Management, Announcements and Editing Staff.

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:

William "Billy" Gleaves, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555-000; telephone: 301-415-5848; email: Bill.Gleaves@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Obtaining Information and Submitting Comments

A. Obtaining Information

Please refer to Docket ID NRC-2008-0252 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-2008-0252.

- *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 application for amendment, dated August 24, 2021 is available in ADAMS under Accession No. ML21236A305.

- *Attention:* The PDR, where you may examine and order copies of public documents, is currently closed. You may submit your request to the PDR via email at 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.

B. Submitting Comments

The NRC encourages electronic comment submission through the Federal Rulemaking website (<https://www.regulations.gov>). Please include Docket ID NRC-2008-0252 in your comment submission.

The NRC cautions you not to include identifying or contact information that you do not want to be publicly disclosed in your comment submission. The NRC will post all comment submissions at <https://www.regulations.gov> as well as enter the comment submissions into ADAMS. The NRC does not routinely edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, 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 the NRC does not routinely edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment submissions into ADAMS.

II. Introduction

The NRC is considering issuance of an amendment to facility Operating License Nos. NPF-91 and NPF-92, issued to SNC for operation of the VEGP Units 3 and 4, located in Burke County, Georgia.

The proposed changes would revise the COLs to depart from plant-specific Design Control Document (DCD) Tier 1 Inspection, Test, Analysis, and Acceptance Criteria (ITAAC) information, and the corresponding COL Appendix C information, in a way that allows completion of the ITAAC prior to fuel load consistent with the existing facility design.

Changes are proposed for ITAAC Nos. 68 (2.1.03.01), 75 (2.1.03.06), 515 (2.5.01.03e), 565 (2.5.05.02.i), and 570 (2.5.05.03b), to address specific "as-built" components whose final location is in the reactor vessel, since the invessel components cannot be installed in their final "as-built" location until after core fuel load. Pursuant to paragraph 52.103(g) of title 10 of the *Code of Federal Regulations* (10 CFR), all ITAAC must be completed prior to loading the initial core. Thus, these ITAAC cannot be completed as currently written, in light of the interpretation and understanding of NRC approved guidance that provides that "as-built" structures, systems or components (SSC) must be in their final operational location prior to ITAAC Closure Notification submittal, because these invessel components cannot be placed in their final operational location until after the 10 CFR 52.103(g) finding. Because this proposed change requires a departure from Tier 1 information in the Westinghouse AP1000 DCD, the licensee also requested an exemption from the requirements of the Generic DCD Tier 1 in accordance with 10 CFR 52.63(b)(1).

Before any issuance of the proposed license amendment, the NRC will need to make the findings required by the Atomic Energy Act of 1954, as amended (the Act), and NRC's regulations.

The NRC has made a proposed determination that the license amendment request involves no significant hazards consideration. Under

the NRC's regulations in 10 CFR 50.92, this means that operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed revisions have been found to continue to provide the required functional capability of the safety systems for previously evaluated accidents and anticipated operational occurrences. The affected system is not an initiator of any accident analyzed in the Updated Final Safety Analysis Report (UFSAR), nor do the changes involve an interface with any SSC accident initiator or initiating sequence of events, and thus, the probabilities of the accidents evaluated in the UFSAR are not affected. The proposed changes do not involve a change to any mitigation sequence or the predicted radiological releases due to postulated accident conditions, thus, the consequences of the accidents evaluated in the UFSAR are not affected.

The UFSAR describes the analyses of various design basis transients and accidents to demonstrate compliance of the design with the acceptance criteria for these events. The acceptance criteria for the various events are based on meeting the relevant regulations and general design criteria and are a function of the anticipated frequency of occurrence of the event and potential radiological consequences to the public. The revised ITAAC maintains the plant conditions, and thus, maintains the frequency designation and consequence level as previously evaluated.

Therefore, the proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed revisions have been found to continue to confirm the required functional capability of the safety systems for previously evaluated accidents and anticipated operational occurrences. The proposed revisions do not change the function of the related systems, and thus, the changes do not introduce a new failure mode, malfunction or sequence of events that could adversely affect safety or safety-related equipment.

Therefore, the proposed amendment does not create the possibility of a new or different

kind of accident from any accident previously evaluated.

3. Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

The proposed revisions have been found to continue to provide the required functional capability of the safety systems for previously evaluated accidents and anticipated operational occurrences. The proposed revisions do not change the function of the related systems nor significantly affect the margins provided by the systems. No safety analysis or design basis acceptance limit/criterion is challenged or exceeded by the requested changes.

Therefore, the proposed amendment does not involve a significant reduction in a margin of safety.

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the license amendment request involves no significant hazards consideration.

The NRC is seeking public comments on this proposed determination that the license amendment request involves no significant hazards consideration. Any comments received within 30 days after the date of publication of this notice will be considered in making any final determination.

Normally, the Commission will not issue the amendment until the expiration of 60 days after the date of publication of this notice. The Commission may issue the license amendment before expiration of the 60-day notice period if the Commission concludes the amendment involves no significant hazards consideration. In addition, the Commission may issue the amendment prior to the expiration of the 30-day comment period should circumstances change during the 30-day comment period such that failure to act in a timely way would result, for example, in derating or shutdown of the facility. Should the Commission take action prior to the expiration of either the comment period or the notice period, the Commission will publish a notice of issuance in the **Federal Register**. Should the Commission make a final no significant hazards consideration determination, any hearing will take place after issuance. The Commission expects that the need to take this action will occur very infrequently.

III. Opportunity To Request a Hearing and Petition for Leave To Intervene

Within 60 days after the date of publication of this notice, any persons (petitioner) whose interest may be affected by this action may file a request

for a hearing and a petition to intervene (petition) with respect to the action. Petitions shall be filed in accordance with the Commission's "Agency Rules of Practice and Procedure" in 10 CFR part 2. Interested persons should consult a current copy of 10 CFR 2.309. The NRC's regulations are accessible electronically from the NRC Library on the NRC's website at <https://www.nrc.gov/reading-rm/doc-collections/cfr/>. If a petition is filed, the Commission or a presiding officer will rule on the petition and, if appropriate, a notice of a hearing will be issued.

As required by 10 CFR 2.309(d), the petition should specifically explain the reasons why intervention should be permitted with particular reference to the following general requirements for standing: (1) The name, address, and telephone number of the petitioner; (2) the nature of the petitioner's right to be made a party to the proceeding; (3) the nature and extent of the petitioner's property, financial, or other interest in the proceeding; and (4) the possible effect of any decision or order which may be entered in the proceeding on the petitioner's interest.

In accordance with 10 CFR 2.309(f), the petition must also set forth the specific contentions which the petitioner seeks to have litigated in the proceeding. Each contention must consist of a specific statement of the issue of law or fact to be raised or controverted. In addition, the petitioner must provide a brief explanation of the bases for the contention and a concise statement of the alleged facts or expert opinion which support the contention and on which the petitioner intends to rely in proving the contention at the hearing. The petitioner must also provide references to the specific sources and documents on which the petitioner intends to rely to support its position on the issue. The petition must include sufficient information to show that a genuine dispute exists with the applicant or licensee on a material issue of law or fact. Contentions must be limited to matters within the scope of the proceeding. The contention must be one which, if proven, would entitle the petitioner to relief. A petitioner who fails to satisfy the requirements at 10 CFR 2.309(f) with respect to at least one contention will not be permitted to participate as a party.

Those permitted to intervene become parties to the proceeding, subject to any limitations in the order granting leave to intervene, and have the opportunity to participate fully in the conduct of the hearing with respect to resolution of that person's admitted contentions

consistent with the NRC's regulations, policies, and procedures.

Petitions must be filed no later than 60 days from the date of publication of this notice. Petitions and motions for leave to file new or amended contentions that are filed after the deadline will not be entertained absent a determination by the presiding officer that the filing demonstrates good cause by satisfying the three factors in 10 CFR 2.309(c)(1)(i) through (iii). The petition must be filed in accordance with the filing instructions in the "Electronic Submissions (E-Filing)" section of this document.

If a hearing is requested, and the Commission has not made a final determination on the issue of no significant hazards consideration, the Commission will make a final determination on the issue of no significant hazards consideration. The final determination will serve to decide when the hearing is held. If the final determination is that the amendment request involves no significant hazards consideration, the Commission may issue the amendment and make it immediately effective, notwithstanding the request for a hearing. Any hearing held would take place after issuance of the amendment. If the final determination is that the amendment request involves a significant hazards consideration, then any hearing held would take place before the issuance of any amendment unless the Commission finds an imminent danger to the health or safety of the public, in which case it will issue an appropriate order or rule under 10 CFR part 2.

A State, local governmental body, Federally recognized Indian Tribe, or agency thereof, may submit a petition to the Commission to participate as a party under 10 CFR 2.309(h)(1). The petition should state the nature and extent of the petitioner's interest in the proceeding. The petition should be submitted to the Commission no later than 60 days from the date of publication of this notice. The petition must be filed in accordance with the filing instructions in the "Electronic Submissions (E-Filing)" section of this document, and should meet the requirements for petitions set forth in this section, except that under 10 CFR 2.309(h)(2) a State, local governmental body, or Federally recognized Indian Tribe, or agency thereof does not need to address the standing requirements in 10 CFR 2.309(d) if the facility is located within its boundaries. Alternatively, a State, local governmental body, Federally recognized Indian Tribe, or agency thereof may participate as a non-party under 10 CFR 2.315(c).

If a hearing is granted, any person who is not a party to the proceeding and is not affiliated with or represented by a party may, at the discretion of the presiding officer, be permitted to make a limited appearance pursuant to the provisions of 10 CFR 2.315(a). A person making a limited appearance may make an oral or written statement of his or her position on the issues but may not otherwise participate in the proceeding. A limited appearance may be made at any session of the hearing or at any prehearing conference, subject to the limits and conditions as may be imposed by the presiding officer. Details regarding the opportunity to make a limited appearance will be provided by the presiding officer if such sessions are scheduled.

IV. Electronic Submissions (E-Filing)

All documents filed in NRC adjudicatory proceedings, including a request for hearing and petition for leave to intervene (petition), any motion or other document filed in the proceeding prior to the submission of a request for hearing or petition to intervene, and documents filed by interested governmental entities that request to participate under 10 CFR 2.315(c), must be filed in accordance with the NRC's E-Filing rule (72 FR 49139; August 28, 2007, as amended at 77 FR 46562; August 3, 2012). The E-Filing process requires participants to submit and serve all adjudicatory documents over the internet, or in some cases to mail copies on electronic storage media. Detailed guidance on making electronic submissions may be found in the Guidance for Electronic Submissions to the NRC and on the NRC website at <https://www.nrc.gov/site-help/e-submittals.html>. Participants may not submit paper copies of their filings unless they seek an exemption in accordance with the procedures described below.

To comply with the procedural requirements of E-Filing, at least 10 days prior to the filing deadline, the participant should contact the Office of the Secretary by email at hearing.docket@nrc.gov, or by telephone at 301-415-1677, to (1) request a digital identification (ID) certificate, which allows the participant (or its counsel or representative) to digitally sign submissions and access the E-Filing system for any proceeding in which it is participating; and (2) advise the Secretary that the participant will be submitting a petition or other adjudicatory document (even in instances in which the participant, or its counsel or representative, already holds an NRC-issued digital ID certificate).

Based upon this information, the Secretary will establish an electronic docket for the hearing in this proceeding if the Secretary has not already established an electronic docket.

Information about applying for a digital ID certificate is available on the NRC's public website at <https://www.nrc.gov/site-help/e-submittals/getting-started.html>. Once a participant has obtained a digital ID certificate and a docket has been created, the participant can then submit adjudicatory documents. Submissions must be in Portable Document Format (PDF). Additional guidance on PDF submissions is available on the NRC's public website at <https://www.nrc.gov/site-help/electronic-sub-ref-mat.html>. A filing is considered complete at the time the document is submitted through the NRC's E-Filing system. To be timely, an electronic filing must be submitted to the E-Filing system no later than 11:59 p.m. Eastern Time on the due date. Upon receipt of a transmission, the E-Filing system time-stamps the document and sends the submitter an email notice confirming receipt of the document. The E-Filing system also distributes an email notice that provides access to the document to the NRC's Office of the General Counsel and any others who have advised the Office of the Secretary that they wish to participate in the proceeding, so that the filer need not serve the document on those participants separately. Therefore, applicants and other participants (or their counsel or representative) must apply for and receive a digital ID certificate before adjudicatory documents are filed so that they can obtain access to the documents via the E-Filing system.

A person filing electronically using the NRC's adjudicatory E-Filing system may seek assistance by contacting the NRC Electronic Filing Help Desk through the "Contact Us" link located on the NRC's public website at <http://www.nrc.gov/site-help/e-submittals.html>, by email to MSHD.Resource@nrc.gov, or by a toll-free call at 1-866-672-7640. The NRC Electronic Filing Help Desk is available between 9 a.m. and 7 p.m., Eastern Time, Monday through Friday, excluding government holidays.

Participants who believe that they have a good cause for not submitting documents electronically must file an exemption request, in accordance with 10 CFR 2.302(g), with their initial paper filing stating why there is good cause for not filing electronically and requesting authorization to continue to submit documents in paper format. Such filings must be submitted by: (1) First-class

mail addressed to the Office of the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemaking and Adjudications Staff; or (2) courier, express mail, or expedited delivery service to the Office of the Secretary, 11555 Rockville Pike, Rockville, Maryland 20852, Attention: Rulemaking and Adjudications Staff. Participants filing adjudicatory documents in this manner are responsible for serving the document on all other participants. Filing is considered complete by first-class mail as of the time of deposit in the mail, or by courier, express mail, or expedited delivery service upon depositing the document with the provider of the service. A presiding officer, having granted an exemption request from using E-Filing, may require a participant or party to use E-Filing if the presiding officer subsequently determines that the reason for granting the exemption from use of E-Filing no longer exists.

Documents submitted in adjudicatory proceedings will appear in the NRC's electronic hearing docket which is available to the public at <https://adams.nrc.gov/ehd>, unless excluded pursuant to an order of the Commission or the presiding officer. If you do not have an NRC-issued digital ID certificate as described above, click "cancel" when the link requests certificates and you will be automatically directed to the NRC's electronic hearing dockets where you will be able to access any publicly-available documents in a particular hearing docket. Participants are requested not to include personal privacy information, such as social security numbers, home addresses, or personal phone numbers in their filings, unless an NRC regulation or other law requires submission of such information. For example, in some instances, individuals provide home addresses in order to demonstrate proximity to a facility or site. With respect to copyrighted works, except for limited excerpts that serve the purpose of the adjudicatory filings and would constitute a Fair Use application, participants are requested not to include copyrighted materials in their submission.

For further details with respect to this action, see the application for license amendment dated August 24, 2021.

Attorney for licensee: Mr. M. Stanford Blanton, Balch & Bingham LLP, 1710 Sixth Avenue North, Birmingham, AL 35203-2015.

NRC Branch Chief: Philip McKenna.
Dated: August 31, 2021.

For the Nuclear Regulatory Commission.

Philip J. McKenna,

Chief, Vogtle Project Office, Office of Nuclear Reactor Regulation.

[FR Doc. 2021-19133 Filed 9-2-21; 8:45 am]

BILLING CODE 7590-01-P

NUCLEAR REGULATORY COMMISSION

[NRC-2021-0001]

Sunshine Act Meetings

TIME AND DATE: Weeks of September 6, 13, 20, 27, October 4, 11, 2021.

PLACE: Commissioners' Conference Room, 11555 Rockville Pike, Rockville, Maryland.

STATUS: Public and closed.

MATTERS TO BE CONSIDERED:

Week of September 6, 2021

There are no meetings scheduled for the week of September 6, 2021.

Week of September 13, 2021—Tentative

Tuesday, September 14, 2021

10:00 a.m. Briefing on NRC

International Activities (Closed—
Ex. 1 & 9)

Week of September 20, 2021—Tentative

There are no meetings scheduled for the week of September 20, 2021.

Week of September 27, 2021—Tentative

Thursday, September 30, 2021

9:00 a.m. Strategic Programmatic Overview of the Operating Reactors and New Reactors Business Lines (Public Meeting) (Contact: Candace De Messieres: 301-415-8395)

Additional Information: Due to COVID-19, there will be no physical public attendance. The public is invited to attend the Commission's meeting live by webcast at the Web address—<https://video.nrc.gov/>.

Week of October 4, 2021—Tentative

Tuesday, October 5, 2021

10 a.m. Meeting with the Advisory Committee on the Medical Uses of Isotopes (Public Meeting) (Contact: Kellee Jamerson: 301-415-7408)

Additional Information: Due to COVID-19, there will be no physical public attendance. The public is invited to attend the Commission's meeting live by webcast at the Web address—<https://video.nrc.gov/>.

Friday, October 8, 2021

10 a.m. Meeting with the Advisory Committee on Reactor Safeguards

(Public Meeting) (Contact: Larry Burkhart: 301-287-3775)

Additional Information: Due to COVID-19, there will be no physical public attendance. The public is invited to attend the Commission's meeting live by webcast at the Web address—<https://video.nrc.gov/>.

Week of October 11, 2021—Tentative

There are no meetings scheduled for the week of October 11, 2021.

CONTACT PERSON FOR MORE INFORMATION: For more information or to verify the status of meetings, contact Wesley Held at 301-287-3591 or via email at Wesley.Held@nrc.gov. The schedule for Commission meetings is subject to change on short notice.

The NRC Commission Meeting Schedule can be found on the internet at: <https://www.nrc.gov/public-involve/public-meetings/schedule.html>.

The NRC provides reasonable accommodation to individuals with disabilities where appropriate. If you need a reasonable accommodation to participate in these public meetings or need this meeting notice or the transcript or other information from the public meetings in another format (e.g., braille, large print), please notify Anne Silk, NRC Disability Program Specialist, at 301-287-0745, by videophone at 240-428-3217, or by email at Anne.Silk@nrc.gov. Determinations on requests for reasonable accommodation will be made on a case-by-case basis.

Members of the public may request to receive this information electronically. If you would like to be added to the distribution, please contact the Nuclear Regulatory Commission, Office of the Secretary, Washington, DC 20555, at 301-415-1969, or by email at Wendy.Moore@nrc.gov or Betty.Thweatt@nrc.gov.

The NRC is holding the meetings under the authority of the Government in the Sunshine Act, 5 U.S.C. 552b.

Dated: September 1, 2021.

For the Nuclear Regulatory Commission.

Wesley W. Held,

Policy Coordinator, Office of the Secretary.

[FR Doc. 2021-19241 Filed 9-1-21; 4:15 pm]

BILLING CODE 7590-01-P

OFFICE OF PERSONNEL MANAGEMENT

Comment Request for Review of a Revised Information Collection: Leadership Assessment Surveys

AGENCY: Office of Personnel Management.

ACTION: 30-Day notice and request for comments.

SUMMARY: The Office of Personnel Management (OPM) intends to submit to the Office of Management and Budget (OMB) a request for review of a currently approved collection, Leadership Assessment Surveys. OPM is requesting approval of the OPM Leadership 360™, Leadership Potential Assessment, and the Leadership Profiler as a part of this collection. Approval of these surveys is necessary to collect information on Federal agency performance and leadership effectiveness.

DATES: Comments are encouraged and will be accepted until October 4, 2021.

ADDRESSES: Interested persons are invited to submit written comments on the proposed information collection to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street NW, Washington, DC 20503, Attention: Desk Officer for the Office of Personnel Management or sent via electronic mail to oir_submission@omb.eop.gov or faxed to (202) 395-6974.

FOR FURTHER INFORMATION CONTACT: A copy of this ICR, with applicable supporting documentation, may be obtained by contacting the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street NW, Washington, DC 20503, Attention: Desk Officer for the Office of Personnel Management or sent via electronic mail to oir_submission@omb.eop.gov or faxed to (202) 395-6974.

SUPPLEMENTARY INFORMATION: As required by the Paperwork Reduction Act of 1995, (Pub. L. 104-13, 44 U.S.C. chapter 35) as amended by the Clinger-Cohen Act (Pub. L. 104-106), OPM is soliciting comments for this collection. The information collection was previously published in the **Federal Register** on 11/27/2020 at 85 FRN 76116 allowing for a 60-day public comment period. No comments were received for this information collection (OMB No. 3206-0253). The purpose of this notice is to allow for an additional 30-days for public comments. Comments are particularly invited on:

1. Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;
2. Whether our estimate of the public burden of this collection is accurate, and based on valid assumptions and methodology; and
3. Ways in which we can minimize the burden of the collection of

information on those who are to respond, through the use of the appropriate technological collection techniques or other forms of information technology.

OPM's Human Resources Strategy and Evaluation Solutions performs assessment and related consultation activities for Federal agencies on a reimbursable basis. The assessments are authorized by various statutes and regulations: Section 4702 of Title 5, U.S.C.; E.O. 12862; E.O. 13715; Section 1128 of the National Defense Authorization Act for Fiscal Year 2004, Public Law 108-136; 5 U.S.C. 1101 note, 1103(a)(5), 1104, 1302, 3301, 3302, 4702, 7701 note; E.O. 13197, 66 FR 7853, 3 CFR 748 (2002); E.O. 10577, 12 FR 1259, 3 CFR, 1954-1958 Comp., p. 218; and Section 4703 of Title 5, United States Code.

This collection request includes surveys we currently use and plan to use during the next three years to measure Federal leaders' effectiveness. These surveys all measure leadership characteristics. Non-Federal respondents will almost never receive more than one of these surveys. All of these surveys consist of Likert-type, mark-one, and mark-all-that-apply items, and may include a small number of open-ended comment items. OPM's Leadership 360™ assessment measures the 28 competencies that comprise the five Executive Core Qualifications and Fundamental Competencies in the OPM leadership model. The OPM Leadership 360™ consists of 116 items and is almost never customized, although customization to meet an agency's needs is possible. OPM's Leadership Potential Assessment consists of 104 items focused on identifying individuals ready to move into supervisory positions. OPM's Leadership Profiler consists of 245 items that measure leadership personality characteristics within a "Big 5" framework. These assessments are almost always administered electronically.

Analysis

Agency: Human Resources Strategy and Evaluation Solutions, Office of Personnel Management.

Title: Leadership Assessment Surveys.

OMB Number: 3206-0253.

Frequency: On occasion.

Affected Public: Individuals and government contractors.

Number of Respondents:

approximately 24,000.

Estimated Time per Respondent: 15 minutes for the OPM Leadership 360™ and Leadership Potential Assessment; 45 minutes for the Leadership Profiler. The latter will almost never be

administered to non-Federal employees, so the average time is approximately 15 minutes.

Total Burden Hours: 6,000 hours.

Office of Personnel Management.

Alexys Stanley,

Regulatory Affairs Analyst.

[FR Doc. 2021-19082 Filed 9-2-21; 8:45 am]

BILLING CODE 6325-43-P

OFFICE OF PERSONNEL MANAGEMENT

Privacy Act of 1974; Computer Matching Program Between the Office of Personnel Management and Social Security Administration

AGENCY: Office of Personnel Management.

ACTION: Notice of a re-established matching program.

SUMMARY: Pursuant to the Privacy Act of 1974, as amended by the Computer Matching and Privacy Protection Act of 1988 and the Computer Matching Privacy Protections Amendment of 1990 (Privacy Act), and Office of Management and Budget (OMB) guidance on the conduct of matching programs, notice is hereby given of the reestablishment of a matching program between the Office of Personnel Management (OPM) and the Social Security Administration (SSA) (Computer Matching Agreement 1045).

DATES: Please submit comments on or before October 4, 2021. The matching program will begin on [enter 30 days from date of publication] unless comments have been received from interested members of the public that require modification and republication of the notice. The matching program will continue for 18 months from the beginning date and may be extended for an additional 12 months if the respective agency Data Integrity Boards determine that the conditions specified in 5 U.S.C. 552a(o)(D) have been met.

ADDRESSES: You may submit comments via mail to: Deon Mason, Chief, Business Services, Retirement Services and Management, Retirement Services, Office of Personnel Management, Room 3316-G, 1900 E Street NW, Washington, DC 20415 or via email at Deon.mason@opm.gov. You may also submit comments, identified by docket number and title, at the Federal Rulemaking Portal: <http://www.regulations.gov> by following the instructions for submitting comments. All submissions received must include the agency name and docket number for this document. The general policy for comments and other submissions from members of the public

is to make these submissions available for public viewing at <http://www.regulations.gov> as they are received without change, including any personal identifiers or contact information.

FOR FURTHER INFORMATION CONTACT: Lisa Morgan, Retirement Services, Office of Personnel Management, at (202) 606-5016.

SUPPLEMENTARY INFORMATION: In accordance with the Privacy Act of 1974, as amended by the Computer Matching and Privacy Protection Act of 1988 and the Computer Matching Privacy Protection Amendment of 1990 (Privacy Act), and Office of Management and Budget (OMB) guidance on the conduct of matching programs, including OMB Final Guidance Interpreting the Provision of Public Law 100-53 (published in the **Federal Register** on June 19, 1989 (54 FR 25818) and OMB Circular A-108, notice is hereby given of a re-established matching program between the Office of Personnel Management (OPM) and the Social Security Administration (SSA). This matching program, Computer Matching Agreement 1045, is being reestablished to enable SSA to disclose wage and self-employment income information to OPM. OPM will match SSA's information with OPM's records on disability retirees under age 60, disabled adult child survivors, certain retirees in receipt of a supplemental benefit under the Federal Employees Retirement System (FERS), and certain annuitants receiving a discontinued service retirement benefit under the Civil Service Retirement System (CSRS). The law limits the amount these retirees, survivors, and annuitants can earn while retaining benefits paid to them. Retirement benefits cease upon re-employment in Federal service for discontinued service annuitants. OPM will use the earnings and self-employment information from SSA to determine continued eligibility for benefits under OPM programs.

Participating Agencies: OPM and SSA.

Authority for Conducting the Matching Program: Legal authorities for the disclosures under this agreement are 5 U.S.C. 8337(d), 8341(a)(4)(B), 8344(a)(4)(b), and 8468, which establish earnings limitations for certain CSRS and FERS annuitants. The authority to terminate benefits may be found in 5 U.S.C. 8341(e)(3)(B) and 8443(b)(3)(B). The Internal Revenue Code (IRC), at 26 U.S.C. 6103 (l)(11), requires SSA to disclose tax return information to OPM upon request for purposes of the

administration of chapters 83 and 84 of Title 5 of the United States Code.

Purpose: The purpose of this agreement between OPM and SSA is to assist OPM in meeting its legal obligation to offset benefits payable by OPM to annuitants. SSA will disclose income and tax return information to OPM. OPM will use the information obtained from SSA to match against OPM's records of disability retirees under age 60, disabled adult-child survivors, certain retirees receiving supplemental benefit under the Federal Employees Retirement Systems (FERS), and certain annuitants receiving a discontinued service retirement benefit under the Civil Service Retirement System (CSRS). Because the law limits the amount these individuals can earn and still retain the benefits paid to them by OPM, OPM will use the SSA information to determine and individual's continued eligibility to receive a benefit from OPM.

Categories Individuals: The individuals whose information is involved in this matching program are those disability retirees under the age of 60, disabled adult-child survivors, certain retirees in receipt of a supplemental benefit under the FERS, and certain annuitants receiving a discontinued service retirement benefit under the CSRS who receive benefits from OPM. SSA will provide information about these individuals by referencing their master file of all individuals with Social Security numbers (SSN) and their file of earnings and self-employment records.

Categories of Records: The categories of records involved in this matching program include the full name, SSN, date of birth, and the tax year for requested earnings for those individuals about who the match is being conducted. In turn, SSA will disclose the following records to OPM: employer identification number, name, address, wage amount from Form W-2, and earnings amounts from self-employment income.

System(s) of Records: OPM's system of records involved in this matching program is OPM/Central-1, Civil Service Retirement and Insurance Records. 64 FR 54930 (Oct. 8, 1999), as amended at 73 FR 15013 (March 20, 2008). SSA's systems of records involved in this matching program are the Master Files of Social Security Number Holders and SSN Applications, 60-0058, 75 FR 82121 (Dec. 29, 2010) as amended at 78 FR 40542 (July 5, 2013), 79 FR 8780 (Feb. 13, 2014), and 83 FR 31250 (July 3, 2018); and the Master Beneficiary Record (MBR), 60-0090, 71 FR 1826 (Jan. 11, 2006), as amended at 72 FR

69723 (Dec. 10, 2007) and 78 FR 40542 (July 5, 2013); and the Earnings Recording and Self-Employment Income System, 60–0059, 71 FR 1819 (Jan. 11, 2006) as amended at 78 FR 40542 (July 5, 2013).

Office of Personnel Management.

Alexys Stanley,

Regulatory Affairs Analyst.

[FR Doc. 2021–19041 Filed 9–2–21; 8:45 am]

BILLING CODE 6325–38–P

OFFICE OF PERSONNEL MANAGEMENT

Comment Request for Review of a Revised Information Collection: Customer Satisfaction Surveys

AGENCY: U.S. Office of Personnel Management.

ACTION: 30-Day notice and request for comments.

SUMMARY: The Office of Personnel Management (OPM) intends to submit to the Office of Management and Budget (OMB) a request for review of a currently approved collection, Customer Satisfaction Surveys. Approval of these surveys is necessary to collect information on Federal agency and program performance.

DATES: Comments are encouraged and will be accepted October 4, 2021.

ADDRESSES: Interested persons are invited to submit written comments on the proposed information collection to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street NW, Washington, DC 20503, Attention: Desk Officer for the Office of Personnel Management or sent via electronic mail to oir_submission@omb.eop.gov or faxed to (202) 395–6974.

FOR FURTHER INFORMATION CONTACT: A copy of this information collection request (ICR), with applicable supporting documentation, may be obtained by contacting Human Resources Strategy and Evaluation Solutions, Office of Personnel Management, 1900 E Street, RM 2469 NW, Washington, DC 20415, Attention: Coty Hoover, C/O Henry Thibodeaux, via email to Organizational_Assessment@opm.gov, or 202–606–8001.

SUPPLEMENTARY INFORMATION: As required by the Paperwork Reduction Act of 1995, (Pub. L. 104–13, 44 U.S.C. chapter 35) as amended by the Clinger-Cohen Act (Pub. L. 104–106), OPM is soliciting comments for this collection. The information collection was previously published in the **Federal**

Register on 2/24/2021 at 86 FR 11339 allowing for a 60-day public comment period. No comments were received for this information collection (OMB No. 3206–0236). The purpose of this notice is to allow an additional 30 days for public comments. Comments are particularly invited on:

1. Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

2. Whether our estimate of the public burden of this collection is accurate, and based on valid assumptions and methodology; and

3. Ways in which we can minimize the burden of the collection of information on those who are to respond, through the use of the appropriate technological collection techniques or other forms of information technology.

OPM's Human Resources Strategy and Evaluation Solutions performs assessment and related consultation activities for Federal agencies on a reimbursable basis. The assessment is authorized by various statutes and regulations: Section 4702 of Title 5, U.S.C.; E.O. 12862; E.O. 13715; Section 1128 of the National Defense Authorization Act for Fiscal Year 2004, Public Law 108–136; 5 U.S.C. 1101 note, 1103(a)(5), 1104, 1302, 3301, 3302, 4702, 7701 note; E.O. 13197, 66 FR 7853, 3 CFR 748 (2002); E.O. 10577, 12 FR 1259, 3 CFR, 1954–1958 Comp., p. 218; and Section 4703 of Title 5, United States Code.

This collection request includes surveys we currently use and plan to use during the next three years to measure agency performance in providing services to meet customer needs. These surveys consist of Likert-type, mark-one, and mark-all-that-apply items, and may include a small number of open-ended comment items. Administration of OPM's Customer Satisfaction Surveys (OMB No. 3206–0236) typically consists of approximately 20 standard items drawn from an item bank of approximately 50 items; client agencies usually add a small number of custom items to assess satisfaction with specific products and services. The survey is almost always administered electronically.

Analysis

Agency: Human Resources Strategy and Evaluation Solutions, Office of Personnel Management.

Title: Customer Satisfaction Surveys.

OMB Number: 3206–0236.

Frequency: On occasion.

Affected Public: Individuals and businesses.

Number of Respondents: approximately 240,000.

Estimated Time per Respondent: 7 minutes.

Total Burden Hours: 28,000 hours.

U.S. Office of Personnel Management.

Kellie Cosgrove Riley,

Director, Office of Privacy and Information Management.

[FR Doc. 2021–19081 Filed 9–2–21; 8:45 am]

BILLING CODE 6325–38–P

OFFICE OF PERSONNEL MANAGEMENT

Privacy Act of 1974; Computer Matching Program Between the Office of Personnel Management and Social Security Administration

AGENCY: Office of Personnel Management (OPM).

ACTION: Notice of a re-established matching program.

SUMMARY: Pursuant to the Privacy Act of 1974, as amended by the Computer Matching and Privacy Protection Act of 1988 and the Computer Matching and Privacy Protections Amendment of 1990 (Privacy Act), and Office of Management and Budget (OMB) guidance on the conduct of matching programs, notice is hereby given of the re-establishment of a matching program between the Office of Personnel Management (OPM) and the Social Security Administration (SSA) (Computer Matching Agreement 1071).

DATES: Please submit comments on or before October 4, 2021. The matching program will begin on October 4, 2021 unless comments have been received from interested members of the public that require modification and republication of the notice. The matching program will continue for 18 months from the beginning date and may be extended an additional 12 months if the respective agency Data Integrity Boards determine that the conditions specified in 5 U.S.C. 552a(o)(2)(D) have been met.

ADDRESSES: You may submit comments via mail to: Deon Mason, Chief, Business Services, Retirement Services and Management, Retirement Services, Office of Personnel Management, Room 3316–G, 1900 E Street NW, Washington, DC 20415, or via email at Deon.Mason@opm.gov. You may also submit comments, identified by docket number and title, at the Federal Rulemaking Portal: <http://www.regulations.gov> by

following the instructions for submitting comments.

All submissions received must include the agency name and docket number for this document. The general policy for comments and other submissions from members of the public is to make these submissions available for public viewing at <http://www.regulations.gov> as they are received without change, including any personal identifiers or contact information.

FOR FURTHER INFORMATION CONTACT: Lisa Morgan, Retirement Services, Office of Personnel Management, at (202) 606-5016.

SUPPLEMENTARY INFORMATION: In accordance with the Privacy Act of 1974, as amended by the Computer Matching and Privacy Protection Act of 1988 and the Computer Matching and Privacy Protections Amendment of 1990 (Privacy Act), and Office of Management and Budget (OMB) guidance on the conduct of matching programs, including OMB Final Guidance Interpreting the Provisions of Public Law 100-53 (published in the **Federal Register** on June 19, 1989 (54 FR 25818) and OMB Circular A-108, notice is hereby given of the re-establishment of a matching program between the Office of Personnel Management (OPM) and the Social Security Administration (SSA). This matching program, Computer Matching Agreement 1071, is being re-established to enable OPM to offset specific benefits paid to disability annuitants, child survivor annuitants, and spousal survivor annuitants by a percentage of benefits payable by SSA under Title II of the Social Security Act, as required by law.

Participating Agencies: OPM and SSA.

Authority for Conducting the Matching Program: OPM's authority to participate in this matching program derives from 5 U.S.C. 8442(f), 8443(a), 8452(a)(2)(A), and 8461(h)(1). SSA is authorized to participate in this matching program pursuant to 42 U.S.C. 1306.

Purpose(s): The purpose of this matching program between OPM and SSA is to assist OPM in meeting its legal obligation to offset specific benefits payable by OPM to disability annuitants, child survivor annuitants, and spousal survivor annuitants. SSA will disclose to OPM benefit information regarding individuals who receive benefits from SSA under Title II of the Social Security Act, which OPM will use to determine an individual's eligibility to receive benefits from OPM

and to compute the benefits it provides at the correct rate.

Categories of Individuals: The individuals about whom OPM maintains information that are involved in this matching program include retired Federal employees who are eligible or potentially eligible to receive a disability annuity from OPM (disability annuitants), and surviving children and surviving spouses of those disability annuitants who are themselves eligible or potentially eligible to receive an annuity from OPM. The individuals about whom SSA maintains information that are involved in this matching program include those who receive benefits from SSA under Title II of the Social Security Act.

Category of Records: The categories of records involved in the data match from OPM include information about those individuals who have applied for or are eligible or potentially eligible for disability annuitant benefits. Specifically, full name, Social Security number (SSN), date of birth, and a system indicator required to extract information from SSA's systems. For those individuals for whom SSA has a record, SSA will provide OPM with information about an individual's beneficiary status and any associated benefit information; for those individuals for whom SSA cannot match the SSN, SSA will return an appropriate code to OPM.

System(s) of Records: OPM's system of records involved in this matching program is designated OPM/Central-1, Civil Service Retirement and Insurance Records. 64 FR 54930 (Oct. 8, 1999), as amended at 73 FR 15013 (March 20, 2008). SSA's systems of records involved in this matching program are the Master Files of Social Security Number Holders and SSN Applications, 60-0058, 75 FR 82121 (Dec. 29, 2010) as amended at 78 FR 40542 (July 5, 2013) and 79 FR 8780 (Feb. 13, 2014); and the Master Beneficiary Record (MBR), 60-0090, 71 FR 1826 (Jan. 11, 2006), as amended at 72 FR 69723 (Dec. 10, 2007) and 78 FR 40542 (July 5, 2013).

Office of Personnel Management.

Alexys Stanley,

Regulatory Affairs Analyst.

[FR Doc. 2021-19043 Filed 9-2-21; 8:45 am]

BILLING CODE 6325-38-P

SECURITIES AND EXCHANGE COMMISSION

Submission for OMB Review; Comment Request

Upon Written Request, Copies Available From: Securities and Exchange Commission, Office of FOIA Services, Washington, DC 20549-2736

Extension:

Rule 15g-4; [SEC File No. 270-347, OMB Control No. 3235-0393]

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") has submitted to the Office of Management and Budget ("OMB") a request for extension of the existing collection of information provided for in Rule 15g-4—Disclosure of compensation to brokers or dealers (17 CFR 240.15g-4) under the Securities Exchange Act of 1934 (15 U.S.C. 78a *et seq.*).

Rule 15g-4 requires brokers and dealers effecting transactions in penny stocks for or with customers to disclose the amount of compensation received by the broker-dealer in connection with the transaction. The purpose of the rule is to increase the level of disclosure to investors concerning penny stocks generally and specific penny stock transactions.

The Commission estimates that approximately 178 broker-dealers will each spend an average of approximately 87.0833333 hours annually to comply with this rule. Thus, the total time burden is approximately 15,501 hours per year.

Rule 15g-4 contains record retention requirements. Compliance with the rule is mandatory. The required records are available only to the examination staff of the Commission and the self regulatory organizations of which the broker-dealer is a member.

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.

The public may view background documentation for this information collection at the following website: www.reginfo.gov. Find this particular information collection by selecting "Currently under 30-day Review—Open for Public Comments" or by using the search function. Written comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice to (i) www.reginfo.gov/public/do/PRAMain and (ii) David Bottom, Director/Chief Information Officer,

Securities and Exchange Commission, c/o Cynthia Roscoe, 100 F Street NE, Washington, DC 20549, or by sending an email to: PRA_Mailbox@sec.gov.

Dated: August 30, 2021.

J. Matthew DeLesDernier,
Assistant Secretary.

[FR Doc. 2021-19029 Filed 9-2-21; 8:45 am]

BILLING CODE 8011-01-P

SECURITIES AND EXCHANGE COMMISSION

Submission for OMB Review; 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:

Rule 301 of Regulation ATS; [SEC File No. 270-451, OMB Control No. 3235-0509]

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”) has submitted to the Office of Management and Budget (“OMB”) a request for approval of extension of the previously approved collection of information provided for in Rule 301 of Regulation ATS (17 CFR 242.301) under the Securities Exchange Act of 1934 (15 U.S.C. 78a *et seq.*) (“Exchange Act”).

Regulation ATS provides a regulatory structure for alternative trading systems. Rule 301 of Regulation ATS contains certain record keeping and reporting requirements, as well as additional obligations that apply only to alternative trading systems with significant volume. The Rule requires all alternative trading systems that wish to comply with Regulation ATS to file an initial operation report on Form ATS. Alternative trading systems are also required to supply updates on Form ATS to the Commission describing material changes to the system, file quarterly transaction reports on Form ATS-R, and file cessation of operations reports on Form ATS. An alternative trading system with significant volume is required to comply with requirements for fair access and systems capacity, integrity, and security. Rule 301 also imposes certain requirements pertaining to written safeguards and procedures to protect subscribers’ confidential trading information.

The Commission staff estimates that entities subject to the requirements of Rule 301 will spend a total of

approximately 2,687 hours a year to comply with the Rule.

Regulation ATS requires ATSs to preserve any records, for at least three years, made in the process of complying with the systems capacity, integrity and security requirements.

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.

The public may view background documentation for this information collection at the following website: www.reginfo.gov. Find this particular information collection by selecting “Currently under 30-day Review—Open for Public Comments” or by using the search function. Written comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice to (i) www.reginfo.gov/public/do/PRAMain and (ii) David Bottom, Director/Chief Information Officer, Securities and Exchange Commission, c/o Cynthia Roscoe, 100 F Street NE, Washington, DC 20549, or by sending an email to: PRA_Mailbox@sec.gov.

Dated: August 30, 2021.

J. Matthew DeLesDernier,
Assistant Secretary.

[FR Doc. 2021-19030 Filed 9-2-21; 8:45 am]

BILLING CODE 8011-01-P

SECURITIES AND EXCHANGE COMMISSION

Sunshine Act Meetings

TIME AND DATE: Notice is hereby given, pursuant to the provisions of the Government in the Sunshine Act, Public Law 94-409, that the Securities and Exchange Commission Investor Advisory Committee will hold a public meeting on Thursday, September 9, 2021. The meeting will begin at 10 a.m. (ET) and will be open to the public.

PLACE: The meeting will be conducted by remote means and/or at the Commission’s headquarters, 100 F St NE, Washington, DC 20549. Members of the public may watch the webcast of the meeting on the Commission’s website at www.sec.gov.

STATUS: This Sunshine Act notice is being issued because a majority of the Commission may attend the meeting. On August 27, 2021, the Commission published notice of the Committee meeting (Release Nos. 33-10968, 34-92783), indicating that the meeting is open to the public and inviting the public to submit written comments to the Committee.

MATTER TO BE CONSIDERED: The agenda for the meeting includes: Welcome remarks; approval of previous meeting minutes; a panel discussion entitled “Reimagining Investor Protection in a Digital World: The Behavioral Design of Online Trading Platforms”; a panel discussion regarding competition and regulatory reform at the PCAOB; a discussion of a recommendation regarding 10b5-1 plans; a discussion of a recommendation regarding SPACs; subcommittee reports; and a non-public administrative session.

CONTACT PERSON FOR MORE INFORMATION: For further information and to ascertain what, if any, matters have been added, deleted or postponed; please contact Vanessa A. Countryman from the Office of the Secretary at (202) 551-5400.

Dated: September 1, 2021.

Vanessa A. Countryman,
Secretary.

[FR Doc. 2021-19290 Filed 9-1-21; 4:15 pm]

BILLING CODE 8011-01-P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-92808; File No. SR-FICC-2021-003]

Self-Regulatory Organizations; Fixed Income Clearing Corporation; Notice of Filing of Amendment No. 1 and Order Granting Accelerated Approval of a Proposed Rule Change, as Modified by Amendment No. 1, To Add the Sponsored GC Service and Make Other Changes

August 30, 2021.

On May 12, 2021, Fixed Income Clearing Corporation (“FICC”) 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 proposed rule change SR-FICC-2021-003 to amend FICC’s Government Securities Division Rulebook³ to add a new service that expands FICC’s existing Sponsored Service.⁴ The proposed rule change was

¹ 15 U.S.C. 78s(b)(1).

² 17 CFR 240.19b-4.

³ FICC’s Government Securities Division (“GSD”) Rulebook (“Rules”) is available at <http://www.dtcc.com/legal/rules-and-procedures>.

⁴ FICC also filed the proposals contained in the proposed rule change as advance notice SR-FICC-2021-801 with the Commission pursuant to Section 806(e)(1) of the Dodd-Frank Wall Street Reform and Consumer Protection Act entitled the Payment, Clearing, and Settlement Supervision Act of 2010 (“Clearing Supervision Act”), 12 U.S.C. 5465(e)(1), and Rule 19b-4(n)(1)(i) of the Act, 17 CFR 240.19b-4(n)(1)(i). Notice of filing of the Advance Notice was published for comment in the **Federal Register** on June 3, 2021. Securities Exchange Act Release

published for public comment in the **Federal Register** on June 1, 2021.⁵ On June 8, 2021, FICC filed Amendment No. 1 to the proposed rule change, to correct an erroneous cross reference in the original filing.⁶ The proposed rule change, as modified by Amendment No. 1, is hereinafter referred to as the “Proposed Rule Change.” On June 24, 2021, the Commission published a notice designating a longer period of time for Commission action and a longer period for public comment on the Proposed Rule Change.⁷ The Commission received one comment letter in support of the Proposed Rule Change.⁸

The Commission is publishing this notice to solicit comments on Amendment No. 1 from interested persons and, for the reasons discussed below, to approve the Proposed Rule Change on an accelerated basis.

I. Description of the Proposed Rule Change

A. Background

1. FICC Services for Repurchase Agreement (“Repo”) Transactions

Repos involve a pair of securities transactions between two parties. The parties agree to the terms of the trade, including the securities, principal

amount, interest rate, haircut, and tenor (*i.e.*, date of maturity). The first transaction (the “Start Leg”) consists of the sale of securities, in which one party (the “cash borrower”) delivers securities, and in exchange, the other party (the “cash lender”) delivers cash. At the Start Leg, the cash borrower typically delivers an amount of securities equal in value to the amount of cash received from the cash lender, plus a haircut. Repo durations range from one day (“overnight”) to a year or more, but are usually less than three months (“term”). The second transaction (the “End Leg”) occurs on a date after that of the Start Leg and consists of the repurchase of securities, in which the obligations to deliver cash and securities are the reverse of the Start Leg. At the End Leg, the cash borrower typically delivers the amount of cash borrowed, plus interest, and the cash lender returns the securities.

FICC serves as CCP and provides clearance and settlement services to facilitate both bilateral and tri-party repo transactions. FICC facilitates bilateral repos⁹ in which all securities delivery obligations are made against full payment (“delivery-versus-payment” or “DVP”) (the “DVP Service”). FICC generally novates and guarantees settlement of a trade upon validation of the trade details, which results in the legally binding and enforceable contract between FICC and the parties to the trade.¹⁰ On a daily basis, FICC aggregates and matches a member’s offsetting obligations resulting from the member’s trades, thereby netting the member’s total daily settlement obligations.¹¹

FICC facilitates tri-party repos¹² through its General Collateral Finance (“GCF”) Repo[®] Service, which enables members to trade general collateral

finance repos based on rate, term, and underlying product throughout the day on a blind basis.¹³ The Bank of New York Mellon operates the tri-party platform that facilitates trades conducted through the GCF Repo Service. FICC has established standardized, generic CUSIP Numbers exclusively for GCF Repo processing and to specify the acceptable types of underlying Fedwire book-entry eligible collateral, which include U.S. Treasuries, U.S. government agency securities, and certain mortgage-backed securities.¹⁴

2. Sponsored Membership

In 2005, FICC established the Sponsored Service, allowing eligible members to sponsor their clients into a limited form of membership.¹⁵ A Sponsoring Member is permitted to submit to FICC, for comparison, novation, and netting, certain eligible securities transactions of its Sponsored Members. FICC requires each Sponsoring Member to establish an omnibus account at FICC (separate from its regular netting account) for Sponsored Member trading activity. Sponsored Members generally have to meet the definition of a qualified institutional buyer (“QIB”), as defined in Rule 144A¹⁶ under the Securities Act of 1933.¹⁷

For operational and administrative purposes, FICC interacts solely with the Sponsoring Member as agent for purposes of the day-to-day satisfaction of its Sponsored Members’ obligations to and from FICC, including their securities and funds-only settlement obligations.¹⁸ Sponsoring Members are also responsible for providing FICC with a Sponsoring Member Guaranty, whereby the Sponsoring Member guarantees to FICC the payment and performance by its Sponsored Members of their obligations under the Rules.¹⁹ Although Sponsored Members are principally liable to FICC for their own settlement obligations under the Rules, the Sponsoring Member Guaranty requires the Sponsoring Member to satisfy those settlement obligations on behalf of a Sponsored Member if the

No. 92019 (May 27, 2021), 86 FR 29834 (June 3, 2021) (SR–FICC–2021–801).

⁵ Securities Exchange Act Release No. 92014 (May 25, 2021), 86 FR 29334 (June 1, 2021) (SR–FICC–2020–003) (“Notice”).

⁶ Amendment No. 1 made a correction to Exhibit 5 of the filing. On June 8, 2021, FICC filed Amendment No. 1 to the advance notice to make the same correction as regarding the proposed rule change. The advance notice, as modified by Amendment No. 1, is hereinafter referred to as the “Advance Notice.” On June 11, 2021, the Commission, by the Division of Trading and Markets, pursuant to delegated authority, requested additional information from FICC pursuant to Section 806(e)(1)(D) of the Clearing Supervision Act, 17 CFR 200.30–3(a)(93); 12 U.S.C. 5465(e)(1)(D). The request for information tolled the Commission’s period of review of the Advance Notice until 60 days from the date of the Commission’s receipt of the information requested from FICC. See 12 U.S.C. 5465(e)(1)(E)(ii) and (G)(ii); see Memorandum from the Office of Clearance and Settlement, Division of Trading and Markets, titled “Commission’s Request for Additional Information,” available at <https://www.sec.gov/rules/sro/ficc-an/2021/34-92019-memo-ficc.pdf>. The Commission received the information requested from FICC on July 2, 2021.

⁷ Securities Exchange Act Release No. 92185 (June 15, 2021), 86 FR 33420 (June 24, 2021) (SR–FICC–2021–003).

⁸ The comment is available at <https://www.sec.gov/comments/sr-ficc-2021-003/srficc2021003.htm>. Because the proposals contained in the Advance Notice and the Proposed Rule Change are the same, the Commission considers any public comments received on the proposal as applicable to both filings, regardless of whether comments are submitted with respect to the Advance Notice or the Proposed Rule Change.

⁹ A bilateral repo is one in which the cash lender and cash borrower directly exchange cash and securities. In the bilateral repo market, the parties specify the securities used as collateral. Therefore, a cash lender seeking to obtain a particular security would utilize the bilateral repo market.

¹⁰ See Rule 5, *supra* note 3.

¹¹ See Rule 11, *supra* note 3.

¹² A tri-party repo is one in which a clearing bank, acting as tri-party agent, provides to both the cash lender and the cash borrower certain operational, custodial, collateral management, and other services. In tri-party repo trading, both parties maintain accounts at a clearing bank, which facilitates the payment and delivery of cash and securities between the parties’ accounts. In contrast to the bilateral repo market and its use of specific collateral, the tri-party repo market is exclusively for general collateral repos, meaning that the parties agree to use any securities from a pre-approved basket of acceptable securities as collateral. In a general collateral repo, the cash lender is indifferent to the particular securities it receives as collateral, provided that the securities come from the pre-approved basket of acceptable securities.

¹³ See Rule 20, *supra* note 3.

¹⁴ See Rule 3 (definitions of “GCF Repo Transaction” and “Generic CUSIP Number”) and Rule 20, Section 2, *supra* note 3; Notice, *supra* note 5 at 29336.

¹⁵ Securities Exchange Act Release No. 51896 (June 21, 2005), 70 FR 36981 (June 27, 2005) (SR–FICC–2004–22). See Rule 3A, *supra* note 3.

¹⁶ 17 CFR 230.144A.

¹⁷ 15 U.S.C. 77a *et seq.*

¹⁸ See Rule 3A, Section 8, *supra* note 3.

¹⁹ See Rule 1 (definition of “Sponsoring Member Guaranty”) and Rule 3A, Section 2(c), *supra* note 3.

Sponsored Member defaults and fails to perform its settlement obligations.²⁰

B. Proposed Sponsored GC Service

Currently, the Sponsored Service only facilitates trading in bilateral DVP repos, not tri-party repos. In the Proposed Rule Change, FICC proposes to expand the Sponsored Service to accommodate tri-party repo trading, which FICC believes would increase term repo activity within the Sponsored Service. FICC states that several market participants have indicated that they currently transact tri-party term repos outside of central clearing because they are not operationally equipped to perform the collateral management and other functions associated with term DVP repos.²¹ In particular, money market funds and other mutual funds generally prefer to use the tri-party repo market because a clearing bank administers collateral management and other functions, as described above.²²

Therefore, FICC proposes to add the Sponsored GC Service, which would allow (but not require) Sponsoring Members and their Sponsored Members to trade general collateral repos with each other on the tri-party platform of a Sponsored GC Clearing Agent Bank²³ (each, a “Sponsored GC Trade”). Such general collateral repos would involve the same asset classes that are currently available for members using the GCF Repo Service.²⁴ Consistent with the GCF

Repo Service, the Sponsored GC Service would also permit cash borrowers to make collateral substitutions. Sponsored GC Trades would settle in a manner similar to the way Sponsoring Members and Sponsored Members currently settle tri-party repos with each other outside of central clearing.

Sponsored GC Service Structure

Sponsored GC Trades would only be between a Sponsored Member and its Sponsoring Member. FICC would novate only the End Legs of Sponsored GC Trades. Consistent with the current settlement process of such tri-party repos outside of central clearing, the Start Legs of Sponsored GC Trades would continue to settle on a trade-for-trade basis on the tri-party platform of a Sponsored GC Clearing Agent Bank.²⁵

Accrued repo interest on Sponsored GC Trades would be paid and collected by FICC on a daily basis. Additionally, if the market value of the securities collateral decreases from its market value at the Start Leg, the cash borrower would be required deliver to FICC additional securities (and/or cash) such that the market value of the total securities collateral remains at least equal to its market value at the Start Leg. Conversely, if the market value of the securities collateral increases from its market value at the Start Leg, the cash lender would be required to deliver to FICC securities (and/or cash) such that the market value of the remaining securities collateral remains at least equal to its market value at the Start Leg. Such additional securities (and/or cash) must be delivered within the timeframe set forth in a proposed new schedule of Sponsored GC Trade timeframes set forth in the Rules.

In order to facilitate settlement of securities and cash obligations, FICC would direct each party to a Sponsored GC Trade to make any payment or delivery due to FICC in respect of a Sponsored GC Trade (except for certain

funds-only settlement obligations, as discussed below) directly to the relevant pre-novation counterparty. As a result, each transfer of securities and daily repo interest would be made directly between the Sponsored Member and its Sponsoring Member via the tri-party repo platform of a Sponsored GC Clearing Agent Bank.²⁶

Market Risk Management

FICC would manage its market risk with respect to Sponsored GC Trades similar to the manner in which FICC manages existing trades within the Sponsored Service. To mitigate market risk, FICC would calculate the Value at Risk (“VaR”) margin component (“VaR Charge”)²⁷ for each Sponsored Member based on its activity in the Sponsored Service, including its activity in the proposed Sponsored GC Service. The VaR Charge for the Sponsoring Member’s omnibus account for Sponsored Member trading activity would continue to be gross-margined as the sum of the individual VaR Charges for each Sponsored Member client.²⁸

Additionally, FICC would assign a symbol to each Sponsored Member to facilitate FICC’s ability to surveil the Sponsored Member’s activity across its Sponsored GC Trades as well as its other Sponsored Member Trades within the existing Sponsored Service (both with the same Sponsoring Member and across Sponsoring Members, if applicable). In addition, FICC would apply certain heightened requirements that apply to certain Sponsoring Members within the Sponsored GC Service as well.²⁹ For example, FICC

²⁰ *Id.*

²¹ See Notice, *supra* note 5 at 29336. A key difference between the bilateral and tri-party repo markets deals with the operational aspects of managing term repos. In the tri-party repo market, a clearing bank typically automatically selects securities from the cash borrower’s account to serve as collateral that satisfies the credit and liquidity criteria agreed between the parties. The clearing bank delivers securities against the simultaneous delivery of cash between the parties’ accounts at the clearing bank. The clearing bank manages the regular revaluation of collateral, variation margining, income payments on the collateral, and collateral substitutions. In the bilateral repo market, the parties themselves perform such collateral management and other administrative functions.

²² See Notice, *supra* note 5 at 29336.

²³ The Bank of New York Mellon operates the tri-party platform that would facilitate trades conducted through the Sponsored GC Service.

²⁴ FICC would register a new series of Generic CUSIP Numbers for the Sponsored GC Service as follows: (i) U.S. Treasury Securities maturing in ten (10) years or less, (ii) U.S. Treasury Securities maturing in thirty (30) years or less, (iii) Non-Mortgage-Backed U.S. Agency Securities, (iv) Federal National Mortgage Association (“Fannie Mae”) and Federal Home Loan Mortgage Corporation (“Freddie Mac”) Fixed Rate Mortgage-Backed Securities, (v) Fannie Mae and Freddie Mac Adjustable Rate Mortgage-Backed Securities, (vi) Government National Mortgage Association (“Ginnie Mae”) Fixed Rate Mortgage-Backed Securities, (vii) Ginnie Mae Adjustable Rate Mortgage-Backed Securities, (viii) U.S. Treasury Inflation-Protected Securities (“TIPS”) and (ix) U.S. Treasury Separate Trading of Registered Interest

and Principal of Securities (“STRIPS”). The purpose of registering a new series of Generic CUSIP Numbers specific to the Sponsored GC Service is to avoid any operational processing errors that could otherwise result if a trade intended for the Sponsored GC Service was inadvertently processed as a GCF Repo transaction or vice versa. Notice, *supra* note 5 at 29336.

²⁵ FICC does not believe it would be efficient or appropriate to novate the Start Legs of Sponsored GC Trades, as that novation would unnecessarily complicate an already efficient process by requiring the parties to make significant operational and business changes to include FICC in the transaction chain. Since Sponsored GC Trades would only be between a Sponsored Member and its Sponsoring Member on a known (*i.e.*, not blind) basis, all Start Leg obligations would settle between a single set of counterparties, negating any efficiency or reduced settlement risk that FICC’s novation would provide. See Notice, *supra* note 5 at 29337.

²⁶ FICC similarly does not believe it would be appropriate for FICC to be in the transaction chain for each payment and delivery under a Sponsored GC Trade because inserting FICC in the middle of the payments and deliveries would require substantial changes in operational processes for both Sponsored Members and Sponsoring Members. FICC does not believe such operational changes are necessary since there can only be two pre-novation counterparties involved in the settlement of a Sponsored GC Trade (*i.e.*, the Sponsoring Member and its Sponsored Member client). See Notice, *supra* note 5 at 29337–38.

²⁷ Each member’s margin consists of a number of applicable components. The VaR Charge is typically the largest component of a member’s margin requirement. The VaR Charge is designed to capture the potential market price risk associated with the securities in a member’s portfolio. The VaR Charge is designed to provide an estimate of FICC’s projected liquidation losses with respect to a defaulted member’s portfolio at a 99 percent confidence level. See Rule 1 (definition of “VaR Charge”), *supra* note 3; Securities Exchange Act Release No. 83362 (June 1, 2018), 83 FR 26514 (June 7, 2018) (SR–FICC–2018–001).

²⁸ See Rule 3A, Section 10, *supra* note 3.

²⁹ Specifically, these restrictions apply to Category 2 Sponsoring Members, which are other members that meet certain financial requirements as compared to Category 1 Sponsoring Members, which are bank netting members that are well-

may impose heightened financial requirements on these Sponsoring Members based on their anticipated activity and other factors,³⁰ and FICC may limit such a Sponsoring Member's activity if the sum of the VaR Charges of its omnibus and netting accounts exceeds its net capital.³¹

In addition, FICC would manage the mark-to-market risk associated with unaccrued repo interest on a Sponsored GC Trade through a proposed new interest rate mark component of funds-only settlement.³² FICC would also apply an Interest Adjustment Payment to Sponsored GC Trades to account for overnight use of funds by the Sponsoring Member or Sponsored Member, as applicable, based on such party's receipt from FICC of a Forward Mark Adjustment Payment (reflecting a GC Interest Rate Mark) on the previous business day.³³

Liquidity Risk Management

Currently, trades between a Sponsoring Member and its Sponsored Member do not independently create liquidity risk for FICC. Under its Rules, if a Sponsoring Member defaults, FICC may close out (that is, cash settle) the Sponsored Member trades of the defaulting Sponsoring Member.³⁴ Similarly, if a Sponsored Member defaults, FICC may offset its settlement obligations to the Sponsoring Member against the Sponsoring Member's obligations under the Sponsoring Member Guaranty to perform on behalf of its defaulting Sponsored Member.³⁵ Thus, in both default scenarios, FICC bears no liquidity risk.

As a result, to the extent a Sponsoring Member either (1) runs a matched book of Sponsored Member trades (*i.e.*, enters into offsetting trades with its own

Sponsored Members), or (2) simply enters into trades with its Sponsored Member (*i.e.*, without entering into offsetting trades), such activities do not increase FICC's liquidity risk. FICC bears liquidity risk only when a Sponsoring Member enters into an offsetting trade in which a third-party member is the pre-novation counterparty. In that scenario, FICC is required to settle the obligations of a defaulting Sponsoring Member.

Since Sponsored GC Trades would not involve third-party members, such trades would impact FICC's liquidity risk in a similar manner to trades between a Sponsoring Member and its Sponsored Member in the current Sponsored Service. As a result, FICC proposes to manage the liquidity risk associated with Sponsored GC Trades in the same manner that it currently manages such risk for other trades between a Sponsoring Member and its Sponsored Member.

C. Proposed Changes to Allocations Within the Capped Contingency Liquidity Facility ("CCLF")

1. CCLF Background

On April 25, 2017, the Commission approved FICC's adoption of the Clearing Agency Liquidity Risk Management Framework ("Framework"), which broadly describes FICC's liquidity risk management strategy and objective to maintain sufficient liquid resources in order to meet the potential amount of funding required to settle outstanding transactions of a defaulting member (including affiliates) in a timely manner.³⁶ The Framework identifies, among other things, each of the qualifying liquid resources available to FICC, including the CCLF.³⁷ The CCLF is a rules-based, committed liquidity resource, designed to enable FICC to meet its cash settlement obligations in the event of a default of the member (including the member's family of affiliated members) to which FICC has the largest exposure in extreme but plausible market conditions.³⁸ FICC

would activate the CCLF if, upon a member default, FICC determines that its non-CCLF liquidity resources would not generate sufficient cash to satisfy FICC's payment obligations to its non-defaulting members. In simple terms, a CCLF repo is equivalent to a non-defaulting member financing FICC's payment obligation under the original trade, thereby providing FICC with time to liquidate the securities underlying the original trade. More specifically, upon activating the CCLF, members would be called upon to enter into repo transactions (as cash lenders) with FICC (as cash borrower) up to a pre-determined capped dollar amount, thereby providing FICC with sufficient liquidity to meet its payment obligations. For a non-defaulting member to whom FICC has a payment obligation disrupted by a member default, a CCLF repo would extinguish and replace the original trade that gave rise to FICC's payment obligation.

FICC determines the total size of the CCLF based on FICC's potential cash settlement obligations that would result from the default of the member (including affiliates) presenting the largest liquidity need to FICC over a specified look-back period, plus an additional liquidity buffer. In the Proposed Rule Change, FICC does not propose to change the method by which it determines the total size of the CCLF.

FICC uses a tiered approach to allocate the total size of the CCLF among its members to arrive at the amount of each member's CCLF obligation. FICC allocates \$15 billion of the total size of the CCLF among all members.³⁹ FICC allocates the remainder of the total size of the CCLF among members that generate liquidity needs above the \$15 billion threshold based on the frequency that such members generate daily liquidity needs over \$15 billion across supplemental liquidity tiers in \$5 billion increments. Specifically, FICC calculates a dollar amount for the CCLF obligation applicable to each supplemental liquidity tier. FICC allocates the CCLF obligation for each supplemental liquidity tier to members on a pro-rata basis corresponding to the number of times each member generates liquidity

(November 21, 2017) (SR-FICC-2017-002); Rule 22A, Section 2a, *supra* note 3.

³⁹ FICC has determined that \$15 billion is an appropriate amount for allocation to all members because the average member's liquidity need from 2015-2016 was approximately \$7 billion, with a majority of members (approximately 85 percent) having liquidity needs less than \$15 billion. *See* Securities Exchange Act Release No. 82090 (November 15, 2017), 82 FR 55427, 55430 (November 21, 2017) (SR-FICC-2017-002).

capitalized with \$5 billion in equity capital. *See* Rule 3A, Section 2(a), *supra* note 3.

³⁰ *See* Rule 3A, Section 2(b), *supra* note 3.

³¹ *See* Rule 3A, Section 2(h), *supra* note 3.

³² This GC Interest Rate Mark would be calculated in the same manner as the GCF Interest Rate Mark is for GCF Repo transactions. For a detailed description of the calculation, *see* Notice, *supra* note 5 at 29337-38.

³³ No other components of funds-only settlement would be necessary to apply to Sponsored GC Trades because, as described above, (i) all Sponsored GC Trades would novate after the settlement of the Start Legs of such trades (*i.e.*, not during the Forward-Starting Period), (ii) mark-to-market changes in the value of the securities transferred under Sponsored GC Trades would be managed by the Sponsored GC Clearing Agent Bank on FICC's behalf (consistent with the manner in which GCF Repo transactions are currently processed), and (iii) the accrued repo interest on Sponsored GC Trades would be passed on a daily basis, as described above.

³⁴ *See* Rule 3A, Section 14(c), *supra* note 3. *See also* Rule 22A, Section 2, *supra* note 3.

³⁵ *See* Rule 3A, Section 11, *supra* note 3.

³⁶ *See* Securities Exchange Act Release No. 80489 (April 19, 2017), 82 FR 19120 (April 25, 2017) (SR-FICC-2017-008).

³⁷ *See id.*

³⁸ FICC designed the CCLF to meet the regulatory requirement for a covered clearing agency to measure, monitor, and manage its liquidity risk by maintaining sufficient liquid resources to effect same-day settlement of payment obligations in the event of a default of the participant family that would generate the largest aggregate payment obligation for the clearing agency in extreme but plausible market conditions. 17 CFR 240.17Ad-22(e)(7)(i); *see* Securities Exchange Act Release No. 82090 (November 15, 2017), 82 FR 55427, 55430

needs within each supplemental liquidity tier.⁴⁰

2. Current CCLF Allocation Methodology for the Sponsored Service

Currently, FICC does not impose a CCLF obligation on a Sponsoring Member to the extent the Sponsoring Member runs a matched book of Sponsored Member trades. This is because to determine a Sponsoring Member's CCLF obligation, FICC nets all of the positions recorded in the Sponsoring Member's omnibus account (regardless of whether they relate to the same Sponsored Member) and separately nets all of the positions in the Sponsoring Member's netting account.⁴¹ As a result, to the extent a Sponsoring Member enters into perfectly offsetting Sponsored Member trades (*i.e.*, the matched book scenario), the settlement obligations of those trades net out in the omnibus account and the netting account, with no resulting CCLF obligation for the Sponsoring Member.

However, if a Sponsoring Member enters into a Sponsored Member trade without entering into an offsetting transaction, the Sponsoring Member is subject to CCLF obligations for the position of its Sponsored Member recorded in its omnibus account as well as its own position arising from the Sponsored Member trade recorded in its netting account. Although the positions in the Sponsoring Member's omnibus account and netting account offset each other, FICC does not currently net such positions for CCLF purposes because CCLF allocations are determined at the participant account level.⁴² FICC

⁴⁰ For example, a member that generates daily liquidity needs in the \$15–\$20 billion supplemental liquidity tier would incur a pro-rata share for the \$15–\$20 billion supplemental liquidity tier only. Another member that generates daily liquidity needs in the \$20–\$25 billion supplemental liquidity tier would incur a pro-rata share for both the \$15–\$20 and \$20–\$25 billion supplemental liquidity tiers. A third member that generates daily liquidity needs in the \$65–\$70 billion supplemental liquidity tier would incur a pro-rata share for every supplemental liquidity tier. Each member's pro-rata share is based on the frequency with which the member generates daily liquidity needs in each supplemental liquidity tier. See Securities Exchange Act Release No. 80234 (March 14, 2017), 82 FR 14401, 14404–05 (March 20, 2017) (SR–FICC–2017–002).

⁴¹ See Rule 3A, Section 8(b) and Rule 22A, Section 2a(b), *supra* note 3.

⁴² This limitation on offset is consistent with FICC's approach of not offsetting the positions of two accounts of the same member for CCLF purposes. However, FICC notes an important difference between Sponsored Member trades and other FICC repo activity. See Notice, *supra* note 5 at 29343. Specifically, as mentioned above in Section I.A.2., the Sponsored Service requires a Sponsoring Member to maintain an omnibus account that is separate from its netting account. In contrast, for all other repo activity, members have the option to collapse all of their activity into a

believes the foregoing scenario should not contribute to the Sponsoring Member's CCLF obligation because, as described above in Section I.B, such offsetting obligations do not present liquidity risk to FICC.

3. Proposed CCLF Allocation Methodology for the Sponsored Service

As described above, trades between a Sponsoring Member and its Sponsored Member do not independently create liquidity risk for FICC, and therefore, FICC believes that such trades should not affect the Sponsoring Member's CCLF obligation. To ensure that a Sponsoring Member's CCLF obligation is calculated to reflect the lack of liquidity risk to FICC associated with Sponsored Member trades, FICC proposes to take into account, for CCLF calculation purposes, any offsetting settlement obligations between a Sponsoring Member's netting account and its omnibus account. This proposed change would ensure that all Sponsored Member trades, whether perfectly offset by other Sponsored Member trades (*i.e.*, the matched book scenario) or not, would be recognized for CCLF purposes as not affecting FICC's liquidity risk. This proposed change would also apply to trades in the new Sponsored GC Service.⁴³

Although, as noted above, the Proposed Rule Change would not affect the method by which FICC determines the total CCLF amount, FICC's proposal to net offsetting trades between a Sponsoring Member and its Sponsored Member for CCLF calculation purposes would affect the allocation of CCLF obligations over \$15 billion to other

single participant account in order to achieve a similar netting benefit. Sponsoring Members do not have that option with respect to their Sponsored Member trades. Therefore, FICC believes this proposed change is necessary to ensure that a Sponsoring Member's CCLF obligations are calculated in a manner that more closely aligns with the liquidity risk associated with Sponsored Member trades. *Id.*

⁴³ For Sponsored GC Trades, this proposed change would ensure that FICC applies an appropriate CCLF obligation to a Sponsoring Member in the event a Sponsored GC Clearing Agent Bank allocates to a Sponsored GC Trade a different security than the security that underlies an offsetting Sponsored Member Trade. For example, a Sponsoring Member may enter into a Sponsored GC Trade on a Generic CUSIP Number and a separate offsetting Sponsored Member trade in a specific CUSIP Number. Although the specific CUSIP Number might also be an eligible security under the Generic CUSIP Number underlying the Sponsored GC Trade, the Sponsored GC Clearing Agent Bank could allocate to the Sponsored GC Trade a different eligible CUSIP Number from the list of eligible securities. FICC's proposed change would offset these positions across the Sponsoring Member's netting account and omnibus account to ensure that the CCLF obligation applicable to the Sponsoring Member accurately reflects the liquidity risk associated with those positions.

members. Specifically, as described above, under the current Rules, if a Sponsoring Member enters into a Sponsored Member trade without entering into an offsetting transaction, the Sponsoring Member is subject to CCLF obligations for the position of its Sponsored Member recorded in its omnibus account as well as its own position arising from the Sponsored Member trade recorded in its netting account. Under the Proposed Rule Change, the Sponsoring Member would not incur CCLF obligations for such transactions. Therefore, a Sponsoring Member's peak daily liquidity is currently higher than it would be under the Proposed Rule Change. This, in turn, may decrease the frequency with which a Sponsoring Member's daily peak liquidity reaches into higher supplemental liquidity tiers. As a result, the pro-rata allocation of CCLF obligations among members with daily peak liquidity in those supplemental liquidity tiers would increase.⁴⁴ When fewer members generate peak liquidity needs in a supplemental liquidity tier, the remaining members that generate peak liquidity in that tier bear a larger pro-rata share of the CCLF allocations for that tier.

D. Other Proposed Changes

FICC proposes to remove a provision from the Rules requiring a Sponsoring Member to provide FICC with a quarterly representation that each of its Sponsored Members is either a QIB or satisfies the financial requirements necessary to be a QIB.⁴⁵ FICC proposes to remove this requirement because an existing Rule provision requires a Sponsoring Member to attest that a Sponsored Member satisfies the QIB requirement at the time of the Sponsored Member's initial application,⁴⁶ and another existing Rule provision requires a Sponsoring Member to notify FICC if its Sponsored Member no longer satisfies the QIB requirement.⁴⁷ Therefore, FICC believes the quarterly representation to be an overlapping and redundant requirement that creates unnecessary administrative burdens for FICC and for its Sponsoring Members.⁴⁸

FICC also proposes to make certain corrections to the Rules regarding the Sponsored Service. First, FICC proposes to change an erroneous reference to the

⁴⁴ However, as stated above, the proposals in the Proposed Rule Change would not change FICC's current methodology for calculating the total amount of the CCLF.

⁴⁵ See Rule 3A, Section 2(d), *supra* note 3.

⁴⁶ See Rule 3A, Section 3(b), *supra* note 3.

⁴⁷ See Rule 3A, Section 3(d), *supra* note 3.

⁴⁸ See Notice, *supra* note 5 at 29343.

“Close Leg” in the Rule 1 definition of Initial Haircut to “Start Leg.” Second, FICC proposes to clarify the citation to paragraph (a)(1)(i)(H) of Rule 144A in Rule 3A, Section 3(a)(ii)(B).

Additionally, FICC proposes to make several technical and grammatical changes to section numbers and cross-references throughout the Rules to conform with the new proposed Rule provisions regarding Sponsored GC Service.

E. Description of Amendment No. 1

In Amendment No. 1, FICC updated Exhibit 5 to the Proposed Rule Change to correct an erroneous cross reference in the original filing. Specifically, Exhibit 5 to the original filing erroneously showed the proposed change to Rule 3A, Section 18, subsection (a) to include a cross reference to subsections (a)(i) and (a)(ii) of the Sponsored Trade definition. Amendment No. 1 corrected Exhibit 5 so that the cross reference is to subsections (a)(i) and (b) of the Sponsored Trade definition.

II. Discussion and Commission Findings

Section 19(b)(2)(C) of the Act⁴⁹ 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 Act and rules and regulations thereunder applicable to such organization. After carefully considering the Proposed Rule Change, the Commission finds that the Proposed Rule Change is consistent with the requirements of the Act and the rules and regulations thereunder applicable to FICC. In particular, the Commission finds that the Proposed Rule Change is consistent with Sections 17A(b)(3)(F)⁵⁰ of the Act and Rules 17Ad–22(e)(7), (e)(18), and (e)(23) thereunder.⁵¹

A. Consistency With Section 17A(b)(3)(F) of the Act

Section 17A(b)(3)(F) of the Act⁵² requires the rules of a clearing agency to, among other things, (i) promote the prompt and accurate clearance and settlement of securities transactions, (ii) assure the safeguarding of securities and funds which are in the custody or control of the clearing agency or for which it is responsible, and (iii) protect investors and the public interest.

As described above in Section I.B., FICC’s current Sponsored Service only facilitates trading in DVP repos, not tri-party repos. Certain market participants (e.g., money market funds and other mutual funds) have stated that their participation in the Sponsored Service is inhibited because they are not operationally equipped to perform the collateral management and other functions associated with term DVP repos.⁵³ FICC proposes to expand the Sponsored Service via the Sponsored GC Service to accommodate tri-party repo trading, in which a clearing bank administers such collateral management and other functions. As a result, FICC expects the proposed Sponsored GC Service to increase term repo activity within the Sponsored Service.⁵⁴ By enabling Sponsoring Members and their Sponsored Members to engage in tri-party term repo transactions with each other, the proposed Sponsored GC Service would encourage more term repo trades centrally cleared by FICC within the Sponsored Service. Increasing the number of trades centrally cleared by FICC would promote the prompt and accurate clearance and settlement of securities transactions because securities transactions that might otherwise be conducted outside of central clearing would benefit from FICC’s risk management and guarantee of settlement.⁵⁵ Accordingly, FICC’s proposal to add the Sponsored GC Service is consistent with promoting the prompt and accurate clearance and settlement of securities transactions.

Additionally, as described above in Section I.C., the CCLF is designed to provide FICC with sufficient qualifying liquid resources to cover the default of the family of affiliated members that would generate the largest liquidity need for FICC. The Proposed Rule Change would change the allocation of CCLF obligations among FICC’s members. Specifically, with respect to

trades between a Sponsoring Member and Sponsored Member, FICC proposes to take into account, for CCLF calculation purposes, any offsetting settlement obligations between a Sponsoring Member’s netting account and its omnibus account. Such trades do not independently create liquidity risk for FICC, and therefore, should not affect the Sponsoring Member’s CCLF obligation. Therefore, the Proposed Rule Change would result in the allocation of CCLF obligations to FICC’s members that more accurately reflect the liquidity needs presented to FICC by each member. However, the proposed change in CCLF allocation methodology would not change the current total overall size of the CCLF. By maintaining the total size of the CCLF, FICC should be able to continue to perform its clearance and settlement functions with sufficient qualifying liquidity resources for FICC to mitigate the losses that the default of the largest affiliated family of members could cause, not only to FICC and its non-defaulting members, but also to the financial markets more broadly. As such, the Proposed Rule Change is consistent with promoting the safeguarding of securities and funds in FICC’s custody and control, and thereby protecting investors and the public interest.

Finally, as described above in Section I.D., FICC also proposes to make certain corrections to the Rules regarding the Sponsored Service, as well as several technical and grammatical changes throughout the Rules to conform with the new provisions regarding Sponsored GC Service. Making corrections and other improvements to clarify the Rules helps to ensure that the Rules are accurate and clear to members. Members that better understand their rights and obligations regarding the Rules are more likely to act in accordance with the Rules, which generally promotes the prompt and accurate clearance and settlement of securities transactions.

For the foregoing reasons, the Commission believes that the Proposed Rule Change is designed to promote the prompt and accurate clearance and settlement of securities transactions, safeguard securities and funds that are in the custody or control of FICC, and protect investors and the public interest, consistent with Section 17A(b)(3)(F) of the Exchange Act.⁵⁶

B. Consistency With Rule 17Ad–22(e)(7)

Rule 17Ad–22(e)(7) under the Act requires a covered clearing agency to establish, implement, maintain, and

⁴⁹ See Notice, *supra* note 5 at 29336.

⁵⁰ See *id.* FICC conducted two surveys of its Sponsoring Members, the data from which supports FICC’s expectation that the proposed Sponsored GC Service would increase term repo activity within the Sponsored Service. FICC provided the survey data to the Commission as part of FICC’s response to the Commission’s request for additional information in connection with the Advance Notice. See *supra* note 6. Pursuant to 17 CFR 240.24b-2, FICC requested confidential treatment of its response to the Commission’s request for additional information.

⁵¹ See Letter from Robert Toomey, Managing Director and Associate General Counsel, Securities Industry and Financial Markets Association (June 18, 2021) at 2 (commenting on the benefits to market participants resulting from the expected increase in greater central clearing of tri-party repos via the Sponsored GC Service).

⁵² 15 U.S.C. 78q–1(b)(3)(F).

⁴⁹ 15 U.S.C. 78s(b)(2)(C).

⁵⁰ 15 U.S.C. 78q–1(b)(3)(F).

⁵¹ 17 CFR 240.17Ad–22(e)(7), (e)(18), and (e)(23).

⁵² 15 U.S.C. 78q–1(b)(3)(F).

enforce written policies and procedures reasonably designed to effectively measure, monitor, and manage the liquidity risk that arises in or is borne by the covered clearing agency.⁵⁷ As described above in Section I.C., FICC proposes to change the Rules to allow netting, for CCLF allocation purposes, of offsetting positions in a Sponsoring Member's omnibus account and netting account.

FICC's proposal would not impact FICC's current methodology for determining the total amount of the CCLF as a liquidity resource. As discussed above in Section II.A., FICC proposes to change the Rules regarding CCLF allocation to ensure that a Sponsoring Member's CCLF obligation aligns more closely with the actual liquidity risk its trading activity presents to FICC. As a result, FICC's proposed CCLF allocation methodology represents more efficient liquidity risk management than the current methodology. Accordingly, the Commission believes that FICC's proposed CCLF allocation methodology is consistent with Rule 17Ad-22(e)(7).⁵⁸

C. Consistency With Rule 17Ad-22(e)(18)

Rule 17Ad-22(e)(18) under the Act requires a covered clearing agency to establish, implement, maintain, and enforce written policies and procedures reasonably designed to establish objective, risk-based, and publicly disclosed criteria for participation in the clearing agency.⁵⁹ As described above in Section I.D., FICC proposes to remove a provision from the Rules requiring a Sponsoring Member to provide FICC with a quarterly representation that each of its Sponsored Members is either a QIB or satisfies the financial requirements necessary to be a QIB. FICC proposes to remove the quarterly representation requirement because existing Rule provisions require Sponsoring Members to attest to its Sponsored Member's QIB status⁶⁰ and to notify FICC if a Sponsored Member no longer satisfies the QIB requirement.⁶¹ Therefore, the quarterly representation requirement is redundant and creates unnecessary administrative burdens for FICC and its Sponsoring Members. A redundant requirement that creates unnecessary administrative burdens is not an objective, risk-based criterion for participation in FICC. Accordingly, the Division believes that

FICC's proposal to remove the requirement for Sponsoring Members to provide FICC with a quarterly representation verifying the QIB status of its Sponsored Members is consistent with Rule 17Ad-22(e)(18).⁶²

D. Consistency With Rule 17Ad-22(e)(21)

Rule 17Ad-22(e)(21) under the Act requires a covered clearing agency to establish, implement, maintain, and enforce written policies and procedures reasonably designed to be efficient and effective in meeting the requirements of its participants and the markets it serves, including the clearing agency's clearing and settlement arrangements and the scope of products cleared or settled.⁶³ As described above in Section I.B., FICC's current Sponsored Service does not accommodate the trading of tri-party repos. FICC proposes to expand the Sponsored Service to allow tri-party repo trading to meet the needs of market participants that currently transact tri-party term repos outside of central clearing because they are not operationally equipped to perform the collateral management and other functions associated with term DVP repos. By expanding the Sponsored Service to facilitate tri-party repo trading, FICC seeks to provide a viable option for its members to transact term tri-party repos in central clearing. Sponsored GC Trades would settle in a manner similar to the way Sponsoring Members and Sponsored Members currently settle tri-party repos with each other outside of central clearing, thereby making it more operationally efficient for the parties to transact term repos with each other using FICC as the CCP. The Commission believes that the proposed Sponsored GC Service is consistent with Rule 17Ad-22(e)(21)⁶⁴ because it is responsive to the requests from FICC's members for the ability to trade centrally cleared term tri-party repos in a manner that is efficient and effective in meeting the operational requirements of FICC's members.

III. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning whether Amendment No. 1 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-FICC-2021-003 on the subject line.

Paper Comments

Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549.

All submissions should refer to File Number SR-FICC-2021-003. 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 such filings will also be available for inspection and copying at the principal office of FICC and FICC's website at <https://www.dtcc.com/legal>.

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-FICC-2021-003 and should be submitted on or before September 24, 2021.

IV. Accelerated Approval of the Proposed Rule Change, as Modified by Amendment No. 1

The Commission finds good cause, pursuant to Section 19(b)(2)(C)(iii) of the Act,⁶⁵ to approve the Proposed Rule Change, as modified by Amendment No. 1, prior to the thirtieth day after the date of publication of Amendment No. 1 in the **Federal Register**. As noted above, in

⁵⁷ 17 CFR 240.17Ad-22(e)(7).

⁵⁸ *Id.*

⁵⁹ 17 CFR 240.17Ad-22(e)(18).

⁶⁰ See Rule 3A, Section 3(b), *supra* note 3.

⁶¹ See Rule 3A, Section 3(d), *supra* note 3.

⁶² *Id.*

⁶³ 17 CFR 240.17Ad-22(e)(21).

⁶⁴ *Id.*

⁶⁵ 15 U.S.C. 78s(b)(2)(C)(iii).

Amendment No. 1, FICC updated Exhibit 5 to the Proposed Rule Change to correct an erroneous cross reference in the original filing. Amendment No. 1 neither modifies the Proposed Rule Change as originally published in any substantive manner, nor does Amendment No. 1 affect any rights or obligations of FICC or its members. Instead, Amendment No. 1 corrects a typographical error in the original filing. Accordingly, the Commission finds good cause, pursuant to Section 19(b)(2)(C)(iii) of the Act,⁶⁶ to approve the Proposed Rule Change, as modified by Amendment No. 1, prior to the thirtieth day after the date of publication of notice of Amendment No. 1 in the **Federal Register**.

V. Conclusion

On the basis of the foregoing, the Commission finds that the Proposed Rule Change, as modified by Amendment No. 1, is consistent with the requirements of the Act and in particular with the requirements of Section 17A of the Act⁶⁷ and the rules and regulations promulgated thereunder.

It is therefore ordered, pursuant to Section 19(b)(2) of the Act⁶⁸ that proposed rule change SR-FICC-2021-003, be, and hereby is, APPROVED.⁶⁹

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.⁷⁰

J. Matthew DeLesDernier,
Assistant Secretary.

[FR Doc. 2021-19046 Filed 9-2-21; 8:45 am]

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SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-92802; File No. SR-NYSE-2021-46]

Self-Regulatory Organizations; New York Stock Exchange LLC; Notice of Filing and Immediate Effectiveness of Proposed Rule Change To Extend the Temporary Period for Specified Commentaries to Rules 7.35A and 7.35C and Temporary Rule Relief in Rule 36.30

August 30, 2021.

Pursuant to Section 19(b)(1) ¹ of the Securities Exchange Act of 1934 (the

“Act”)² and Rule 19b-4 thereunder,³ notice is hereby given that on August 27, 2021, New York Stock Exchange LLC (“NYSE” or the “Exchange”) filed with the Securities and Exchange Commission (the “Commission”) the proposed rule change as described in Items I and II below, which Items have been prepared by the self-regulatory organization. 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 extend the temporary period for specified Commentaries to Rules 7.35A and 7.35C and temporary rule relief in Rule 36.30, to end on the earlier of a full reopening of the Trading Floor facilities to DMMs or after the Exchange closes on December 31, 2021. 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 proposes to extend the temporary period for specified Commentaries to Rules 7.35A and 7.35C and temporary rule relief to Rule 36.30 to end on the earlier of a full reopening of the Trading Floor facilities to DMMs or after the Exchange closes on December 31, 2021. The current temporary period that these Rules are in effect ends on the earlier of a full reopening of the Trading Floor facilities to DMMs or after the Exchange closes on August 31, 2021.

Background

To slow the spread of COVID-19 through social-distancing measures, on March 18, 2020, the CEO of the Exchange made a determination under Rule 7.1(c)(3) that, beginning March 23, 2020, the Trading Floor facilities located at 11 Wall Street in New York City would close and the Exchange would move, on a temporary basis, to fully electronic trading.⁴ On May 14, 2020, the CEO of the Exchange made a determination under Rule 7.1(c)(3) to reopen the Trading Floor on a limited basis on May 26, 2020 to a subset of Floor brokers, subject to safety measures designed to prevent the spread of COVID-19.⁵ On June 15, 2020, the CEO of the Exchange made a determination under Rule 7.1(c)(3) to begin the second phase of the Trading Floor reopening by allowing DMMs to return on June 17, 2020, subject to safety measures designed to prevent the spread of COVID-19.⁶ Consistent with these safety measures, both DMMs and Floor broker firms continue to operate with reduced staff on the Trading Floor.

Proposed Rule Change

Beginning in March 2020, the Exchange modified its rules to add Commentaries to Rules 7.35, 7.35A, 7.35B, and 7.35C and rule relief in Rule 36.30,⁷ and has extended the expiration

⁴ Pursuant to Rule 7.1(e), the CEO notified the Board of Directors of the Exchange of this determination. The Exchange’s current rules establish how the Exchange will function fully-electronically. The CEO also closed the NYSE American Options Trading Floor, which is located at the same 11 Wall Street facilities, and the NYSE Arca Options Trading Floor, which is located in San Francisco, CA. See Press Release, dated March 18, 2020, available here: <https://ir.theice.com/press/press-releases/all-categories/2020/03-18-2020-204202110>.

⁵ See Securities Exchange Act Release No. 88933 (May 22, 2020), 85 FR 32059 (May 28, 2020) (SR-NYSE-2020-47) (Notice of filing and immediate effectiveness of proposed rule change).

⁶ See Securities Exchange Act Release No. 89086 (June 17, 2020) (SR-NYSE-2020-52) (Notice of filing and immediate effectiveness of proposed rule change).

⁷ See Securities Exchange Act Release Nos. 88413 (March 18, 2020), 85 FR 16713 (March 24, 2020) (SR-NYSE-2020-19) (amending Rule 7.35C to add Commentary .01); 88444 (March 20, 2020), 85 FR 17141 (March 26, 2020) (SR-NYSE-2020-22) (amending Rules 7.35A to add Commentary .01, 7.35B to add Commentary .01, and 7.35C to add Commentary .02); 88488 (March 26, 2020), 85 FR 18286 (April 1, 2020) (SR-NYSE-2020-23) (amending Rule 7.35A to add Commentary .02); 88546 (April 2, 2020), 85 FR 19782 (April 8, 2020) (SR-NYSE-2020-28) (amending Rule 7.35A to add Commentary .03); 88562 (April 3, 2020), 85 FR 20002 (April 9, 2020) (SR-NYSE-2020-29) (amending Rule 7.35C to add Commentary .03); 88705 (April 21, 2020), 85 FR 23413 (April 27, 2020) (SR-NYSE-2020-35) (amending Rule 7.35A to add Commentary .04); 88725 (April 22, 2020), 85 FR 23583 (April 28, 2020) (SR-NYSE-2020-37)

Continued

⁶⁶ *Id.*

⁶⁷ 15 U.S.C. 78q-1.

⁶⁸ 15 U.S.C. 78s(b)(2).

⁶⁹ In approving the proposed rule change, the Commission considered the proposals’ impact on efficiency, competition, and capital formation. 15 U.S.C. 78c(f).

⁷⁰ 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.

date of such Commentaries several times.⁸ In July 2021, the Commission approved the Exchange's proposals to make permanent several of the rule changes that were the subject of those Commentaries.⁹ The remaining Commentaries, specified below, are in effect until the earlier of a full reopening of the Trading Floor facilities to DMMs or after the Exchange closes on August 31, 2021:

- Commentaries .01, .02, .03, .04, .05, and .07 to Rule 7.35A;
- Commentaries .01, .02, and .04 to Rule 7.35C; and

(amending Rule 7.35 to add Commentary .01); 88950 (May 26, 2020), 85 FR 33252 (June 1, 2020) (SR-NYSE-2020-48) (amending Rule 7.35A to add Commentary .05); 89059 (June 12, 2020), 85 FR 36911 (June 18, 2020) (SR-NYSE-2020-50) (amending Rule 7.35C to add Commentary .04); 89086 (June 17, 2020), 85 FR 37712 (SR-NYSE-2020-52) (amending Rules 7.35A to add Commentary .06, 7.35B to add Commentary .03, 76 to add Supplementary Material 20, and Supplementary Material .30 to Rule 36); 89925 (September 18, 2020) (SR-NYSE-2020-75) (amending Rule 7.35 to add Commentary .02); and 90810 (December 29, 2020), 86 FR 335 (January 5, 2021) (SR-NYSE-2020-109) (amending Rule 7.35A to add Commentary .07).

⁸ See Securities Exchange Act Release No. 91778 (May 5, 2021) 86 FR 25902 (May 11, 2021) (SR-NYSE-2021-29) (Notice of filing and immediate effectiveness of proposed rule change to extend the temporary period for specified Commentaries to Rules 7.35, 7.35A, 7.35B, and 7.35C and temporary rule relief in Rule 36.30 to end on the earlier of a full reopening of the Trading Floor facilities to DMMs or after the Exchange closes on August 31, 2021). See also Securities Exchange Act Release Nos. 90795 (December 23, 2020), 85 FR 86608 (December 30, 2020) (SR-NYSE-2020-106) (extending same to end on the earlier of a full reopening of the Trading Floor facilities to DMMs or after the Exchange closes on April 30, 2021); 90005 (September 25, 2020), 85 FR 61999 (October 2020) (SR-NYSE-2020-78) (extending same to end on the earlier of a full reopening of the Trading Floor facilities to DMMs or after the Exchange closes on September 30, 2020); 89199 (June 30, 2020), 85 FR 40718 (July 7, 2020) (SR-NYSE-2020-56) (Notice of filing and immediate effectiveness of proposed rule change to extend the temporary period for Commentaries to Rules 7.35, 7.35A, 7.35B, and 7.35C; Supplementary Material .20 to Rule 76; and temporary rule relief in Rule 36.30 to end on the earlier of a full reopening of the Trading Floor facilities to DMMs or after the Exchange closes on July 31, 2020); and 89368 (July 21, 2020), 85 FR 45272 (July 27, 2020) (SR-NYSE-2020-61) (Notice of filing and immediate effectiveness of proposed rule change to lift the temporary suspension to Rule 76 and delete Supplementary Material .20 to Rule 76).

⁹ See Securities Exchange Act Release Nos. 92374 (July 9, 2021), 86 FR 37367 (July 15, 2021) (SR-NYSE-2020-89) (making permanent the rule changes specified in Commentary .03 to Rule 7.35C); 92373 (July 12, 2021), 86 FR 37779 (July 16, 2021) (SR-NYSE-2020-93) (making permanent the rule changes specified in Commentaries .01 and .02 to Rule 7.35); and 92480 (July 23, 2021), 86 FR 40885 (July 29, 2021) (SR-NYSE-2020-95) (making permanent certain rule changes specified in Commentaries .01 and .06 to Rule 7.35A and Commentaries .01 and .03 to Rule 7.35B).

- Amendments to Rule 36.30.

The first and second phases of the reopening of the Trading Floor are subject to safety measures designed to prevent the spread of COVID-19. To meet these safety measures, Floor brokers and DMM units that have chosen to return to the Trading Floor are operating with reduced staff. The Exchange is therefore proposing to extend Commentaries .01, .02, .03, .04, .05, and .07 to Rule 7.35A, Commentaries .01, .02, and .04 to Rule 7.35C, and the amendments to Rule 36.30 until such time that there is a full reopening of the Trading Floor facilities to DMMs.

The Exchange is not proposing any substantive changes to these Rules.

2. Statutory Basis

The proposed rule change is consistent with Section 6(b) of the Act,¹⁰ in general, and furthers the objectives of Section 6(b)(5) of the Act,¹¹ in particular, in that it is 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 facilitating transactions in securities, and to remove impediments to and perfect the mechanism of a free and open market and a national market system.

To reduce the spread of COVID-19, the CEO of the Exchange made a determination under Rule 7.1(c)(3) that beginning March 23, 2020, the Trading Floor facilities located at 11 Wall Street in New York City would close and the Exchange would move, on a temporary basis, to fully electronic trading. On May 14, 2020, the CEO made a determination under Rule 7.1(c)(3) that, beginning May 26, 2020, the Trading Floor would be partially reopened to allow a subset of Floor brokers to return to the Trading Floor. On June 15, 2020, the CEO made a determination under Rule 7.1(c)(3) that, beginning June 17, 2020, DMM units may choose to return a subset of staff to the Trading Floor.

The Exchange believes that the proposed rule change would remove impediments to and perfect the mechanism of a free and open market and a national market system because the Trading Floor has not yet reopened in full to DMMs or Floor brokers. Accordingly, the Exchange believes that the temporary rule changes in effect pursuant to the Commentaries to Rules 7.35A and 7.35C and amendments to Rule 36.30, which are intended to be in effect during the temporary period

while the Trading Floor has not yet opened in full to DMMs, should be extended until such time that there is a full reopening of the Trading Floor facilities to DMMs. The Exchange is not proposing any substantive changes to these Rules.

The Exchange believes that, by clearly stating that this relief will be in effect through the earlier of a full reopening of the Trading Floor facilities to DMMs or the close of the Exchange on December 31, 2021, market participants will have advance notice of the temporary period during which the Commentaries to Rules 7.35A and 7.35C and amendments to Rule 36.30 will be in effect.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change would impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. The proposed rule change is not designed to address any competitive issues but rather would extend the period during which Commentaries .01, .02, .03, .04, .05, and .07 to Rule 7.35A; Commentaries .01, .02, and .04 to Rule 7.35C; and amendments to Rule 36.30 will be in effect. These Commentaries are intended to be in effect during the temporary period while the Trading Floor has not yet been opened in full to DMMs and Floor brokers and currently expire on August 31, 2021. Because the Trading Floor has not been opened in full to DMMs, the Exchange proposes to extend the temporary period for these temporary rules to end on the earlier of a full reopening of the Trading Floor facilities to DMMs or after the Exchange closes on December 31, 2021.

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

The Exchange has filed the proposed rule change pursuant to Section 19(b)(3)(A)(iii) of the Act¹² and Rule 19b-4(f)(6) thereunder.¹³ Because the 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

¹⁰ 15 U.S.C. 78f(b).

¹¹ 15 U.S.C. 78f(b)(5).

¹² 15 U.S.C. 78s(b)(3)(A)(iii).

¹³ 17 CFR 240.19b-4(f)(6).

prior to 30 days from the date on which it was filed, or such shorter time as the Commission may designate, if consistent with the protection of investors and the public interest, the proposed rule change has become effective pursuant to Section 19(b)(3)(A) of the Act and Rule 19b-4(f)(6)(iii) thereunder.

A proposed rule change filed under Rule 19b-4(f)(6)¹⁴ normally does not become operative prior to 30 days after the date of the filing. However, pursuant to Rule 19b-4(f)(6)(iii),¹⁵ the Commission may designate a shorter time if such action is consistent with the protection of investors and the public interest. The Exchange has asked the Commission to waive the 30-day operative delay so that the proposal may become operative immediately upon filing.

The Commission believes that waiver of the operative delay is consistent with the protection of investors and the public interest because it will allow the rules discussed above to remain in effect during the temporary period during which the Trading Floor has not yet been reopened in full to DMMs because of health precautions related to the Covid-19 pandemic. Accordingly, the Commission hereby waives the 30-day operative delay and designates the proposal operative upon filing.¹⁶

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)¹⁷ 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-NYSE-2021-46 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-NYSE-2021-46. 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-NYSE-2021-46 and should be submitted on or before September 24, 2021.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.¹⁸

J. Matthew DeLesDernier,
Assistant Secretary.

[FR Doc. 2021-19045 Filed 9-2-21; 8:45 am]

BILLING CODE 8011-01-P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-92525; File No. SR-FINRA-2020-041]

Self-Regulatory Organizations; Financial Industry Regulatory Authority, Inc.; Order Approving a Proposed Rule Change, as Modified by Amendment No. 1 and Amendment No. 2, To Adopt FINRA Rule 4111 (Restricted Firm Obligations) and FINRA Rule 9561 (Procedures for Regulating Activities Under Rule 4111)

July 30, 2021.

Correction

In notice document 2021-16671 appearing on page 42925 in the issue of August 5, 2021, make the following correction:

On page 42925, in the second column, the file number is corrected to read as set forth above.

[FR Doc. C1-2021-16671 Filed 9-2-21; 8:45 am]

BILLING CODE 0099-10-D

SECURITIES AND EXCHANGE COMMISSION

Submission for OMB Review; Comment Request

Upon Written Request, Copies Available From: Securities and Exchange Commission, Office of FOIA Services, Washington, DC 20549-2736

Extension:

Rule 15g-3; [SEC File No. 270-346, OMB Control No. 3235-0392]

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") has submitted to the Office of Management and Budget ("OMB") a request for approval of extension of the existing collection of information provided for in Rule 15g-3—Broker or dealer disclosure of quotations and other information relating to the penny stock market (17 CFR 240.15g-3) under the Securities Exchange Act of 1934 (15 U.S.C. 78a *et seq.*).

Rule 15g-3 requires that brokers and dealers disclose to customers current quotation prices or similar market information in connection with transactions in penny stocks. The purpose of the rule is to increase the level of disclosure to investors concerning penny stocks generally and specific penny stock transactions.

The Commission estimates that approximately 178 broker-dealers will each spend an average of approximately

¹⁴ 17 CFR 240.19b-4(f)(6).

¹⁵ 17 CFR 240.19b-4(f)(6)(iii).

¹⁶ For purposes only of accelerating the operative date of this proposal, the Commission has considered the proposed rule's impact on efficiency, competition, and capital formation. 15 U.S.C. 78c(f).

¹⁷ 15 U.S.C. 78s(b)(2)(B).

¹⁸ 17 CFR 200.30-3(a)(12).

87.0833333 hours annually to comply with this rule. Thus, the total time burden is approximately 15,501 hours per year.

Rule 15g-3 contains record retention requirements. Compliance with the rule is mandatory. The required records are available only to the examination staff of the Commission and the self regulatory organizations of which the broker-dealer is a member.

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.

The public may view background documentation for this information collection at the following website: www.reginfo.gov. Find this particular information collection by selecting "Currently under 30-day Review—Open for Public Comments" or by using the search function. Written comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice to (i) www.reginfo.gov/public/do/PRAMain and (ii) David Bottom, Director/Chief Information Officer, Securities and Exchange Commission, c/o Cynthia Roscoe, 100 F Street NE, Washington, DC 20549, or by sending an email to: PRA_Mailbox@sec.gov.

Dated: August 30, 2021.

J. Matthew DeLesDernier,
Assistant Secretary.

[FR Doc. 2021-19028 Filed 9-2-21; 8:45 am]

BILLING CODE 8011-01-P

SMALL BUSINESS ADMINISTRATION

[Disaster Declaration #17121 and #17122; Louisiana Disaster Number LA-00115]

Presidential Declaration of a Major Disaster for the State of Louisiana

AGENCY: U.S. Small Business Administration.

ACTION: Notice.

SUMMARY: This is a Notice of the Presidential declaration of a major disaster for the State of Louisiana (FEMA-4611-DR), dated 08/29/2021.

Incident: Hurricane Ida.

Incident Period: 08/26/2021 and continuing.

DATES: Issued on 08/29/2021.

Physical Loan Application Deadline Date: 10/28/2021.

Economic Injury (EIDL) Loan Application Deadline Date: 05/31/2022.

ADDRESSES: Submit completed loan applications to: U.S. Small Business Administration, Processing and

Disbursement Center, 14925 Kingsport Road, Fort Worth, TX 76155.

FOR FURTHER INFORMATION CONTACT: A. Escobar, Office of Disaster Assistance, U.S. Small Business Administration, 409 3rd Street SW, Suite 6050, Washington, DC 20416, (202) 205-6734.

SUPPLEMENTARY INFORMATION: Notice is hereby given that as a result of the President's major disaster declaration on 08/29/2021, applications for disaster loans may be filed at the address listed above or other locally announced locations.

The following areas have been determined to be adversely affected by the disaster:

Primary Parishes (Physical Damage and Economic Injury Loans): Ascension, Assumption, East Baton Rouge, East Feliciana, Iberia, Iberville, Jefferson, Lafourche, Livingston, Orleans, Plaquemines, Pointe Coupee, Saint Bernard, Saint Charles, Saint Helena, Saint James, Saint Martin, Saint Mary, Saint Tammany, St John the Baptist, Tangipahoa, Terrebonne, Washington, West Baton Rouge, West Feliciana.

Contiguous Parishes/Counties (Economic Injury Loans Only):

Louisiana: Avoyelles, Concordia, Lafayette, Saint Landry, Vermilion.
Mississippi: Amite, Hancock, Marion, Pearl River, Pike, Walthall, Wilkinson.

The Interest Rates are:

	Percent
For Physical Damage:	
Homeowners with Credit Available Elsewhere	3.125
Homeowners without Credit Available Elsewhere	1.563
Businesses with Credit Available Elsewhere	5.710
Businesses without Credit Available Elsewhere	2.855
Non-Profit Organizations with Credit Available Elsewhere ...	2.000
Non-Profit Organizations without Credit Available Elsewhere	2.000
For Economic Injury:	
Businesses & Small Agricultural Cooperatives without Credit Available Elsewhere	2.855
Non-Profit Organizations without Credit Available Elsewhere	2.000

The number assigned to this disaster for physical damage is 17121 8 and for economic injury is 17122 0.

(Catalog of Federal Domestic Assistance Number 59008)

James Rivera,
Associate Administrator for Disaster Assistance.

[FR Doc. 2021-19094 Filed 9-2-21; 8:45 am]

BILLING CODE 8026-03-P

DEPARTMENT OF STATE

[Public Notice: 11525]

Notification of the Fourteenth CAFTA-DR Environmental Affairs Council Meeting

AGENCY: Department of State.

ACTION: Notice of the fourteenth Dominican Republic-Central America-United States Free Trade Agreement (CAFTA-DR) Environmental Affairs Council meeting and request for comments.

SUMMARY: The Department of State and the Office of the United States Trade Representative are providing notice that the parties to CAFTA-DR intend to hold the fourteenth meeting of the Environmental Affairs Council (the Council) established under Chapter 17 (Environment Chapter) of that agreement in a virtual meeting on October 14, 2021, hosted by Costa Rica. The Department of State and Office of the United States Trade Representative also invite written comments or suggestions regarding topics to be discussed at the Council meeting to be submitted no later than September 23, 2021. When preparing comments, we encourage submitters to refer to Chapter 17 of the CAFTA-DR and to the CAFTA-DR Environmental Cooperation Agreement (ECA) (*documents available at <https://www.state.gov/key-topics-office-of-environmental-quality-and-transboundary-issues/current-trade-agreements-with-environmental-chapters/#cafta-dr> and <https://ustr.gov/issue-areas/environment/bilateral-and-regional-trade-agreements>*). Instructions on how to submit comments are under the heading **ADDRESSES**.

DATES: The public session of the Council will be held on October 14, 2021, from 4:00 p.m. to 5:20 p.m. EDT. Please contact Anel Gonzalez-Ruiz and Sigrid Simpson to request a link to this meeting. We request comments and suggestions in writing no later than September 23, 2021.

ADDRESSES: Written comments or suggestions should be submitted to both:

(1) Anel Gonzalez-Ruiz, U.S. Department of State, Bureau of Oceans and International Environmental and

Scientific Affairs, Office of Environmental Quality, by email to Gonzalez-Ruiza@state.gov with the subject line "CAFTA-DR EAC Meeting"; and

(2) Sigrig Simpson, Director for Environment and Natural Resources, Office of the United States Trade Representative by email to Sigrig.A.Simpson@ustr.eop.gov with the subject line "CAFTA-DR EAC Meeting".

If you have access to the internet you can view and comment on this notice by going to: <http://www.regulations.gov#!/home> and searching for docket number DOS-2021-0029.

FOR FURTHER INFORMATION CONTACT: Anel Gonzalez-Ruiz, (202) 705-5282, or Sigrig Simpson, (202) 881-6592.

SUPPLEMENTARY INFORMATION: On October 14, the Council will meet in a closed government-to-government session to (1) review implementation of the Environment chapter and discuss how parties are meeting their environment chapter obligations, including by highlighting increased levels of environmental protection, environmental enforcement, and related achievements in the past year; (2) discuss the most pressing trade-related environmental challenges facing the parties and identify key actions that the parties can take under CAFTA-DR to address them; (3) receive a report from the CAFTA-DR Secretariat for Environmental Matters on the status of public submissions; and (4) highlight the achievements of the CAFTA-DR Environmental Cooperation Program on its fifteenth anniversary and review ongoing work under that program.

The Council invites all interested persons to attend a virtual public session on Chapter 17 implementation, beginning at 4:00 p.m. EDT on October 14. At the session, the Council will welcome questions, input, and information about challenges and achievements in implementation of the Environment chapter obligations and the related ECA. If you would like to connect to the public session, please notify Anel Gonzalez-Ruiz and Sigrig Simpson at the email addresses listed under the heading **ADDRESSES**. Please include your full name and identify any organization or group you represent.

Article 17.5 of the CAFTA-DR establishes an Environmental Affairs Council (the Council) and provides that, unless the CAFTA-DR parties otherwise agree, the Council will meet annually to oversee the implementation of, and review progress under, Chapter 17, and to consider the status of cooperation activities developed under the ECA.

Article 17.5 further requires that, unless the parties otherwise agree, each meeting of the Council include a session in which members of the Council have an opportunity to meet with the public to discuss matters relating to the implementation of Chapter 17.

In preparing comments, we encourage submitters to refer to:

- Chapter 17 of the CAFTA-DR and
- The ECA

These documents are available at: <https://www.state.gov/key-topics-office-of-environmental-quality-and-transboundary-issues/current-trade-agreements-with-environmental-chapters/#cafta-dr> and <https://ustr.gov/issue-areas/environment/bilateral-and-regional-trade-agreements>. Visit the State website at www.state.gov and the USTR website at www.ustr.gov for more information.

Raffi V. Balian,

Acting Director, Office of Environmental Quality, U.S. Department of State.

[FR Doc. 2021-19060 Filed 9-2-21; 8:45 am]

BILLING CODE 4710-09-P

SURFACE TRANSPORTATION BOARD

[Docket No. FD 36540]

Cornhusker Railroad, LLC—Operation Exemption—Trackage in Hall and Adams Counties, Neb.

Cornhusker Railroad, LLC (CORN), a noncarrier, has filed a verified notice of exemption pursuant to 49 CFR 1150.31 to operate approximately 27 miles of track in Hall and Adams Counties, Neb. (the Line). The Line consists of: (1) The Grand Island Branch, between a connection with BNSF Railway Company (BNSF) at West Airport Road near BNSF milepost 103.55 in Ovina, Neb., and a connection with Union Pacific Railroad Company (UP) at West Husker Highway near UP milepost 154.5 in Alda, Neb., a distance of approximately five miles, and approximately 17 miles of connected industry track to the west, all located in Hall County; and (2) the Hastings Branch, consisting of approximately five miles of industry track that connects to UP's Hastings Industrial Park Subdivision in Hastings, Adams County. According to CORN, no common carrier services are currently being offered on the Line.¹

¹ The verified notice states that five miles of the Grand Island Branch were the subject of two prior acquisition and operation proceedings, but the authority was never consummated and the Line remains private trackage. See *Cornhusker Rys.—Acquis. & Operation Exemption—Rail Line of DTE*

This transaction is related to a concurrently filed verified notice of exemption in *Cathcart Rail, LLC—Continuance in Control Exemption—Cornhusker Railroad*, Docket No. FD 36541, in which Cathcart Rail, LLC, seeks to continue in control of CORN upon CORN's becoming a Class III rail carrier.

According to the verified notice, CORN has not yet entered into an agreement with the owner of the Line, but CORN states that, prior to exercising operating authority, it will acquire title to the rail assets that will be used in common carrier service.

CORN states that the proposed transaction does not involve any provision or agreement that would limit future interchange on the Line with a third-party connecting carrier. CORN certifies that its projected annual revenue will not exceed \$5 million and that the proposed transaction will not result in CORN's becoming a Class I or II rail carrier.

The earliest this transaction may be consummated is September 19, 2021, the effective date of the exemption (30 days after the verified notice was filed).

If the verified notice contains false or misleading information, the exemption is void ab initio. Petitions to revoke the exemption under 49 U.S.C. 10502(d) may be filed at any time. The filing of a petition to revoke will not automatically stay the effectiveness of the exemption. Petitions for stay must be filed no later than September 10, 2021.

All pleadings, referring to Docket No. FD 36540, should be filed with the Surface Transportation Board via e-filing on the Board's website. In addition, a copy of each pleading must be served on CORN's representative, David F. Rifkind, Stinson LLP, 1775 Pennsylvania Avenue NW, Suite 800, Washington, DC 20006.

According to CORN, this action is categorically excluded from environmental review under 49 CFR 1105.6(c) and from historic preservation reporting requirements under 49 CFR 1105.8(b).

Board decisions and notices are available at www.stb.gov.

Decided: August 31, 2021.

By the Board, Scott M. Zimmerman, Acting Director, Office of Proceedings.

Aretha Laws-Byrum,
Clearance Clerk.

[FR Doc. 2021-19086 Filed 9-2-21; 8:45 am]

BILLING CODE 4915-01-P

Rail Servs., Inc., FD 34719 (STB served July 20, 2005); *Freightcar Short Line, Inc.—Acquis. & Operation Exemption—Line of Cornhusker Rys.*, FD 35423 (STB served Sept. 30, 2010).

SURFACE TRANSPORTATION BOARD**[Docket No. FD 36541]****Cathcart Rail, LLC—Continuance in Control Exemption—Cornhusker Railroad, LLC**

Cathcart Rail, LLC (Cathcart), a noncarrier, has filed a verified notice of exemption under 49 CFR 1180.2(d)(2) to continue in control of Cornhusker Railroad, LLC (CORN), a noncarrier controlled by Cathcart, upon CORN's becoming a Class III rail carrier.

This transaction is related to a verified notice of exemption filed concurrently in *Cornhusker Railroad—Operation Exemption—Trackage in Hall & Adams Counties, Neb.*, Docket No. FD 36540, in which CORN seeks to operate approximately 27 miles of track consisting of the Grand Island Branch in Hall County, Neb., and the Hastings Branch, in Adams County, Neb.

According to the verified notice of exemption, Cathcart currently controls Bucyrus Industrial Railroad, LLC, a Class III rail carrier in Bucyrus, Ohio, and Belpre Industrial Parkersburg Railroad, LLC, a Class III rail carrier in Ohio and West Virginia.¹

Cathcart represents that: (1) The rail line to be operated by CORN does not connect with the rail lines of any of the rail carriers controlled by Cathcart; (2) the transaction is not part of a series of anticipated transactions that would result in such a connection; and (3) the transaction does not involve a Class I rail carrier. The proposed transaction is therefore exempt from the prior approval requirements of 49 U.S.C. 11323 pursuant to 49 CFR 1180.2(d)(2).

The transaction may be consummated on or after September 19, 2021, the effective date of the exemption (30 days after the verified notice was filed).

Under 49 U.S.C. 10502(g), the Board may not use its exemption authority to relieve a rail carrier of its statutory obligation to protect the interests of its employees. However, 49 U.S.C. 11326(c) does not provide for labor protection for transactions under 49 U.S.C. 11324 and 11325 that involve only Class III rail carriers. Because this transaction involves Class III rail carriers only, the Board, under the statute, may not impose labor protective conditions for this transaction.

If the verified notice contains false or misleading information, the exemption is void ab initio. Petitions to revoke the

exemption under 49 U.S.C. 10502(d) may be filed at any time. The filing of a petition to revoke will not automatically stay the effectiveness of the exemption. Petitions for stay must be filed no later than September 10, 2021 (at least seven days before the exemption becomes effective).

All pleadings, referring to Docket No. FD 36541, should be filed with the Surface Transportation Board via e-filing on the Board's website. In addition, one copy of each pleading must be served on Cathcart's representative, David F. Rifkind, Stinson LLP, 1775 Pennsylvania Avenue NW, Suite 800, Washington, DC 20006.

According to Cathcart, this action is categorically excluded from environmental review under 49 CFR 1105.6(c) and from historic reporting requirements under 49 CFR 1105.8(b).

Board decisions and notices are available at www.stb.gov.

Decided: August 31, 2021.

By the Board, Scott M. Zimmerman, Acting Director, Office of Proceedings.

Aretha Laws-Byrum,
Clearance Clerk.

[FR Doc. 2021-19087 Filed 9-2-21; 8:45 am]

BILLING CODE 4915-01-P

DEPARTMENT OF TRANSPORTATION**Federal Aviation Administration****[Docket No. FAA-2020-1052]**

Agency Information Collection Activities: Requests for Comments; Clearance of a Renewed Approval of Information Collection: Reporting of Information Using Special Airworthiness Information Bulletin

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 November 6, 2020. The collection involves a voluntary request for information on a specific safety concern. The information to be collected will be used to help the FAA in an ongoing investigation to determine the cause of a specific condition, or whether the condition is likely to exist or develop on

other aircraft, aircraft engines, propellers, or appliances of the same type design.

DATES: Written comments should be submitted by October 4, 2021.

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.

FOR FURTHER INFORMATION CONTACT: Stephen Kocmoud by email at: stephen.m.kocmoud@faa.gov; phone: 817-222-5350.

SUPPLEMENTARY INFORMATION:

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: 2120-0731.

Title: Reporting of Information Using Special Airworthiness Information Bulletin.

Form Numbers: None.

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 November 6, 2020 (85 FR 71135). A special airworthiness information bulletin (SAIB) is an important tool that helps the FAA to gather information to determine whether an airworthiness directive is necessary. An SAIB alerts, educates, and make recommendations to the aviation community and individual aircraft owners and operators about ways to improve the safety of a product. It contains non-regulatory information and guidance that is advisory and may include recommended actions or inspections with a request for voluntary reporting of inspection results.

Respondents: Respondents may include mechanics, type clubs, owners and operators of aircraft.

Frequency: Information is collected as needed to acquire additional information on a specific condition.

Estimated Average Burden per Response: 5 minutes.

Estimated Total Annual Burden: 447 hours.

¹ See *Bucyrus Indus. R.R.—Operation Exemption—Bucyrus Railcar Repair, LLC*, FD 36329 (STB served July 25, 2019); *Belpre Indus. Parkersburg R.R.—Lease & Operation Exemption—CSX Transp., Inc.* FD 36388 (STB served Apr. 3, 2020).

Issued in Washington, DC, on August, 30, 2021.

Michael Linegang,

Manager, Operational Safety Branch.

[FR Doc. 2021-19035 Filed 9-2-21; 8:45 am]

BILLING CODE 4910-13-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Public Meeting/Notice of Availability for Proposed Air Tour Management Plans at Bandelier National Monument; Great Smoky Mountains National Park; Arches National Park; Glacier National Park; Canyonlands National Park; Natural Bridges National Monument; and Bryce Canyon National Park

AGENCY: Federal Aviation Administration (FAA), Transportation.

ACTION: Public meeting/notice of availability for draft Air Tour Management Plans at Bandelier National Monument; Great Smoky Mountains National Park; Arches National Park; Glacier National Park; Canyonlands National Park; Natural Bridges National Monument; and Bryce Canyon National Park.

SUMMARY: The FAA, in cooperation with the National Park Service (NPS), has initiated development of Air Tour Management Plans (ATMPs) for Bandelier National Monument, Great Smoky Mountains National Park, Arches National Park, Glacier National Park, Canyonlands National Park, Natural Bridges National Monument, and Bryce Canyon National Park (collectively referred to as the Parks) pursuant to the National Parks Air Tour Management Act of 2000 (the Act) and its implementing regulations. The Act requires that in developing an ATMP for a national park or tribal lands, the FAA and the NPS must hold at least one public meeting with interested parties. In addition, the Act requires that the ATMPs be published in the **Federal Register** for notice and comment and that copies be made available to the public. This notice announces the public availability of the proposed ATMPs for comment and public meetings for each of the Parks. The purpose of these meetings is to review the proposed ATMPs and further ATMP development with the public. In accordance with the National Historic Preservation Act, the FAA and the NPS are also seeking public comment on the potential of the proposed ATMPs to cause adverse effects to historic properties.

DATES:

Comment Period: Comments must be received on or before 30 days from this notice. Comments will be received on the NPS Planning, Environment and Public Comment System (PEPC) website. Each park's website link is below:

- Bandelier National Monument—<https://parkplanning.nps.gov/BandelierATMP>
 - Great Smoky Mountains National Park—<https://parkplanning.nps.gov/GreatSmokyMountainsATMP>
 - Arches National Park—<https://parkplanning.nps.gov/ArchesATMP>
 - Glacier National Park—<https://parkplanning.nps.gov/GlacierATMP>
 - Canyonlands National Park—<https://parkplanning.nps.gov/CanyonlandsATMP>
 - Natural Bridges National Monument—<https://parkplanning.nps.gov/NaturalBridgesATMP>
 - Bryce Canyon National Park—<https://parkplanning.nps.gov/BRCAATMP>
- Meetings:** The meetings will be held at the following dates and times:
- Wednesday, September 15, 2021 (4:30–6:00 p.m. MT)—Bandelier National Monument
Livestream: <https://youtu.be/6OETrpLMwco>
 - Thursday, September 16, 2021 (4:30–6:00 p.m. ET)—Great Smoky Mountains National Park
Livestream: <https://youtu.be/BIIt8gzNVVA>
 - Monday, September 20, 2021 (4:30–6:00 p.m. MT)—Arches National Park
Livestream: <https://youtu.be/xAvPYYeKDwE>
 - Tuesday, September 21, 2021 (4:30–6:00 p.m. MT)—Glacier National Park
Livestream: <https://youtu.be/bYpPbrFK3Rk>
 - Wednesday, September 22, 2021 (4:30–6:00 p.m. MT)—Canyonlands National Park
Livestream: <https://youtu.be/MwWe0y1wLGc>
 - Thursday, September 23, 2021 (4:30–6:00 p.m. MT)—Natural Bridges National Monument
Livestream: <https://youtu.be/qD4Tm6IDdrM>
 - Monday, September 27, 2021 (2:30–4:00 p.m. MT)—Bryce Canyon National Park
Livestream: https://youtu.be/4_myJpTAgVQ

ADDRESSES: The meetings will be held virtually. Members of the public who wish to observe the virtual meetings can access the livestream from either of the following FAA social media platforms on the day of the event, <https://www.facebook.com/FAA>, <https://www.youtube.com/FAAnews>

or <https://www.youtube.com/FAAnews>

FOR FURTHER INFORMATION CONTACT: Any request for reasonable accommodations should be sent to the person listed on the parks' PEPC sites.

SUPPLEMENTARY INFORMATION: The FAA is issuing this notice pursuant to the National Parks Air Tour Management Act of 2000 (Pub. L. 106-181 (<https://www.govinfo.gov/link/plaw/106/public/181?link-type=html>)) and its implementing regulations contained in Title 14, Code of Federal Regulations, Part 136, Subpart B, National Parks Air Tour Management. The objective of any ATMP must be to provide acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations upon the natural and cultural resources, visitor experiences, and tribal lands. Further, an ATMP must comply with National Environmental Policy Act (NEPA) and its accompanying regulations and the Act designates the FAA as the lead agency for that purpose. The FAA and the NPS are inviting comment from the public, Federal and state agencies, tribes, and other interested parties on the proposed ATMPs for Bandelier National Monument, Great Smoky Mountains National Park, Arches National Park, Glacier National Park, Canyonlands National Park, Natural Bridges National Monument, and Bryce Canyon National Park. Any Indian tribe whose tribal lands are, or may be, overflowed by aircraft involved in a commercial air tour operation over the park or tribal lands to which the ATMP applies, will be invited to participate in the NEPA process as a cooperating agency.

The FAA and the NPS have determined that each ATMP constitutes a Federal undertaking subject to compliance with Section 106 of the National Historic Preservation Act and its implementing regulations (36 CFR part 800). The FAA and the NPS are consulting with tribes, State and Tribal Historic Preservation Officers, and other interested parties to identify historic properties and assess the potential effects of ATMPs on them.

The meetings will be open to the public and livestreamed. Members of the public who wish to observe the virtual meetings can access the livestream from either of the following FAA social media platforms on the day of the event, <https://www.facebook.com/FAA>, <https://twitter.com/FAANews> (<https://twitter.com/FAANews>) or <https://www.youtube.com/FAAnews> (<https://www.youtube.com/FAAnews>). The U.S.

Department of Transportation is committed to providing equal access to the meetings for all participants. If you need alternative formats or services because of a disability, such as sign language, interpretation, or other ancillary aids, please contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section.

The FAA and the NPS request that comments be as specific as possible in response to actions that are being proposed under this notice. All written comments become part of the official record. Written comments on the proposed ATMPs can be submitted via PEPC or sent to the mailing addresses listed in the **FOR FURTHER INFORMATION CONTACT** sections provided on the parks' PEPC sites. Comments will not be accepted by fax, email, or any other way than those specified above. 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.

Documents that describe each Park's proposed ATMP project in greater detail are available at the following locations:

- FAA Air Tour Management Plan Program website, http://www.faa.gov/about/office_org/headquarters_offices/arc/programs/air_tour_management_plan/
- NPS Planning, Air Tours website, <https://home.nps.gov/subjects/sound/airtours.htm>

Issued in El Segundo, CA. On August 31, 2021.

Keith Lusk,

Program Manager, Special Programs Staff, Western-Pacific Region.

[FR Doc. 2021-19059 Filed 9-2-21; 8:45 am]

BILLING CODE 4910-13-P

DEPARTMENT OF TRANSPORTATION

Federal Motor Carrier Safety Administration

[Docket No. FMCSA-2021-0089]

Agency Information Collection Activities; Renewal Information Collection Request: National Consumer Complaint Database

AGENCY: Federal Motor Carrier Safety Administration (FMCSA), DOT.

ACTION: Notice and request for comments.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995, FMCSA announces its plan to submit the Renewal Information Collection Request (ICR) described below to the Office of Management and Budget (OMB) for its review and approval and invites public comment. This renewal collection of information is for the National Consumer Complaint Database (NCCDB), which is an online interface allowing consumers, drivers and others to file complaints against unsafe and unscrupulous companies and/or their employees, including shippers, receivers and transportation intermediaries, depending on the type of complaint. These complaints cover a wide range of activities, including but not limited to driver harassment, coercion, movement of household goods, financial responsibility instruments for brokers and freight forwarders, Americans with Disability Act (ADA), Electronic Log Device (ELD), Medical Review Officer (MRO), and Substance Abuse Practitioner (SAP) complaints. FMCSA requests approval to renew the ICR titled "National Consumer Complaint Database" covered by OMB Control Number 2126-0067 in order to continue to collect consumer complaint information so FMCSA can use complaint data to take enforcement action, better inform FMCSA policies for safer motor carrier operations, and improve consumer protection.

DATES: We must receive your comments on or November 2, 2021.

ADDRESSES: You may submit comments identified by Federal Docket Management System (FDMS) Docket Number FMCSA-2021-0089 using any of the following methods:

- *Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the online instructions for submitting comments.
- *Fax:* 1-202-493-2251.
- *Mail:* Docket Services; 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, Washington, DC, between 9 a.m. and 5 p.m. E.T., Monday through Friday, except Federal holidays.

Instructions: All submissions must include the Agency name and docket number. For detailed instructions on submitting comments, see the Public Participation heading below. Note that all comments received will be posted without change to <http://>

www.regulations.gov, including any personal information provided. Please see the Privacy Act heading below.

Docket: For access to the docket to read background documents or comments received, visit <http://www.regulations.gov>, and follow the online instructions for accessing the dockets, or go to the street address listed above.

Privacy Act: In accordance with 5 U.S.C. 553(c), DOT solicits comments from the public to better inform its rulemaking 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.

Public Participation: The Federal eRulemaking Portal is available 24 hours each day, 365 days each year. You can obtain electronic submission and retrieval help and guidelines under the "help" section of the Federal eRulemaking Portal website. If you want us to notify you that we received your comments, please include a self-addressed, stamped envelope or postcard, or print the acknowledgement page that appears after submitting comments online. Comments received after the comment closing date will be included in the docket and will be considered to the extent practicable.

FOR FURTHER INFORMATION CONTACT: Ms. Donnice Wagoner, Department of Transportation, Federal Motor Carrier Safety Administration, Commercial Enforcement and Investigations Division/MC-ECC, West Building 6th Floor, 1200 New Jersey Avenue SE, Washington, DC 20590. Telephone: 202-366-8045. email: Donnice.Wagoner@dot.gov.

SUPPLEMENTARY INFORMATION:

Background

The FMCSA maintains online information and resources to assist drivers, others in the motor carrier industry, and members of the general public in filing safety complaints regarding household goods (HHG) carriers, hazardous material (HM) carriers, property carriers, cargo tank facilities, passenger carriers, electronic log devices (ELD), and Medical Review Officers (MRO) and Substance Abuse Professionals (SAP) reporting to the Agency's Drug and Alcohol Clearinghouse. There is also information pertaining to the filing of consumer complaints, particularly regarding HHG transportation and ADA compliance.¹

¹ The U.S. Department of Transportation (DOT) maintains reporting and other requirements for

This online interface is known as the National Consumer Complaint Database (NCCDB). The NCCDB has contributed to safer motor carrier operations on our nation's highways by identifying carriers for investigations and improved consumer protection by ensuring moving companies use fair business practices. FMCSA uses the information collected in the NCCDB to monitor and induce non-compliant regulated entities to achieve and maintain compliance.

The NCCDB grew out of a telephone hotline known as the Safety Violation Hotline Service. Congress mandated this hotline in Section 4017 of the "Transportation Equity Act of the 21st Century," Public Law 105-178, 112 Stat. 107, June 9, 1998. The Motor Carrier Safety Improvement Act of 1999, Public Law 106-159, 113 Stat. 1748, December 9, 1999, created the Federal Motor Carrier Safety Administration and section 213 of the Act expanded the Safety Violation Hotline Service to include a 24-hour operation. On August 10, 2005, Congress enacted the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users, (SAFETEA-LU), Public Law 109-59, 119 Stat. 1144. Section 4214 of SAFETEA-LU requires DOT to create a system to record and log aggregate complaint information regarding violations of the Federal Motor Carrier Safety Regulations.

The NCCDB fulfills the requirements of these mandates. Complaints are accepted through the NCCDB in connection with other statutory mandates, including, but not limited to, protection of drivers against harassment and coercion under sections 32301(b) and 32911, respectively, of the Moving Ahead for Progress in the 21st Century Act, Public Law 112-141, 126 Stat. 405. The NCCDB also accepts complaints from interested parties regarding third party intermediaries (brokers and freight forwarders) and their associated financial responsibility instruments.

Title: National Consumer Complaint Database.

OMB Control Number: 2126-0067.

Type of Request: Information collection request renewal.

Respondents: Consumers, Drivers, and Other Participants in the Motor Carrier Industry.

Estimated Number of Respondents: 18,546 respondents.

Estimated Time per Response: 15 minutes.

Expiration Date: February 28, 2022.

over-the-road buses (OTRBs) under its Americans with Disabilities Act (ADA) regulations. (For a complete listing of the DOT's ADA regulations, see 49 CFR parts 37 and 38.)

Frequency of Response: On occasion.
Estimated Total Annual Burden: 4,638 hours [18,546 respondents × 1 response per respondent × 15 minutes per response = 4,638]. Note that estimates may not match exactly due to rounding.

Public Comments Invited: You are asked to comment on any aspect of this information collection, including: (1) Whether the proposed collection is necessary for the agency to perform its mission; (2) the accuracy of the estimated burden; (3) ways for the FMCSA to enhance the quality, usefulness, and clarity of the collected information; and (4) ways that the burden could be minimized without reducing the quality of the collected information. The agency will summarize or include your comments in the request for OMB's clearance of this information collection.

Issued under the authority of 49 CFR 1.87.

Thomas P. Keane,

Associate Administrator, Office of Research and Registration.

[FR Doc. 2021-19079 Filed 9-2-21; 8:45 am]

BILLING CODE 4910-EX-P

DEPARTMENT OF TRANSPORTATION

Federal Motor Carrier Safety Administration

[Docket No. FMCSA-2021-0081]

Agency Information Collection Activities; Revision of an Approved Information Collection Request: Commercial Driver Licensing and Test Standards

AGENCY: Federal Motor Carrier Safety Administration (FMCSA), Transportation (DOT).

ACTION: Notice and request for comments.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995, FMCSA announces its plan to submit the Information Collection Request (ICR) described below to the Office of Management and Budget for its review and approval and invites public comment. The FMCSA requests approval to revise and renew an ICR titled, "Commercial Driver Licensing and Test Standards," due to an increase in the number of commercial driver's license records. This ICR is needed to ensure that drivers, motor carriers and the States are complying with notification and recordkeeping requirements for information related to testing, licensing, violations, convictions, and disqualifications and that the information is accurate,

complete, transmitted, and recorded within certain time periods as required by the Commercial Motor Vehicle Safety Act of 1986 (CMVSA), as amended.

DATES: We must receive your comments on or before November 2, 2021.

ADDRESSES: You may submit comments identified by Federal Docket Management System (FDMS) Docket Number FMCSA-2021-0081 using any of the following methods:

- *Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the online instructions for submitting comments.

- *Fax:* 202-493-2251.

- *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 12-140, 1200 New Jersey Avenue SE, Washington, DC, between 9:00 a.m. and 5:00 p.m., e.t., Monday through Friday, except Federal holidays.

Instructions: All submissions must include the Agency name and docket number. For detailed instructions on submitting comments, see the Public Participation heading below. Note that all comments received will be posted without change to <http://www.regulations.gov>, including any personal information provided. Please see the Privacy Act heading below.

Docket: For access to the docket to read background documents or comments received, go to <http://www.regulations.gov> and follow the online instructions for accessing the dockets, or go to the street address listed above.

Privacy Act: Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement for the Federal Docket Management System published in the **Federal Register** on January 17, 2008 (73 FR 3316), or you may visit <http://edocket.access.gpo.gov/2008/pdf/E8-794.pdf>.

Public Participation: The Federal eRulemaking Portal is available 24 hours each day, 365 days each year. You can obtain electronic submission and retrieval help and guidelines under the "help" section of the Federal eRulemaking Portal website. If you want us to notify you that we received your comments, please include a self-addressed, stamped envelope or postcard, or print the acknowledgement

page that appears after submitting comments online. Comments received after the comment closing date will be included in the docket and will be considered to the extent practicable.

FOR FURTHER INFORMATION CONTACT: Ms. Isabella Marra, Office of Safety Programs, Commercial Driver's License Division (MC-ESL), Federal Motor Carrier Safety Administration, West Building 6th Floor, 1200 New Jersey Avenue SE, Washington, DC 20590-0001. Telephone: 202-366-9579; email: isabella.marra@dot.gov.

SUPPLEMENTARY INFORMATION:

Background

The licensed drivers in the United States deserve reasonable assurances that their fellow motorists are properly qualified to drive the vehicles they operate. Before the Commercial Motor Vehicle Safety Act of 1986 (CMVSA or the Act) (Pub. L. 99-570, Title XII, 100 Stat. 3207-170, codified at 49 U.S.C. chapter 313) was signed by the President on October 27, 1986, 18 States and the District of Columbia authorized any person licensed to drive an automobile to also legally drive a large truck or bus. No special training or special license was required to drive these vehicles, even though it was widely recognized that operation of certain types of vehicles called for special skills, knowledge, and training. Even in the 32 States that had a classified driver licensing system in place, only 12 of these States required an applicant to take a skills test in a representative vehicle. Equally serious was the problem of drivers possessing multiple driver licenses. By spreading their convictions among several States, commercial motor vehicle (CMV) drivers could avoid punishment for their infringements, and stay behind the wheel.

The CMVSA addressed these problems by requiring the Federal government to act and place minimum standards on all jurisdictions, including the District of Columbia. Section 12002 of the Act made it illegal for a CMV operator to have more than one driver's license. Section 12003 required the CMV driver conducting operations in commerce to notify both the designated State of licensure official and the driver's employer of any convictions of State or local laws relating to traffic control (except parking tickets). This section also required the promulgation of regulations to ensure each person who applies for employment as a CMV operator to notify prospective employers of all previous employment as a CMV

operator for at least the previous 10 years.

In section 12005 of the Act, the Secretary of Transportation (Secretary) is required to develop minimum Federal standards for testing and licensing of operators of CMVs. Section 12007 of the Act also directed the Secretary, in cooperation with the States, to develop a clearinghouse to aid the States in implementing the one driver, one license, and one driving record requirement. This clearinghouse is known as the Commercial Driver's License Information System (CDLIS).

The CMVSA further required each person who has their commercial driver's license (CDL) suspended, revoked or canceled by a State, or who is disqualified from operating a CMV for any period, to notify his or her employer of such actions. Drivers of CMVs must notify their employers within 1 business day of being notified of the license suspension, revocation, and cancellation, or of the lost right to operate or disqualification. These requirements are reflected in 49 CFR part 383, titled "Commercial Driver's License Standards; Requirements and Penalties."

Specifically, section 383.21 prohibits a person from having more than one license; section 383.31 requires notification of convictions for driver violations; section 383.33 requires notification of driver's license suspensions; section 383.35 requires notification of previous employment; and section 383.37 outlines employer responsibilities. Section 383.111 requires the passing of a knowledge test by the driver and section 383.113 requires the passing of a skills test by the driver; section 383.115 contains the requirement for the double/triple trailer endorsement; section 383.117 contains the requirement for the passenger endorsement; section 383.119 contains the requirement for the tank vehicle endorsement; and section 383.121 contains the requirement for the hazardous materials endorsement.

The 10-year employment history information supplied by the CDL holder to the employer upon application for employment (49 CFR 383.35) is used to assist the employer in meeting his/her responsibilities to ensure that the applicant does not have a history of high safety risk behavior.

State officials use the information collected on the license application form (49 CFR 383.71), the medical certificate information that is posted to the driving record, and the conviction and disqualification data posted to the driving record (49 CFR 383.73) to prevent unqualified and/or disqualified

CDL holders from operating CMVs on the nation's highways. State officials are required to adopt and administer an FMCSA approved program for testing and ensuring the fitness of persons to operate a commercial motor vehicles (CMVs) (49 CFR 384.201). State officials are also required to administer knowledge and skills tests to CDL driver applicants (49 CFR 384.202). The driver applicant is required to correctly answer at least 80 percent of the questions on each knowledge test to achieve a passing score on that test. To achieve a passing score on the skills test, the driver applicant must demonstrate that he/she can successfully perform all the skills listed in the regulations. During State CDL program reviews, FMCSA officials review this information to ensure that the provisions of the regulations are being carried out.

Without the aforementioned requirements, there would be no uniform control over driver licensing practices to prevent unqualified and/or disqualified drivers from being issued a CDL and to prevent unsafe drivers from spreading their convictions among several licenses in several States and remaining behind the wheel of a CMV. Failure to collect this information would render the regulations unenforceable.

Title: Commercial Driver Licensing and Test Standards.

OMB Number: 2126-0011.

Type of Request: Revision of a currently approved information collection.

Respondents: Drivers with a commercial learner's permit (CLP) or CDL and State driver licensing agencies.

Estimated Number of Respondents: 7,696,360 driver respondents and 22,886 State respondents.

Estimated Time per Response: Varies and can range from 5 seconds to 40 hours.

Expiration Date: December 31, 2021.

Frequency of Response: Varies and can range from 51 to 8,696,120.

Estimated Total Annual Burden: 2,700,901 hours, which is the total of four tasks for CDL drivers (2,062,676 hours), added to a total of eight tasks for State driver licensing agency CDL activities (638,225 hours).

Information collection tasks and associated burden hours are as follows:

- IC-1.1 Driver Notification of Convictions/Disqualifications to Employer: 503,771 hours
- IC-1.2 Driver Providing Previous Employment History to New Employer: 316,742 hours
- IC-1.3 Driver Completion of the CDL Application Form: 43,527 hours

- IC-1.4 Driver Completion of Knowledge and Skills Tests: 1,198,636 hours
- IC-2.1 State Recording of Medical Examiner's Certificate Information: 90,202 hours
- IC-2.2 State Recording of the Self Certification of Commercial Motor Vehicle (CMV) Operation: 2,987 hours
- IC-2.3 State Verification of Medical Certification Status: 5,330 hours
- IC-2.4 Annual State Certification of Compliance: 1,632 hours
- IC-2.5 State Preparing for and Participating in Annual Program Review: 10,200 hours
- IC-2.6 CDLIS/PDPS/State Recordkeeping: 289,254 hours
- IC-2.7 Knowledge and Skills Test Recordkeeping: 49,721 hours
- IC-2.8 Knowledge and Skills Test Examiner Certification: 188,899 hours

Public Comments Invited: You are asked to comment on any aspect of this information collection, including: (1) Whether the proposed collection is necessary for the performance of FMCSA's functions; (2) the accuracy of the estimated burden; (3) ways for FMCSA to enhance the quality, usefulness, and clarity of the collected information; and (4) ways that the burden could be minimized without reducing the quality of the collected information. The agency will summarize or include your comments in the request for OMB's clearance of this information collection.

Issued under the authority of 49 CFR 1.87.

Thomas P. Keane,

Associate Administrator, Office of Research and Information Technology.

[FR Doc. 2021-19080 Filed 9-2-21; 8:45 am]

BILLING CODE 4910-EX-P

DEPARTMENT OF THE TREASURY

Office of the Comptroller of the Currency

[Docket ID OCC-2021-0015]

Mutual Savings Association Advisory Committee

AGENCY: Department of the Treasury, Office of the Comptroller of the Currency (OCC).

ACTION: Notice of Federal Advisory Committee meeting.

SUMMARY: The OCC announces a meeting of the Mutual Savings Association Advisory Committee (MSAAC).

DATES: A virtual public meeting of the MSAAC will be held on Tuesday, September 28, 2021, beginning at 8:30 a.m. Eastern Daylight Time (EDT).

ADDRESSES: The OCC will host the September 28, 2021 meeting of the MSAAC virtually.

FOR FURTHER INFORMATION CONTACT: Michael R. Brickman, Deputy Comptroller for Thrift Supervision, (202) 649-5420, Office of the Comptroller of the Currency, Washington, DC 20219. You also may access prior MSAAC meeting materials on the MSAAC page of the OCC's website at Mutual Savings Association Advisory Committee.

SUPPLEMENTARY INFORMATION: Under the authority of the Federal Advisory Committee Act, 5 U.S.C. App. 2, and the regulations implementing the Act at 41 CFR part 102-3, the OCC is announcing that the MSAAC will convene a virtual meeting on Tuesday, September 28, 2021. The meeting is open to the public and will begin at 8:30 a.m. EDT. The purpose of the meeting is for the MSAAC to advise the OCC on regulatory or other changes the OCC may make to ensure the health and viability of mutual savings associations. The agenda includes a discussion of current topics of interest to the industry.

Members of the public may submit written statements to the MSAAC. The OCC must receive written statements no later than 5:00 p.m. EDT on Thursday, September 23, 2021. Members of the public may submit written statements to MSAAC@occ.treas.gov.

Members of the public who plan to attend the virtual meeting should contact the OCC by 5:00 p.m. EDT on Thursday, September 23, 2021, to inform the OCC of their desire to attend the meeting and to obtain information about participating in the meeting. Members of the public may contact the OCC via email at MSAAC@OCC.treas.gov or by telephone at (202) 649-5420. Members of the public who are hearing impaired should call (202) 649-5597 (TTY) by 5:00 p.m. EDT on Thursday, September 23, 2021, to arrange auxiliary aids for this meeting.

Attendees should provide their full name, email address, and organization, if any.

Michael J. Hsu,

Acting Comptroller of the Currency.

[FR Doc. 2021-19055 Filed 9-2-21; 8:45 am]

BILLING CODE P

DEPARTMENT OF THE TREASURY

Office of the Comptroller of the Currency

[Docket ID OCC-2021-0016]

Minority Depository Institutions Advisory Committee

AGENCY: Department of the Treasury, Office of the Comptroller of the Currency.

ACTION: Notice.

SUMMARY: The Office of the Comptroller of the Currency (OCC) announces a meeting of the Minority Depository Institutions Advisory Committee (MDIAC).

DATES: The OCC MDIAC will hold a virtual public meeting on Tuesday, September 21, 2021 beginning at 10:00 a.m. Eastern Daylight Time (EDT).

ADDRESSES: The OCC will hold the September 21, 2021 meeting of the MDIAC virtually.

FOR FURTHER INFORMATION CONTACT: Beverly Cole, Designated Federal Officer and Deputy Comptroller for the Northeastern District, (212) 790-4001, Office of the Comptroller of the Currency, 340 Madison Ave., Fifth Floor, New York, New York 10173.

SUPPLEMENTARY INFORMATION: By this notice, the OCC is announcing that the MDIAC will convene a virtual meeting at 10:00 a.m. EDT on Tuesday, September 21, 2021. Agenda items will include current topics of interest to the industry. The purpose of the meeting is for the MDIAC to advise the OCC on steps the agency may be able to take to ensure the continued health and viability of minority depository institutions and other issues of concern to minority depository institutions. Members of the public may submit written statements to the MDIAC by email to: MDIAC@OCC.treas.gov.

The OCC must receive written statements no later than 5:00 p.m. EDT on Thursday, September 16, 2021. Members of the public who plan to attend the virtual meeting should contact the OCC by 5:00 p.m. EDT on Thursday, September 16, 2021, to inform the OCC of their desire to attend the meeting and to obtain information about participation in the virtual meeting. Members of the public may contact the OCC via email at MDIAC@OCC.treas.gov or by telephone at (212) 790-4001. Attendees should provide their full name, email address, and organization, if any. Members of the public who are hearing impaired should call (202) 649-5597 (TTY) no later than 5:00 p.m. EDT on Thursday, September

16, 2021, to arrange auxiliary aids such as sign language interpretation for this meeting.

Michael J. Hsu,

Acting Comptroller of the Currency.

[FR Doc. 2021–19054 Filed 9–2–21; 8:45 am]

BILLING CODE P

DEPARTMENT OF THE TREASURY

Office of Foreign Assets Control

Notice of OFAC Sanctions Actions

AGENCY: Office of Foreign Assets Control, Treasury.

ACTION: Notice.

SUMMARY: The U.S. Department of the Treasury's Office of Foreign Assets Control (OFAC) is publishing the names of one or more persons that have been placed on OFAC's Specially Designated Nationals and Blocked Persons List (SDN List) based on OFAC's determination that one or more applicable legal criteria were satisfied. All property and interests in property subject to U.S. jurisdiction of these persons are blocked, and U.S. persons are generally prohibited from engaging in transactions with them.

DATES: See **SUPPLEMENTARY INFORMATION** section for effective date(s).

FOR FURTHER INFORMATION CONTACT:

OFAC: Andrea Gacki, Director, tel.: 202–622–2490; 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 the Assistant Director for Sanctions Compliance & Evaluation, tel.: 202–622–2490.

SUPPLEMENTARY INFORMATION:

Electronic Availability

The Specially Designated Nationals and Blocked Persons List and additional information concerning OFAC sanctions programs are available on OFAC's website (<https://www.treasury.gov/ofac>).

Notice of OFAC Actions

On August 24, 2021, OFAC determined that the property and interests in property subject to U.S. jurisdiction of the following persons are blocked under the relevant sanctions authority listed below.

Individuals

1. HIJAZI, Khalil Ahmad, Ciudad del Este, Paraguay; DOB 22 Aug 1961; POB Paraguay; nationality Paraguay; Gender Male; RUC # 1112312–5 (Paraguay) (individual) [GLOMAG] (Linked To: HIJAZI, Kassem Mohamad).

Designated pursuant to section 1(a)(iii)(A)(1) of Executive Order 13818 of December 20, 2017, "Blocking the Property of Persons Involved in Serious Human Rights Abuse or Corruption," 82 FR 60839, 3 CFR, 2018 Comp., p. 399, (E.O. 13818) for having materially assisted, sponsored, or provided financial, material, or technological support for, or goods or services to or in support of, HIJAZI, Kassem Mohamad, a person whose property and interests in property are blocked pursuant to this order.

2. HIJAZI, Kassem Mohamad (a.k.a. HIJAZI, Kassem; a.k.a. HIJAZI, Kassem Mohamed), Ciudad del Este, Paraguay; DOB 15 Sep 1972; POB Foz de Iguacu, Brazil; Gender Male; RUC # 3481074–9 (Paraguay); National ID No. 4212398/SP (Brazil) (individual) [GLOMAG].

Designated pursuant to section 1(a)(iii)(A)(1) of E.O. 13818 for having materially assisted, sponsored, or provided financial, material, or technological support for, or goods or services to or in support of, corruption, including the misappropriation of state assets, the expropriation of private assets for personal gain, corruption related to government contracts or the extraction of natural resources, or bribery that is conducted by a foreign person.

3. DOLDAN GONZALEZ, Liz Paola (Latin: DOLDAN GONZÁLEZ, Liz Paola) (a.k.a. DOLDAN GONZALEZ, Liz Paola Florinda (Latin: DOLDÁN GONZÁLEZ, Liz Paola Florinda)), Avenida Canadones Chaquenos Numero 23, Barrio Obrero, Ciudad Del Este, Paraguay; DOB 07 Sep 1986; POB Pdte. Stroessner, Paraguay; nationality Paraguay; Gender Female; Passport 3379699 (Paraguay); RUC # 3379699–8 (Paraguay) (individual) [GLOMAG].

Designated pursuant to section 1(a)(iii)(A)(1) of E.O. 13818 for having materially assisted, sponsored, or provided financial, material, or technological support for, or goods or services to or in support of corruption, including the misappropriation of state assets, the expropriation of private assets for personal gain, corruption related to government contracts or the extraction of natural resources, or bribery that is conducted by a foreign person.

Entities

1. ESPAÑA INFORMATICA S.A. (a.k.a. ESPAÑA INFORMATICA SA (Latin: ESPAÑA INFORMÁTICA SA)), Ciudad del Este, Paraguay; RUC # 80028331–7 (Paraguay) [GLOMAG] (Linked To: HIJAZI, Kassem Mohamad).

Designated pursuant to section 1(a)(iii)(B) of E.O. 13818 for being owned or controlled by, or to have acted or purported to act for or on behalf of, directly or indirectly, HIJAZI, Kassem Mohamad, a person whose property and interests in property are blocked pursuant to this order.

2. APOLO INFORMATICA S.A. (a.k.a. APOLO INFORMATICA; a.k.a. APOLO INFORMATICA SA; a.k.a. APOLO INFORMATICA SOCIEDAD ANONIMA), Ciudad del Este, Paraguay; RUC # 80068480–0 (Paraguay) [GLOMAG] (Linked To: HIJAZI, Khalil Ahmad).

Designated pursuant to section 1(a)(iii)(B) of E.O. 13818 for being owned or controlled

by, or to have acted or purported to act for or on behalf of, directly or indirectly, HIJAZI, Khalil Ahmad, a person whose property and interests in property are blocked pursuant to this order.

3. EMPRENDIMIENTOS INMOBILIARIOS MISIONES S.A. (a.k.a. EMPRENDIMIENTOS INMOBILIARIOS MISIONES SOCIEDAD ANONIMA), Ciudad del Este, Paraguay; RUC # 80068352–8 (Paraguay) [GLOMAG] (Linked To: HIJAZI, Khalil Ahmad).

Designated pursuant to section 1(a)(iii)(B) of E.O. 13818 for being owned or controlled by, or to have acted or purported to act for or on behalf of, directly or indirectly, HIJAZI, Khalil Ahmad, a person whose property and interests in property are blocked pursuant to this order.

4. MUNDO INFORMATICO PARAGUAY S.A. (a.k.a. MUNDO INFORMATICO PARAGUAY SOCIEDAD ANONIMA), Ciudad del Este, Paraguay; RUC # 80068367–6 (Paraguay) [GLOMAG] (Linked To: HIJAZI, Khalil Ahmad).

Designated pursuant to section 1(a)(iii)(B) of E.O. 13818 for being owned or controlled by, or to have acted or purported to act for or on behalf of, directly or indirectly, HIJAZI, Khalil Ahmad, a person whose property and interests in property are blocked pursuant to this order.

5. MOBILE ZONE INTERNATIONAL IMPORT–EXPORT S.R.L. (a.k.a. MOBILE ZONE INTERNACIONAL IMPORT. EXPORT. S.R.L.; a.k.a. MOBILE ZONE INTERNACIONAL IMPORT–EXPORT S.R.L.), Ciudad del Este, Paraguay; RUC # 80071113–0 (Paraguay) [GLOMAG] (Linked To: DOLDAN GONZALEZ, Liz Paola).

Designated pursuant to section 1(a)(iii)(B) of E.O. 13818 for being owned or controlled by, or to have acted or purported to act for or on behalf of, directly or indirectly, DOLDAN GONZALEZ, Liz Paola, a person whose property and interests in property are blocked pursuant to this order.

Dated: August 24, 2021.

Bradley T. Smith,

Acting Director, Office of Foreign Assets Control.

[FR Doc. 2021–19033 Filed 9–2–21; 8:45 am]

BILLING CODE 4810–AL–P

DEPARTMENT OF VETERANS AFFAIRS

[OMB Control No. 2900–0399]

Agency Information Collection Activity Under OMB Review: Student Beneficiary Report—Restored Entitlement Program for Survivors (REPS)

AGENCY: Veterans Benefits Administration, Department of Veterans Affairs.

ACTION: Notice.

SUMMARY: In compliance with the Paperwork Reduction Act (PRA) of 1995, this notice announces that the Veterans Benefits Administration,

Department of Veterans Affairs, will submit the collection of information abstracted below to the Office of Management and Budget (OMB) for review and comment. The PRA submission describes the nature of the information collection and its expected cost and burden and it includes the actual data collection instrument.

DATES: 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. Refer to “OMB Control No. 2900–0399”.

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. 2900–0399” in any correspondence.

SUPPLEMENTARY INFORMATION:

Authority: 38 U.S.C. 5101; 38 CFR 3.812.

Title: Student Beneficiary Report—Restored Entitlement Program for Survivors (REPS) (VA Form 21P–8938–1).

OMB Control Number: 2900–0399.

Type of Review: Reinstatement with change of a previously approved collection.

Abstract: A claimant’s eligibility for needs-based pension programs are determined in part by countable family income and certain deductible expenses. Restored Entitlement Program for Survivors (REPS) is a benefit payable to certain surviving spouses and dependent children of deceased Veterans who died in service prior to August 13, 1981 or died as a result of a service-connected disability incurred or aggravated prior to August 13, 1981. In these situations, VBA uses VA Form 21P–8938–1 *Student Beneficiary Report—Restored Entitlement Program for Survivors* (REPS), to verify beneficiaries receiving REPS benefits based on school-aged child status, are in fact enrolled full-time in an approved school and are otherwise eligible for continue benefits under REPS. Without this information, determination of eligibility would not be possible. Previously, this collection consisted of two forms: VA Form 21P–8938 and VA Form 21P–8938–1. Currently, the only form used is VA Form 21P–8938–1, therefore the burden has decreased.

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 OMB control number. The **Federal Register** Notice with a 60-day comment period soliciting comments on this collection of information was published at 86 FR 124 on July 1, 2021, pages 35154.

Affected Public: Individuals or Households.

Estimated Annual Burden: 300 hours.

Estimated Average Burden per

Respondent: 15 minutes.

Frequency of Response: Annually.

Estimated Number of Respondents: 1,200.

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. 2021–19085 Filed 9–2–21; 8:45 am]

BILLING CODE 8320–01–P

DEPARTMENT OF VETERANS AFFAIRS

[OMB Control No. 2900–0764]

Agency Information Collection Activity: Survey of Healthcare Experiences of Patients—Dental Patient Satisfaction Survey

AGENCY: Veterans Health Administration, Department of Veterans Affairs.

ACTION: Notice.

SUMMARY: Veterans Health Administration (VHA), 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 extension of a currently 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 November 2, 2021.

ADDRESSES: Submit written comments on the collection of information through Federal Docket Management System (FDMS) at www.Regulations.gov or to Janel Keyes, Office of Regulations, Appeals, and Policy (10BRAP), Department of Veterans Affairs, 810 Vermont Avenue NW, Washington, DC 20420 or email to Janel.Keyes@va.gov. Please refer to “OMB Control No. 2900–

0764” 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. 2900–0764” 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, VHA invites comments on: (1) Whether the proposed collection of information is necessary for the proper performance of VHA’s functions, including whether the information will have practical utility; (2) the accuracy of VHA’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: Public Law 104–13; 44 U.S.C. 3501–3521.

Title: Survey of Healthcare Experiences of Patients—Dental Patient Satisfaction Survey, VA Form 10–10070.

OMB Control Number: 2900–0764.

Type of Review: Reinstatement of a previously approved collection.

Abstract: The mission of the Veterans Health Administration (VHA) is to provide high quality medical and dental care to eligible veterans. Executive Order 12862, dated September 11, 1993, calls for the establishment and implementation of customer service standards, and for agencies to “survey customers to determine the kind and quality of services they want and their level of satisfaction with current services.”

The overall purpose of the Dental Patient Satisfaction Survey is to systematically obtain information from patients, which can be used to identify problems or complaints that need attention and to improve the quality of dental health care services. Information obtained from this dental survey will be made readily available to VA Central Office (VACO), Veterans Integrated Service Network (VISN), VHA field

staff, and stakeholders as part of the Network Performance Report and via the VA Intranet. This data will be used to demonstrate that VA is providing timely, high quality health care services to patients.

Affected Public: Individuals or households.

Estimated Annual Burden: 12,600 hours.

Estimated Average Burden per Respondent: 15 minutes.

Frequency of Response: Once annually.

Estimated Number of Respondents: 50,400.

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. 2021-19058 Filed 9-2-21; 8:45 am]

BILLING CODE 8320-01-P

DEPARTMENT OF VETERANS AFFAIRS

[OMB Control No. 2900-0156]

Agency Information Collection Activity: Notice of Change in Student Status

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 revision of a currently 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 November 2, 2021.

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. 2900-0156” 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. 2900-0156” 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. 3020, 3034(a), 3241, 3323(a), 3474, 3524, 3680(a), 3684(a); 10 U.S.C. 510, and 16136. 38 Code of Federal Regulations 21.4203, 21.5200(d), 21.5292(e)(2), 21.5812, 21.7156, 21.7656, 21.9720, and 21.9725.

Title: Notice of Change in Student Status.

OMB Control Number: 2900-0156.

Type of Review: Revision of a currently approved collection.

Abstract: VA uses the information collected to determine whether the beneficiaries’ educational benefits should be increased, decreased, or terminated, and the effective date of the change, if applicable. Without this information, VA might underpay or overpay benefits.

Affected Public: Individuals and households.

Estimated Annual Burden: 1,124,027 hours.

Estimated Average Burden per Respondent: 10 minutes.

Frequency of Response: On occasion.

Estimated Number of Respondents: 6,744,167.

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. 2021-19129 Filed 9-2-21; 8:45 am]

BILLING CODE 8320-01-P



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Part II

Department of Transportation

National Highway Traffic Safety Administration

49 CFR Parts 531, 533 et al.

Corporate Average Fuel Economy Standards for Model Years 2024–2026
Passenger Cars and Light Trucks; Proposed Rule

DEPARTMENT OF TRANSPORTATION**National Highway Traffic Safety Administration****49 CFR Parts 531, 533, 536, and 537**

[NHTSA–2021–0053]

RIN 2127–AM34

Corporate Average Fuel Economy Standards for Model Years 2024–2026 Passenger Cars and Light Trucks

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).
ACTION: Notice of proposed rulemaking.

SUMMARY: NHTSA, on behalf of the Department of Transportation, is proposing revised fuel economy standards for passenger cars and light trucks for model years 2024–2026. On January 20, 2021, President Biden signed an Executive order (E.O.) entitled, “Protecting Public Health and the Environment and Restoring Science To Tackle the Climate Crisis.” In it, the President directed that “The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks” (hereafter, “the 2020 final rule”) be immediately reviewed for consistency with our Nation’s abiding commitment to empower our workers and communities; promote and protect our public health and the environment; and conserve our national treasures and monuments, places that secure our national memory. President Biden further directed that the 2020 final rule be reviewed at once and that (in this case) the Secretary of Transportation consider “suspending, revising, or rescinding” it, via a new proposal, by July 2021. Because of the President’s direction in the E.O., NHTSA reexamined the 2020 final rule under its authority to set corporate average fuel economy (CAFE) standards. In doing so, NHTSA tentatively concluded that the fuel economy standards set in 2020 should be revised so that they increase at a rate of 8 percent year over year for each model year from 2024 through 2026, for both passenger cars and light trucks. This responds to the agency’s statutory mandate to improve energy

conservation. This proposal also makes certain minor changes to fuel economy reporting requirements.

DATES: *Comments:* Comments are requested on or before October 26, 2021. In compliance with the Paperwork Reduction Act, NHTSA is also seeking comment on a revision to an existing information collection. For additional information, see the Paperwork Reduction Act Section under Section IX, below. All comments relating to the information collection requirements should be submitted to NHTSA and to the Office of Management and Budget (OMB) at the address listed in the **ADDRESSES** section on or before October 26, 2021. See the **SUPPLEMENTARY INFORMATION** section on “Public Participation,” below, for more information about written comments.

Public Hearings: NHTSA will hold one virtual public hearing during the public comment period. The agency will announce the specific date and web address for the hearing in a supplemental **Federal Register** notification. The agency will accept oral and written comments on the rulemaking documents and will also accept comments on the Supplemental Environmental Impact Statement (SEIS) at this hearing. The hearing will start at 9 a.m. Eastern standard time and continue until everyone has had a chance to speak. See the **SUPPLEMENTARY INFORMATION** section on “Public Participation,” below, for more information about the public hearing.

ADDRESSES: You may send comments, identified by Docket No. NHTSA–2021–0053, by any of the following methods:

- *Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the instructions for submitting comments.
- *Fax:* (202) 493–2251.
- *Mail:* Docket Management Facility, M–30, U.S. Department of Transportation, West Building, Ground Floor, Rm. W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- *Hand Delivery:* Docket Management Facility, M–30, U.S. Department of Transportation, West Building, Ground Floor, Rm. W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590, between 9 a.m. and 4 p.m. Eastern Time, Monday through Friday, except Federal holidays.

Comments on the proposed information collection requirements should be submitted to: Office of Management and Budget at www.reginfo.gov/public/do/PRAMain. To find this particular information collection, select “Currently under Review—Open for Public Comment” or use the search function. NHTSA requests that comments sent to the OMB also be sent to the NHTSA rulemaking docket identified in the heading of this document.

Instructions: All submissions received must include the agency name and docket number or Regulatory Information Number (RIN) for this rulemaking. All comments received will be posted without change to <http://www.regulations.gov>, including any personal information provided. For detailed instructions on sending comments and additional information on the rulemaking process, see the “Public Participation” heading of the **SUPPLEMENTARY INFORMATION** section of this document.

Docket: For access to the dockets or to read background documents or comments received, please visit <http://www.regulations.gov>, and/or Docket Management Facility, M–30, U.S. Department of Transportation, West Building, Ground Floor, Rm. W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590. The Docket Management Facility is open between 9 a.m. and 4 p.m. Eastern Time, Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Rebecca Schade, NHTSA Office of Chief Counsel, National Highway Traffic Safety Administration, 1200 New Jersey Avenue SE, Washington, DC 20590; email: rebecca.schade@dot.gov.

SUPPLEMENTARY INFORMATION:**Does this action apply to me?**

This action affects companies that manufacture or sell new passenger automobiles (passenger cars) and non-passenger automobiles (light trucks) as defined under NHTSA’s CAFE regulations.¹ Regulated categories and entities include:

¹ “Passenger car” and “light truck” are defined in 49 CFR part 523.

Category	NAICS Codes ^A	Examples of potentially regulated entities
Industry	335111	Motor Vehicle Manufacturers.
Industry	336112	
Industry	811111	Commercial Importers of Vehicles and Vehicle Components.
	811112	
	811198	
	423110	
Industry	335312	Alternative Fuel Vehicle Converters.
	336312	
	336399	
	811198	

^A North American Industry Classification System (NAICS).

This list is not intended to be exhaustive, but rather provides a guide regarding entities likely to be regulated by this action. To determine whether particular activities may be regulated by this action, you should carefully examine the regulations. You may direct questions regarding the applicability of this action to the person listed in **FOR FURTHER INFORMATION CONTACT**.

I. Executive Summary

NHTSA, on behalf of the Department of Transportation, is proposing to amend standards regulating corporate average fuel economy (CAFE) for passenger cars and light trucks for model years (MYs) 2024–2026. This proposal responds to NHTSA’s statutory obligation to set maximum feasible CAFE standards to improve energy conservation, and to President Biden’s directive in Executive Order 13990 of January 20, 2021 that “The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks”,

2020 final rule or 2020 CAFE rule (85 FR 24174 (April 30, 2020)), be immediately reviewed for consistency with our Nation’s abiding commitment to promote and protect our public health and the environment, among other things. NHTSA undertook that review immediately, and this proposal is the result of that process.

The proposed amended CAFE standards would increase in stringency from MY 2023 levels by 8 percent per year, for both passenger cars and light trucks over MYs 2024–2026. NHTSA tentatively concludes that this level is maximum feasible for these model years, as discussed in more detail in Section VI, and seeks comment on that conclusion. The proposal considers a range of regulatory alternatives, consistent with NHTSA’s obligations under the National Environmental Policy Act (NEPA) and Executive Order 12866. While E.O. 13990 directed the review of CAFE standards for MYs 2021–2026, statutory lead time requirements mean that the soonest

model year that can currently be amended in the CAFE program is MY 2024. The proposed standards would remain vehicle footprint-based, like the CAFE standards in effect since MY 2011. Recognizing that many readers think about CAFE standards in terms of the miles per gallon (mpg) values that the standards are projected to eventually require, NHTSA currently projects that the proposed standards would require, on an average industry fleet-wide basis, roughly 48 mpg in MY 2026. NHTSA notes both that real-world fuel economy is generally 20–30 percent lower than the estimated required CAFE level stated above, and also that the actual CAFE standards are the footprint target curves for passenger cars and light trucks, meaning that ultimate fleet-wide levels will vary depending on the mix of vehicles that industry produces for sale in those model years. Table I–1 shows the incremental differences in stringency levels for passenger cars and light trucks, by regulatory alternative, in the model years subject to regulation.

Table I-1 – Incremental Stringency Levels (mpg above Baseline) for Passenger Cars and Light Trucks, by Regulatory Alternative

Model Year	Alternative 0 (Baseline/No Action)	Alternative 1	Alternative 2	Alternative 3
Passenger cars				
2024	-	3.9	3.3	4.3
2025	-	4.9	6.8	9.2
2026	-	5.9	10.8	14.7
Light trucks				
2024	-	3.5	2.2	3.0
2025	-	4.2	4.7	6.4
2026	-	5.1	7.6	10.4
Total				
2024	-	3.7	2.6	3.5
2025	-	4.5	5.5	7.5
2026	-	5.3	8.7	11.9

This proposal is significantly different from the conclusion that NHTSA reached in the 2020 final rule, but this is because important facts have changed, and because NHTSA has reconsidered how to balance the relevant statutory considerations in light of those facts. NHTSA tentatively concludes that significantly more stringent standards are maximum feasible. Contrary to the 2020 final rule, NHTSA recognizes that the need of the United States to conserve energy must include serious consideration of the energy security risks of continuing to consume oil, which more stringent fuel economy standards can reduce. Reducing our Nation's climate impacts can also benefit our national security. Additionally, at least part of the automobile industry appears increasingly convinced that improving fuel economy and reducing greenhouse gas (GHG) emissions is a growth market for them, and that the market rewards investment in advanced technology. Nearly all auto manufacturers have announced forthcoming new higher fuel-economy and electric vehicle models, and five major manufacturers voluntarily bound themselves to stricter GHG requirements than set forth by NHTSA and the Environmental Protection Agency (EPA) in 2020 through contractual agreements with the State of California, which will result in their achieving fuel economy levels well above the standards set forth in the 2020 final rule. These companies are sophisticated, for-profit enterprises. If they are taking these steps, NHTSA can be more confident than the agency was in 2020 that the market is getting ready to make the leap to significantly higher

fuel economy. The California Framework and the clear planning by industry to migrate toward more advanced fuel economy technologies are evidence of the practicability of more stringent standards. Moreover, more stringent CAFE standards will help to encourage industry to continue improving the fuel economy of all vehicles, rather than simply producing a few electric vehicles, such that all Americans can benefit from higher fuel economy and save money on fuel. NHTSA cannot consider the fuel economy of dedicated alternative fuel vehicles like battery electric vehicles when determining maximum feasible standards, but the fact that industry increasingly appears to believe that there is a market for these vehicles is broader evidence of market (and consumer) interest in fuel economy, which is relevant to NHTSA's determination of whether more stringent standards would be economically practicable. For all of these reasons, NHTSA tentatively concludes that standards that increase at 8 percent per year are maximum feasible.

This proposal is also different from the 2020 final rule in that it is issued by NHTSA alone, and EPA has issued a separate proposal. The primary reason for this is the difference in statutory authority—EPA does not have the same lead time requirements as NHTSA and is thus able to amend MY 2023 in addition to MYs 2024–2026. An important consequence of this is that EPA's proposed rate of stringency increase, after taking a big leap in MY 2023, looks slower than NHTSA's over the same time period. NHTSA emphasizes, however, that the proposed

standards are what NHTSA believes best fulfills our statutory directive of energy conservation, and in the context of the EPA standards, the analysis we have done is tackling the core question of whether compliance with both standards should be achievable with the same vehicle fleet, after manufacturers fully understand the requirements from both proposals. The differences in what the two agencies' standards require become smaller each year, until alignment is achieved. While NHTSA recognizes that the last several CAFE standard rulemakings have been issued jointly with EPA, and that issuing separate proposals represents a change in approach, the agencies worked together to avoid inconsistencies and to create proposals that would continue to allow manufacturers to build a single fleet of vehicles to meet both agencies' proposed standards. Additionally, and importantly, NHTSA has also considered and accounted for California's Zero Emission Vehicle (ZEV) program (and its adoption by a number of other states) in developing the baseline for this proposal, and has accounted for the aforementioned "Framework Agreements" between California and BMW, Ford, Honda, Volkswagen of America (VWA), and Volvo, which are national-level GHG standards to which these companies committed for several model years.

A number of other improvements and updates have been made to the analysis since the 2020 final rule. Table I–2 summarizes these, and they are discussed in much more detail below and in the documents accompanying this preamble.

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Table I-2 – Key Analytical Updates from 2020 Final Rule

Key Updates
In all regulatory alternatives, account for the Zero Emission Vehicle (ZEV) mandates applicable in California and the States that have adopted them.
In all regulatory alternatives, account for some vehicle manufacturers' (BMW, Ford, Honda, VWA, and Volvo) voluntary commitments to the State of California to continued annual nation-wide reductions of vehicle greenhouse gas emissions through model year (MY) 2026, with greater rates of electrification than would have been required under the 2020 final rule.
In all regulatory alternatives, account for manufacturers' responses to both CAFE (alternatives) and baseline carbon dioxide standards jointly (rather than only separately).
Procedures to ensure that modeled technology application and production volumes are the same across all regulatory alternatives in the earliest model years.
Procedures to focus application of the Energy Policy and Conservation Act's (EPCA) "standard setting constraints" (i.e., regarding the consideration of compliance credits and additional dedicated alternative fueled vehicles) more precisely to only those model years for which NHTSA is proposing or finalizing new standards.
More accurate accounting for compliance treatment of flex-fuel vehicles (FFVs) and plug-in hybrid electric vehicles (PHEVs).
Include CAFE civil penalties in the "effective cost" metric used when simulating manufacturers' potential application of fuel-saving technologies.
COVID adjustment to vehicle miles traveled (VMT) model inputs (per Federal Highway Administration estimate of 2020 national VMT).
Embed Federal Highway Administration's VMT model in CAFE Model (dynamic model).
Criteria pollutant health effects reported separately for refining and electricity generation.
New procedures to estimate the impacts and corresponding monetized damages of highway vehicle crashes that do not result in fatalities, now based on historical data and future trend models that reflect the impacts of advanced crash avoidance technologies.
Social cost of carbon and damage costs for methane and nitrous oxide (interim guidance February 19, 2021).
Fuel and electricity prices using Energy Information Administration's Annual Energy Outlook 2021.
Analysis fleet updated to MY 2020.
Updated large scale simulation using Argonne National Laboratory's Autonomie model.
Inclusion of 400- and 500-mile battery electric vehicles (BEVs).
Updated battery and battery management unit size and costs using BatPaC version 4.0 (October 2020).
Updated hybrid electric vehicles, PHEV, and BEV electric machine and battery sizing.
Inclusion of high compression ratio (HCR) engines with cylinder deactivation.
Expanded turbo-downsizing to include reducing low-powered 4-cylinder naturally aspirated engines to 3-cylinder turbocharged engines.
Updated 10-speed automatic transmission efficiency characteristics based on benchmarking data from Southwest Research Institute.
Updated cold start offset assumptions using MY 2020 compliance data.
Updated mass regression analysis values for engines and electric motors.
More accurate accounting for off-cycle incremental costs relative to MY 2020 baseline fleet.
Updated fuel cell vehicle technology inputs.

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NHTSA estimates that this proposal could reduce average undiscounted fuel outlays over the lifetimes of MY 2029 vehicles by about \$1,280, while increasing the average cost of those vehicles by about \$960 over the baseline described above. With the social cost of

carbon (SCC) discounted at 2.5 percent and other benefits and costs discounted at 3 percent, for the three affected model years NHTSA finds \$65.8 billion in benefits attributable to the proposed standards and \$37.4 billion in proposed costs so that present net benefits could

be \$28.4 billion.² Applied to the entire fleet for MYs 1981–2029, NHTSA estimates \$120 billion in costs and \$121

² As discussed in Section III.G.2.b), NHTSA has discounted the SCC at 2.5% when other benefits and costs are discounted at 3% but seeks comment on this approach.

billion in benefits attributable to the proposed standards, such that the present value of aggregate net benefits to society could be \$1 billion. Like any analysis of this magnitude attempting to forecast future effects of current policies, significant uncertainty exists about many key inputs. Changes in the price of fuel or in the social cost of carbon could dramatically change benefits, for example, and readers should expect that the eventual final rule will reflect any updates made to those (and many other) values that occur between now and then. It is also worth stressing that NHTSA's statutory authority requires that its standards be maximum feasible, taking into account four statutory factors. While NHTSA's estimates of costs and benefits are important considerations, it is the maximum feasible analysis that controls the setting of CAFE standards.

Like many other types of regulations, CAFE standards apply only to new vehicles. The costs attributable to new CAFE standards are thus "front-loaded," because they result primarily from the application of fuel-saving technology to new vehicles. On the other hand, the impact of new CAFE standards on fuel consumption and greenhouse gases—

and the associated benefits to society—occur over an extended time, as drivers buy, use, and eventually scrap these new vehicles. By accounting for many model years and extending well into the future (2050), our analysis accounts for these differing patterns in impacts, benefits, and costs. Our analysis also accounts for the potential that, by changing new vehicle prices and fuel economy levels, CAFE standards could indirectly impact the operation of vehicles produced before or after the model years (2024–2026) for which we are proposing new CAFE standards. This means that some of the proposal's impacts and corresponding benefits and costs are actually attributable to indirect impacts on vehicles produced before and after model years 2024–2026.

The bulk of our analysis considers a "model year" (MY) perspective that considers the lifetime impacts attributable to all vehicles produced prior to model year 2030, accounting for the operation of these vehicles over their entire useful lives (with some model year 2029 vehicles estimated to be in service as late as 2068). This approach emphasizes the role of model years 2024–2026, while accounting for the potential that it may take

manufacturers a few additional years to produce fleets fully responsive to the proposed MY 2026 standards, and for the potential that the proposal could induce some changes in the operation of vehicles produced prior to MY 2024.

Our analysis also considers a "calendar year" (CY) perspective that includes the annual impacts attributable to all vehicles estimated to be in service in each calendar year for which our analysis includes a representation of the entire registered light-duty fleet. For this NPRM, this calendar year perspective covers each of calendar years 2021–2050, with differential impacts accruing as early as model year 2023. Compared to the "model year" perspective, this calendar year perspective emphasizes model years of vehicles produced in the longer term, beyond those model years for which standards are currently being proposed. Table I–3 summarizes estimates of selected physical impacts viewed from each of these two perspectives, as well as corresponding estimates of the present values of cumulative benefits, costs, and net benefits.

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Table I-3 – Selected Cumulative Impacts - Model and Calendar Year Perspectives

	Alt. 1	Alt. 2	Alt. 3
Avoided Gasoline Consumption (b. gal)			
MYs 1981-2029	30	50	75
CYs 2023-2050	105	205	290
Additional Electricity Consumption (TWh)			
MYs 1981-2029	90	275	395
CYs 2023-2050	395	1,150	1,690
CO ₂ Emissions (mmt)			
MYs 1981-2029	295	465	665
CYs 2023-2050	1,055	1,845	2,615
Benefits (\$b, 3% Discount Rate)			
MYs 1981-2029	83	121	173
CYs 2023-2050	267	434	607
Costs (\$b, 3% Discount Rate)			
MYs 1981-2029	66	121	176
CYs 2023-2050	186	334	475
Net Benefits (\$b, 3% Discount Rate)			
MYs 1981-2029	16	0	-3
CYs 2023-2050	81	100	132
Benefits (\$b, 7% Discount Rate)			
MYs 1981-2029	52	76	108
CYs 2023-2050	145	236	332
Costs (\$b, 7% Discount Rate)			
MYs 1981-2029	49	91	133
CYs 2023-2050	109	199	286
Net Benefits (\$b, 7% Discount Rate)			
MYs 1981-2029	2	-15	-25
CYs 2023-2050	36	37	46

Finally, for purposes of comparing the benefits and costs of new CAFE standards to the benefits and costs of other Federal regulations, policies, and

programs, we have computed “annualized” benefits and costs. These are the annual averages of the cumulative benefits and costs over the

covered model or calendar years, after expressing these in present value terms.

Table I-4 – Estimated Costs, Benefits, and Net Benefits Across MYs 1981-2029 (billions of dollars), Total Fleet for Alternative 1

	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	66.5	49.3	2.61	3.58
Benefits	82.6	51.6	3.24	3.75
Net Benefits	16.1	2.3	0.63	0.17

Table I-5 – Estimated Costs, Benefits, and Net Benefits Across MYs 1981-2029 (billions of dollars), Total Fleet for Alternative 2

	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	121.1	90.7	4.75	6.59
Benefits	121.4	75.6	4.76	5.49
Net Benefits	0.3	-15.1	0.01	-1.10

Table I-6 – Estimated Costs, Benefits, and Net Benefits Across MYs 1981-2029 (billions of dollars), Total Fleet for Alternative 3

	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	176.3	132.8	6.91	9.65
Benefits	172.9	107.6	6.78	7.82
Net Benefits	-3.4	-25.2	-0.13	-1.83

Table I-7 – Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2021-2050 (billions of dollars), Total Fleet for Alternative 1

	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	185.7	108.9	9.47	8.77
Benefits	266.6	145.2	13.60	11.70
Net Benefits	81.0	36.4	4.13	2.93

Table I-8 – Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2021-2050 (billions of dollars), Total Fleet for Alternative 2

	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	333.6	198.9	17.02	16.03
Benefits	433.6	236.0	22.12	19.02
Net Benefits	100.0	37.1	5.10	2.99

Table I-9 – Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2021-2050 (billions of dollars), Total Fleet for Alternative 3

	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	474.8	285.8	24.22	23.03
Benefits	606.5	331.7	30.94	26.73
Net Benefits	131.7	45.9	6.72	3.70

As discussed in detail below, the monetized estimated costs and benefits

of this proposal are relevant and important to the agency’s tentative

conclusion, but they are not the whole of the conclusion.

Additionally, although NHTSA is prohibited from considering the availability of certain flexibilities in making our determination about the levels of CAFE standards that would be

maximum feasible, manufacturers have a variety of flexibilities available to them to reduce their compliance burden. Table I-10 through Table I-13 below summarizes available compliance

flexibilities. NHTSA seeks comment on whether to retain non-statutory flexibilities for the final rule.

Table I-10 – Statutory Flexibilities for Over-compliance with Standards

Regulatory Item	NHTSA	
	Authority	Current Program
Credit Earning	49 U.S.C. 32903(a)	Denominated in tenths of a mpg
Credit “Carry-forward”	49 U.S.C. 32903(a)(2)	5 MYs into the future
Credit “Carryback” (AKA “deficit carry-forward”)*	49 U.S.C. 32903(a)(1)	3 MYs into the past
Credit Transfer	49 U.S.C. 32903(g)	Up to 2 mpg per fleet; transferred credits may not be used to meet minimum domestic passenger car standard (MDPCS)
Credit Trade*	49 U.S.C. 32903(f)	Unlimited quantity; traded credits may not be used to meet MDPCS

*NHTSA did not expressly model credit carryback, and credit trades were only modeled for credits that existed at the beginning of the modeling simulation. All other credits in this table were modeled.

Table I-11 – Current and Proposed Flexibilities that Address Gaps in Compliance Test Procedures

Regulatory Item	NHTSA	
	Authority	Current and <i>Proposed</i> Program
Air conditioning efficiency	49 U.S.C. 32904	Allows manufacturers to earn “fuel consumption improvement values” (FCIVs) equivalent to EPA credits starting in MY 2017
Off-cycle	49 U.S.C. 32904	Allows manufacturers to earn “fuel consumption improvement values” (FCIVs) equivalent to EPA credits starting in MY 2017 <i>For MY 2020 and beyond, NHTSA proposes to implement CAFE provisions equivalent to the EPA proposed changes</i>

Table I-12 – Incentives that Encourage Application of Technologies

Regulatory Item	NHTSA	
	Authority	<i>Proposed</i> Program
Full-size pickup trucks with HEV or overperforming target*	49 U.S.C. 32904	Allows manufacturers to earn FCIVs equivalent to EPA credits for MYs 2017-2021 <i>NHTSA proposes to reinstate incentives for strong hybrid OR overperforming target by 20% for MYs 2022-2025</i>

*These credits were not modeled for the NPRM analysis.

Table I-13 – Incentives that Encourage Alternative Fuel Vehicles

Regulatory Item	NHTSA	
	Authority	Current Program
Dedicated alternative fuel vehicle	49 U.S.C. 32905(a) and (c)	Fuel economy calculated assuming gallon of liquid or gallon equivalent gaseous alt fuel = 0.15 gallons of gasoline; for EVs petroleum equivalency factor
Dual-fueled vehicles	49 U.S.C. 32905(b), (d), and (e); 32906(a)	Fuel economy calculated using 50% operation on alt fuel and 50% on gasoline through MY 2019. Starting with MY 2020, NHTSA uses the Society of Automotive Engineers (SAE) defined "Utility Factor" methodology to account for actual potential use, and "F-factor" for FFV; NHTSA will continue to incorporate the 0.15 incentive factor

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NHTSA recognizes that the lead time for this proposal is shorter than past rulemakings have provided, and that the economy and the country are in the process of recovering from a global pandemic and the resulting economic distress. At the same time, NHTSA also recognizes that at least parts of the industry are nonetheless stepping up their product offerings and releasing more and more high fuel-economy vehicle models, and many companies did not deviate significantly from product plans established in response to the standards set forth in the 2012 final rule (77 FR 62624, Oct. 15, 2012) and confirmed by EPA in its January 2017 Final Determination. With these considerations in mind, NHTSA is proposing to amend the CAFE standards for MYs 2024–2026. NHTSA, like any other Federal agency, is afforded an opportunity to reconsider prior views and, when warranted, to adopt new positions. Indeed, as a matter of good governance, agencies *should* revisit their positions when appropriate, especially to ensure that their actions and regulations reflect legally sound interpretations of the agency’s authority and remain consistent with the agency’s views and practices. As a matter of law, “an Agency is entitled to change its interpretation of a statute.”³ Nonetheless, “[w]hen an Agency adopts a materially changed interpretation of a statute, it must in addition provide a ‘reasoned analysis’ supporting its decision to revise its interpretation.”⁴ The analysis presented in this preamble

and in the accompanying Technical Support Document (TSD), Preliminary Regulatory Impact Analysis (PRIA), Supplemental Environmental Impact Statement (SEIS), CAFE Model documentation, and extensive rulemaking docket fully supports the proposed decision and revised balancing of the statutory factors for MYs 2024–2026 standards. NHTSA seeks comment on the entirety of the rulemaking record.

II. Introduction

In this notice of proposed rulemaking (NPRM), NHTSA is proposing to revise CAFE standards for model years (MYs) 2024–2026. On January 20, 2021, the President signed Executive Order (E.O.) 13990, “Protecting Public Health and the Environment and Restoring Science To Tackle the Climate Crisis.”⁵ In it, the President directed that “The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks” (hereafter, “the 2020 final rule”), 85 FR 24174 (April 30, 2020), must be immediately reviewed for consistency with our Nation’s abiding commitment to empower our workers and communities; promote and protect our public health and the environment; and conserve our national treasures and monuments, places that secure our national memory. E.O. 13990 states expressly that the Administration prioritizes listening to the science, improving public health and protecting the environment, reducing greenhouse gas emissions, and improving environmental justice while creating well-paying union jobs. The E.O. thus directs that the 2020 final rule be reviewed at once and that (in this case) the Secretary of Transportation consider

“suspending, revising, or rescinding” it, via an NPRM, by July 2021.⁶

Section 32902(g)(1) of Title 49, United States Code allows the Secretary (by delegation to NHTSA) to prescribe regulations amending an average fuel economy standard prescribed under 49 U.S.C. 32902(a), like those prescribed in the 2020 final rule, if the amended standard meets the requirements of 32902(a). The Secretary’s authority to set fuel economy standards is delegated to NHTSA at 49 CFR 1.95(a); therefore, in this NPRM, NHTSA proposes revised fuel economy standards for MYs 2024–2026. Section 32902(g)(2) states that when the amendment makes an average fuel economy standard more stringent, it must be prescribed at least 18 months before the beginning of the model year to which the amendment applies. NHTSA generally calculates the 18-month lead time requirement as April of the calendar year prior to the start of the model year. Thus, 18 months before MY 2023 would be April 2021, because MY 2023 begins in September 2022. Because of this lead time requirement, NHTSA is not proposing to amend the CAFE standards for MYs 2021–2023, even though the 2020 final rule also covered those model years. For purposes of the CAFE program, the 2020 final rule’s standards for MYs 2021–2023 will remain in effect.

For the MYs for which there is statutory lead time to amend the standards, however, NHTSA is proposing amendments to the currently applicable fuel economy standards. Although only one year has passed since the 2020 final rule, the agency believes it is reasonable and appropriate to revisit the CAFE standards for MYs 2024–2026. In particular, the agency has further considered the serious adverse effects on energy conservation that the standards finalized in 2020 would cause

³Phoenix Hydro Corp. v. FERC, 775 F.2d 1187, 1191 (D.C. Cir. 1985).

⁴Alabama Educ. Ass’n v. Chao, 455 F.3d 386, 392 (D.C. Cir. 2006) (quoting Motor Vehicle Mfrs. Ass’n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 57 (1983)); see also Encino Motorcars, LLC v. Navarro, 136 S.Ct. 2117, 2125 (2016) (“Agencies are free to change their existing policies as long as they provide a reasoned explanation for the change.”) (citations omitted).

⁵86 FR 7037 (Jan. 25, 2021).

⁶Id., Sec. 2(a)(ii).

as compared to the proposed standards. The need of the U.S. to conserve energy is greater than understood in the 2020 final rule. In addition, standards that are more stringent than those that were finalized in 2020 appear economically practicable. Nearly all auto manufacturers have announced forthcoming new advanced technology vehicle models with higher fuel economy, making strong public commitments that mirror those of the Administration. Five major manufacturers voluntarily bound themselves to stricter national-level GHG requirements as part of the California Framework agreement. Meanwhile, certain facts on the ground remain similar to what was before NHTSA in the prior analysis—gas prices still remain relatively low in the U.S., for example, and while light-duty vehicle sales fell sharply in MY 2020, the vehicles that *did* sell tended to be, on average, larger, heavier, and more powerful, all factors that increase fuel consumption. However, the renewed focus on addressing energy conservation and the industry's apparent ability to meet more stringent standards show that

a rebalancing of the EPCA factors, and the proposal of more stringent standards, is appropriate for model years 2024–2026.

The following sections introduce the proposal in more detail.

A. *What is NHTSA proposing?*

NHTSA is proposing to set CAFE standards for passenger cars and light trucks manufactured for sale in the United States in MYs 2024–2026. Passenger cars are generally sedans, station wagons, and two-wheel drive crossovers and sport utility vehicles (CUVs and SUVs), while light trucks are generally four-wheel drive vehicles, larger/heavier two-wheel drive sport utility vehicles, pickups, minivans, and passenger/cargo vans.⁷ The proposed standards would increase at 8 percent per year for both cars and trucks, and are represented by regulatory Alternative 2 in the agency's analysis. The proposed standards would be defined by a mathematical equation that represents a constrained linear function relating vehicle footprint to fuel

⁷ "Passenger car" and "light truck" are defined at 49 CFR part 523.

economy targets for both cars and trucks; vehicle footprint is roughly measured as the rectangle that is made by the four points where the vehicle's tires touch the ground. Generally, passenger cars will have more stringent targets than light trucks regardless of footprint, and smaller vehicles will have more stringent targets than larger vehicles. No individual vehicle or vehicle model need meet its target exactly, but a manufacturer's compliance is determined by how its average fleet fuel economy compares to the average fuel economy of the targets of the vehicles it manufactures.

The proposed target curves⁸ for passenger cars and light trucks are as follows; curves for MYs 2020–2023 are included in Figure II–1 and Figure II–2 for context.

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⁸ NHTSA underscores that the equations and coefficients defining the curves are what the agency is proposing, and not the mpg numbers that the agency currently estimates could result from manufacturers complying with the curves. Because the estimated mpg numbers are an *effect* of the proposed curves, they are presented in the following section.

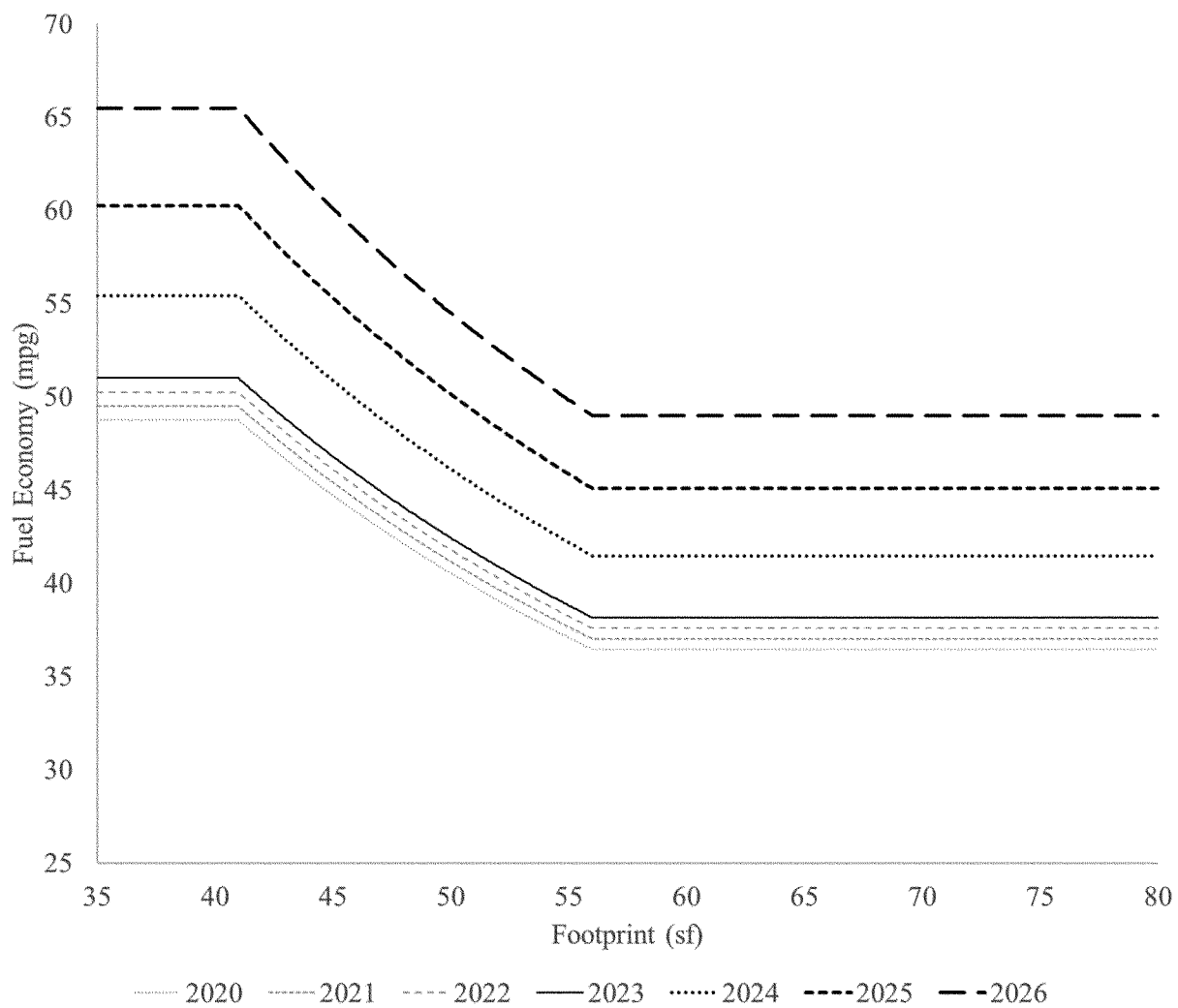


Figure II-1 – Passenger Car Fuel Economy, Proposed Target Curves

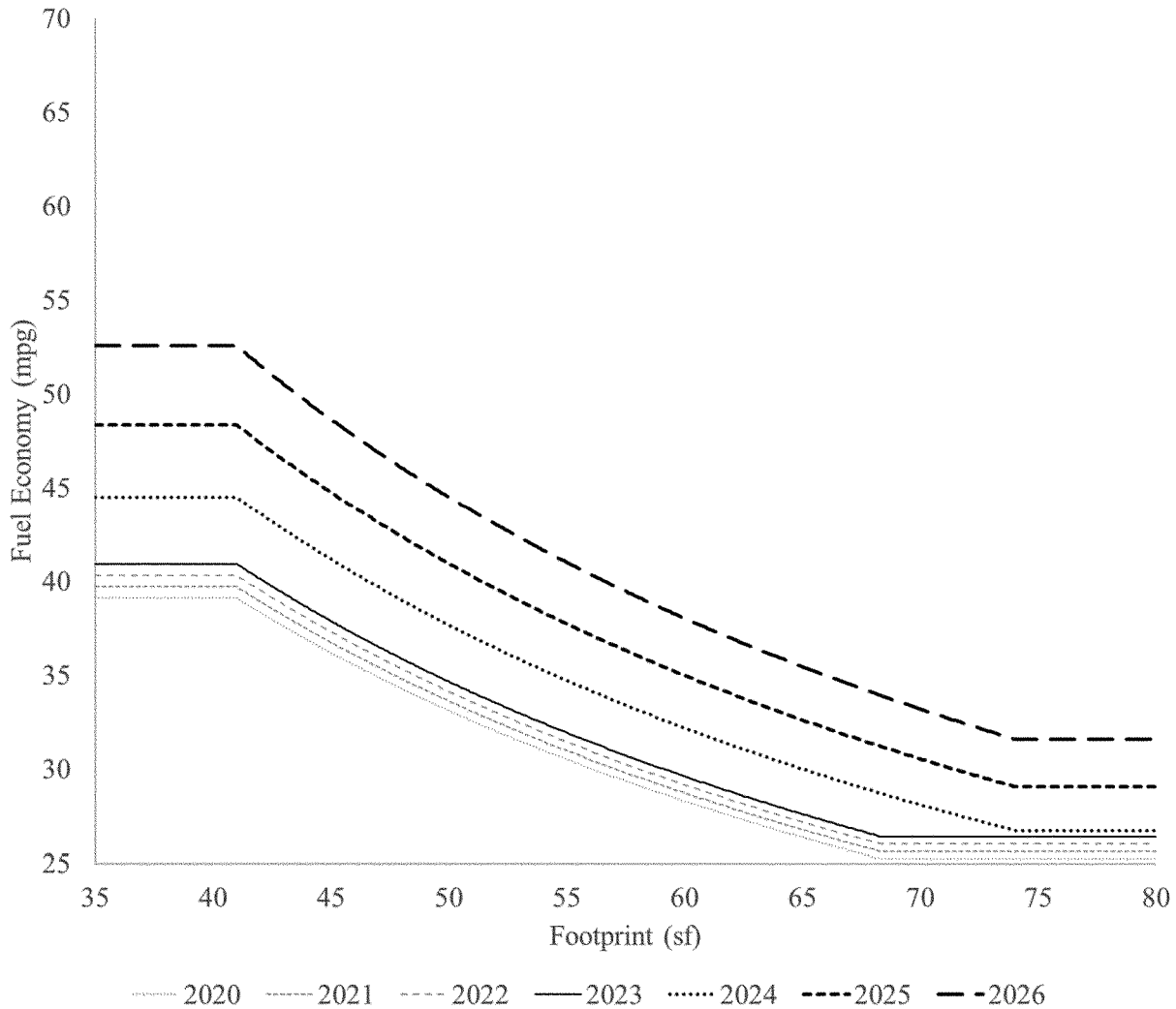


Figure II-2 – Light Truck Fuel Economy, Proposed Target Curves

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NHTSA is also proposing to amend the minimum domestic passenger car CAFE standards for MYs 2024–2026. The provision at 49 U.S.C. 32902(b)(4)

requires NHTSA to project the minimum standard when it promulgates passenger car standards for a model year, so it is appropriate to revisit the minimum standards at this time.

NHTSA is proposing to retain the 1.9 percent offset used in the 2020 final rule, such that the minimum domestic passenger car standard would be as shown in Table II-1.

Table II-1 – Proposed Minimum Domestic Passenger Car Standards

2024	2025	2026
44.4 mpg	48.2 mpg	52.4 mpg

The next section describes some of the effects that NHTSA estimates would follow from this proposal, including how the curves shown above translate to estimated average mile per gallon requirements for the industry.

B. What does NHTSA estimate the effects of proposing this would be?

As for past CAFE rulemakings, NHTSA has used the CAFE Model to estimate the effects of proposed CAFE standards, and of other regulatory alternatives under consideration. Some inputs to the CAFE Model are derived from other models, such as Argonne National Laboratory’s “Autonomie”

vehicle simulation tool and Argonne’s Greenhouse gases, Regulated Emissions, and Energy use in Transportation (GREET) fuel-cycle emissions analysis model, the U.S. Energy Information Administration’s (EIA’s) National Energy Modeling System (NEMS), and EPA’s Motor Vehicle Emission Simulator (MOVES) vehicle emissions model. Especially given the scope of the

NHTSA’s analysis (through model years 2050, with driving of model year 2029 vehicles accounted for through calendar year 2068), these inputs involve a multitude of uncertainties. For example, a set of inputs with significant uncertainty could include future population and economic growth, future gasoline and electricity prices, future petroleum market characteristics (e.g., imports and exports), future battery costs, manufacturers’ future responses to standards and fuel prices, buyers’

future responses to changes in vehicle prices and fuel economy levels, and future emission rates for “upstream” processes (e.g., refining, finished fuel transportation, electricity generation). Considering that all of this is uncertain from a 2021 vantage point, NHTSA underscores that all results of this analysis are, in turn, uncertain, and simply represent the agency’s best estimates based on the information currently before us.

NHTSA estimates that this proposal would increase the eventual⁹ average of manufacturers’ CAFE requirements to about 48 mpg by 2026 rather than, under the No-Action Alternative (i.e., the baseline standards issued in 2020), about 40 mpg. For passenger cars, the average in 2026 is estimated to reach about 58 mpg, and for light trucks, about 42. This compares with 47 mpg and 34 mpg for cars and trucks, respectively, under the No-Action Alternative.

Table II-2 – Estimated Average of CAFE Levels (mpg) Required Under Proposal

Fleet	2024	2025	2026	2027	2028	2029
Passenger Cars	49	53	58	58	58	58
Light Trucks	35	38	42	42	42	42
Overall Fleet	41	44	48	48	48	48

Because manufacturers do not comply exactly with each standard in each model year, but rather focus their compliance efforts when and where it is most cost-effective to do so, “estimated

achieved” fuel economy levels differ somewhat from “estimated required” levels for each fleet, for each year. NHTSA estimates that the industry-wide average fuel economy achieved in

MY 2029 could increase from about 44 mpg under the No-Action Alternative to about 49 mpg under the proposal.

Table II-3 – Estimated Average of CAFE Levels (mpg) Achieved Under Proposal

Fleet	2024	2025	2026	2027	2028	2029
Passenger Cars	54	57	60	61	61	61
Light Trucks	37	38	40	41	41	41
Overall Fleet	43	45	48	48	49	49

As discussed above, NHTSA’s analysis—unlike its previous CAFE analyses—estimates manufacturers’ potential responses to the combined effect of CAFE standards and separate CO₂ standards (including agreements some manufacturers have reached with California), ZEV mandates, and fuel prices. Together, the aforementioned

regulatory programs are more binding than any single program considered in isolation, and this analysis, like past analyses, shows some estimated overcompliance with the proposed CAFE standards, albeit by much less than what was shown in the NPRM that preceded the 2020 final rule, and any

overcompliance is highly manufacturer-dependent.

Expressed as equivalent required and achieved average CO₂ levels (using 8887 grams of CO₂ per gallon of gasoline vehicle certification fuel), the above CAFE levels appear as shown in Table II-4 and Table II-5.

Table II-4 – Estimated Average of CAFE Levels Required Under Proposal (as Equivalent Gram per Mile CO₂ Levels)

Fleet	2024	2025	2026	2027	2028	2029
Passenger Cars	181	166	153	153	153	153
Light Trucks	253	233	214	214	214	214
Overall Fleet	219	201	185	185	185	184

⁹Here, “eventual” means by MY 2029, after most of the fleet will have been redesigned under the MY 2026 standards. NHTSA allows the CAFE Model to

continue working out compliance solutions for the regulated model years for three model years after the last regulated model year, in recognition of the

fact that manufacturers do not comply perfectly with CAFE standards in each model year.

Table II-5 – Estimated Average of CAFE Levels Achieved Under Proposal (as Equivalent Gram per Mile CO₂ Levels)

Fleet	2024	2025	2026	2027	2028	2029
Passenger Cars	165	156	149	147	145	145
Light Trucks	243	234	221	218	216	215
Overall Fleet	206	197	187	184	182	181

Average requirements and achieved CAFE levels would ultimately depend on manufacturers' and consumers' responses to standards, technology developments, economic conditions, fuel prices, and other factors.

NHTSA estimates that over the lives of vehicles produced prior to MY 2030, the proposal would save about 50 billion gallons of gasoline and increase electricity consumption (as the percentage of electric vehicles increases

over time) by about 275 terawatts (TWh), compared to levels of gasoline and electricity consumption NHTSA projects would occur under the baseline standards (*i.e.*, the No-Action Alternative).

Table II-6 – Estimated Changes in Energy Consumption vs. No-Action Alternative

Energy Source	Change in Consumption
Gasoline	-50 billion gallons
Electricity	+275 TWh

NHTSA's analysis also estimates total annual consumption of fuel by the entire on-road fleet from calendar year 2020 through calendar year 2050. On this basis, gasoline and electricity

consumption by the U.S. light-duty vehicle fleet evolves as shown in Figure II-3 and Figure II-4, each of which shows projections for the No-Action Alternative (Alternative 0, *i.e.*, the

baseline), Alternative 1, Alternative 2 (the proposal), and Alternative 3.

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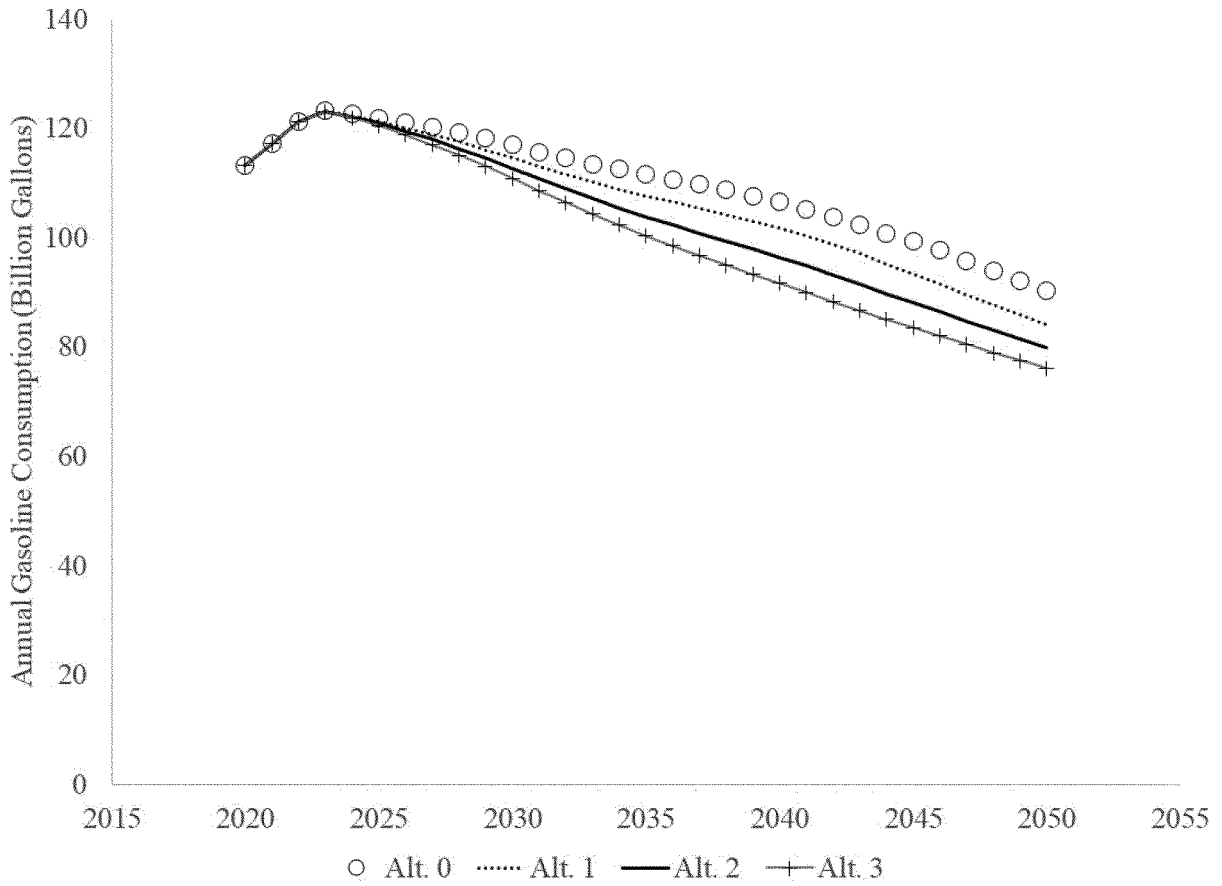


Figure II-3 – Estimated Annual Gasoline Consumption by Light-Duty On-Road Fleet

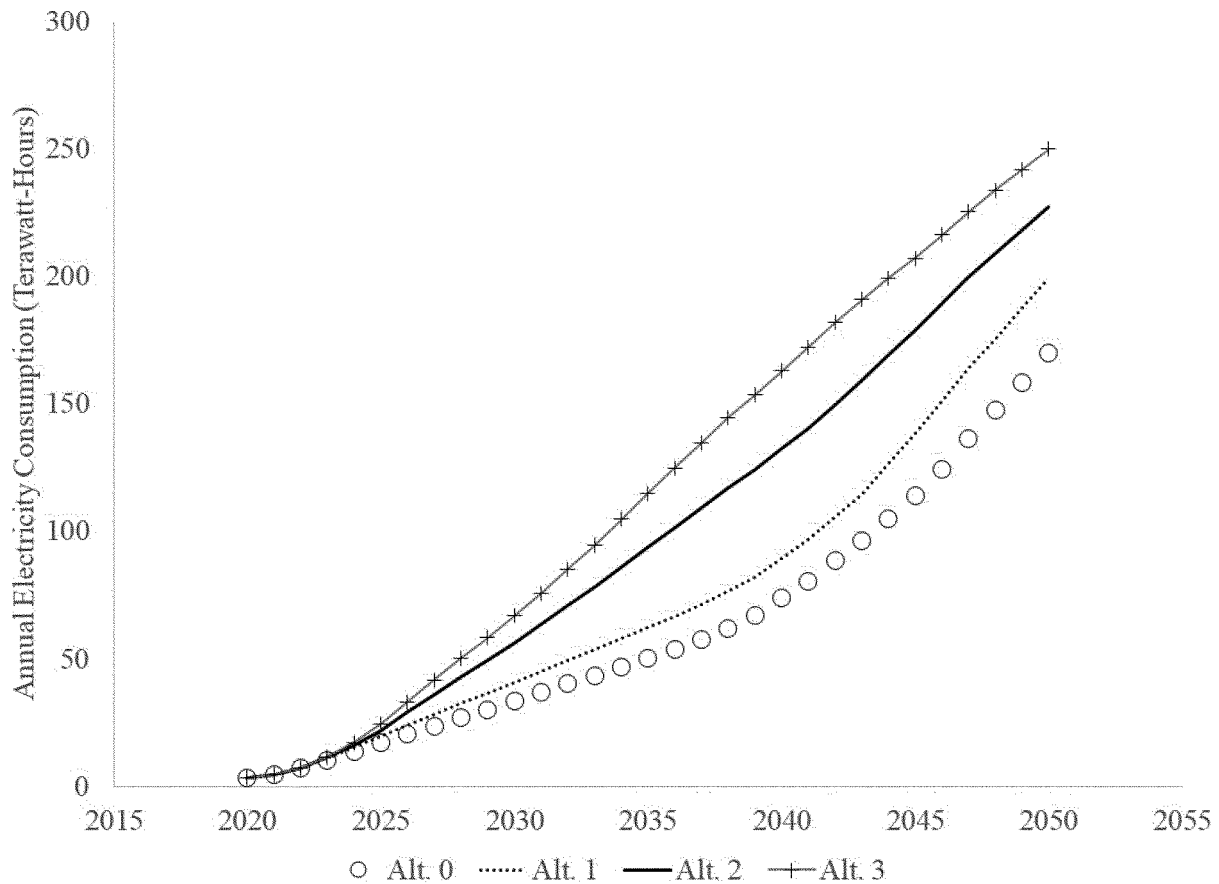


Figure II-4 – Estimated Electricity Consumption by Light-Duty On-Road Fleet

Accounting for emissions from both vehicles and upstream energy sector processes (e.g., petroleum refining and electricity generation), NHTSA

estimates that the proposal would reduce greenhouse gas emissions by about 465 million metric tons of carbon dioxide (CO₂), about 500 thousand

metric tons of methane (CH₄), and about 12 thousand tons of nitrous oxide (N₂O).

Table II-7 – Estimated Changes in Greenhouse Gas Emissions (Metric Tons) vs. No-Action Alternative

Greenhouse Gas	Change in Emissions
Carbon Dioxide (CO ₂)	-465 million tons
Methane (CH ₄)	-500 thousand tons
Nitrous Oxide (N ₂ O)	-12 thousand tons

As for fuel consumption, NHTSA’s analysis also estimates annual emissions attributable to the entire on-road fleet from calendar year 2020 through

calendar year 2050. Also accounting for both vehicles and upstream processes, NHTSA estimates that CO₂ emissions could evolve over time as shown in

Figure II-5, which accounts for both emissions from both vehicles and upstream processes.

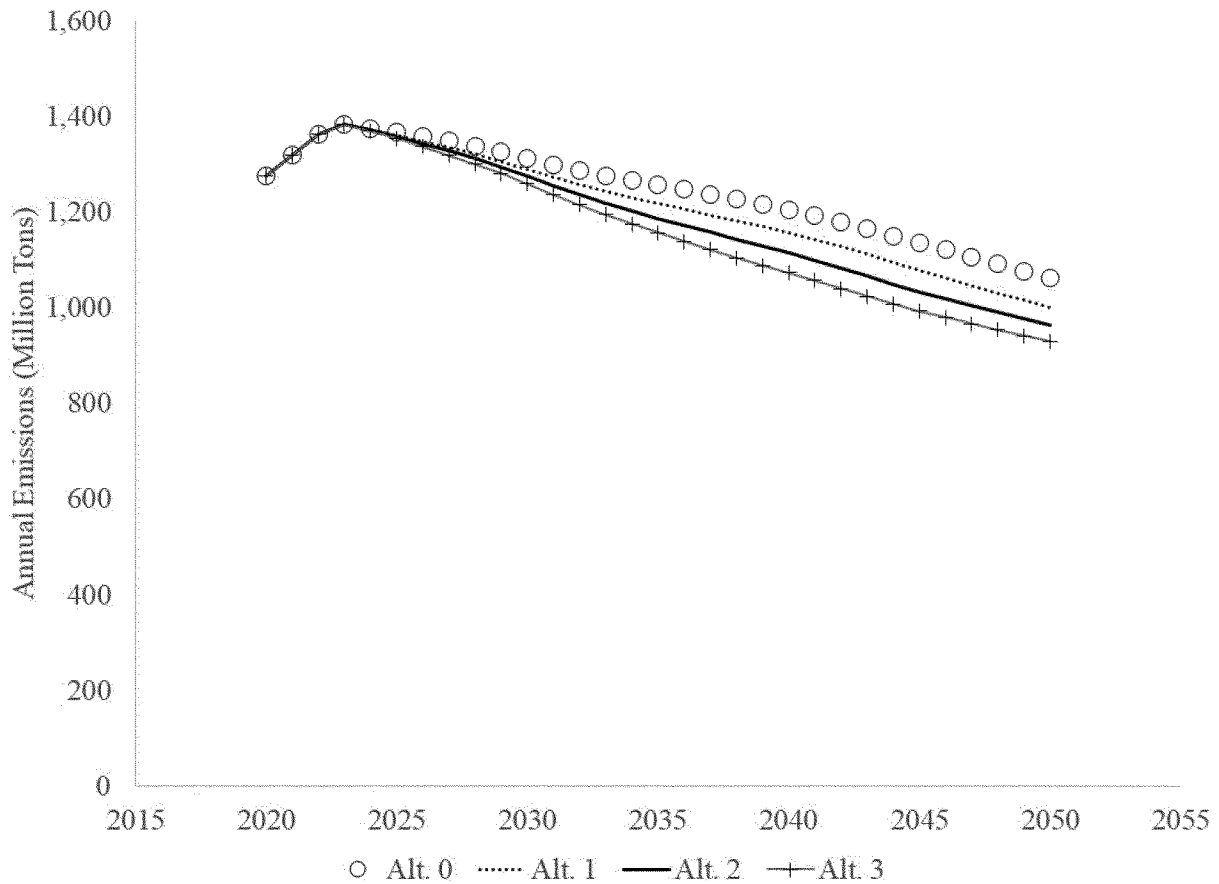


Figure II-5 – Estimated Annual CO₂ Emissions Attributable to Light-Duty On-Road Fleet

Estimated emissions of methane and nitrous oxides follow similar trends. As discussed in the TSD, PRIA, and this NPRM, NHTSA has performed two types of supporting analysis. This NPRM and PRIA focus on the “standard setting” analysis, which sets aside the potential that manufacturers could respond to standards by using compliance credits or introducing new alternative fuel vehicle (including BEVs) models during the “decision years” (for this NPRM, 2024, 2025, and 2026). The accompanying SEIS focuses on an

“unconstrained” analysis, which does not set aside these potential manufacturer actions. The SEIS presents much more information regarding projected GHG emissions, as well as model-based estimates of corresponding impacts on several measures of global climate change.

Also accounting for vehicular and upstream emissions, NHTSA has estimated annual emissions of most criteria pollutants (*i.e.*, pollutants for which EPA has issued National Ambient Air Quality Standards).

NHTSA estimates that under each regulatory alternative, annual emissions of carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxide (NO_x), and fine particulate matter (PM_{2.5}) attributable to the light-duty on-road fleet will decline dramatically between 2020 and 2050, and that emissions in any given year could be very nearly the same under each regulatory alternative. For example, Figure II-6 shows NHTSA’s estimate of future NO_x emissions under each alternative.

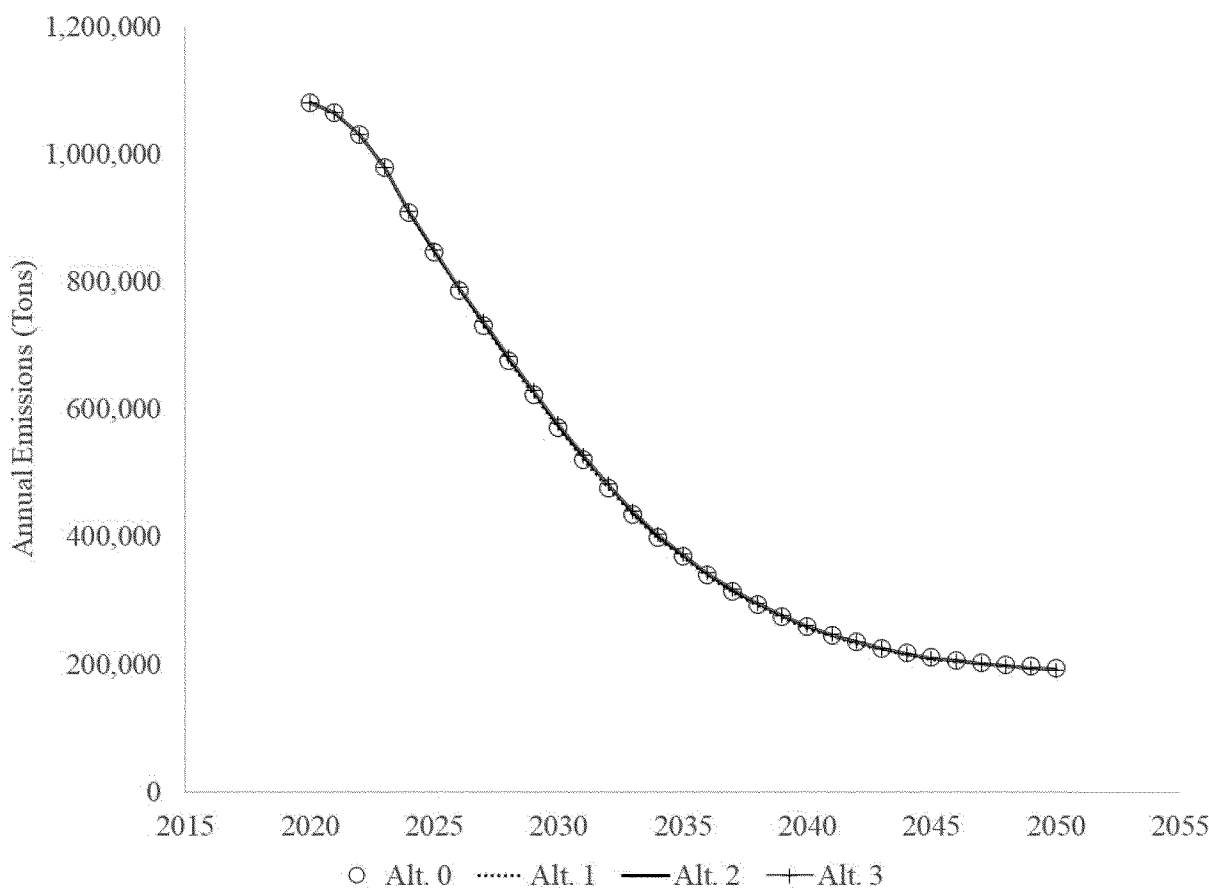


Figure II-6 – Estimated Annual NO_x Emissions Attributable to Light-Duty On-Road Fleet

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On the other hand, as discussed in the PRIA and SEIS, NHTSA projects that annual SO₂ emissions attributable to the light-duty on-road fleet could increase modestly under the action alternatives, because, as discussed above, NHTSA projects that each of the action alternatives could lead to greater use of electricity (for PHEVs and BEVs). The adoption of actions—such as actions prompted by President Biden’s Executive order directing agencies to develop a Federal Clean Electricity and Vehicle Procurement Strategy—to reduce electricity generation emission rates beyond projections underlying NHTSA’s analysis (discussed in the TSD) could dramatically reduce SO₂ emissions under all regulatory alternatives considered here.¹⁰

For the “standard setting” analysis, the PRIA accompanying this NPRM provides additional detail regarding projected criteria pollutant emissions and health effects, as well as the inclusion of these impacts in this benefit-cost analysis. For the “unconstrained” or “EIS” type of analysis, the SEIS accompanying this NPRM presents much more information regarding projected criteria pollutant emissions, as well as model-based estimates of corresponding impacts on several measures of urban air quality and public health. As mentioned above, these estimates of criteria pollutant emissions are based on a complex analysis involving interacting simulation techniques and a myriad of input estimates and assumptions. Especially extending well past 2040, the

analysis involves a multitude of uncertainties. Therefore, actual criteria pollutant emissions could ultimately be different from NHTSA’s current estimates.

To illustrate the effectiveness of the technology added in response to this proposal, Table II-8 presents NHTSA’s estimates for increased vehicle cost and lifetime fuel expenditures if we assumed the behavioral response to the lower cost of driving were zero.¹¹ These numbers are presented in lieu of NHTSA’s primary estimate of lifetime fuel savings, which would give an incomplete picture of technological effectiveness because the analysis accounts for consumers’ behavioral response to the lower cost-per-mile of driving a more fuel-efficient vehicle.

¹⁰ <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/>, accessed June 17, 2021.

¹¹ While this comparison illustrates the effectiveness of the technology added in response to this proposal, it does not represent a full consumer welfare analysis, which would account for drivers’ likely response to the lower cost-per-

mile of driving, as well as a variety of other benefits and costs they will experience. The agency’s complete analysis of the proposal’s likely impacts on passenger car and light truck buyers appears in the PRIA, Appendix I, Table A-23-1.

Table II-8 – Estimated Impact on Average MY 2029 Vehicle Costs vs. No-Action Alternative¹²

Consumer Impact	Dollar Value
Price Increase	\$960
Lifetime Fuel Savings	\$1,280

With the SCC discounted at 2.5% and other benefits and costs discounted at 3%, NHTSA estimates that costs and benefits could be approximately \$120 billion and \$121 billion, respectively, such that the present value of aggregate

net benefits to society could be somewhat less than \$1 billion. With the social cost of carbon (SCC) discounted at 3% and other benefits and costs discounted at 7%, NHTSA estimates approximately \$90 billion in costs and

\$76 billion in benefits could be attributable to vehicles produced prior to MY 2030 over the course of their lives, such that the present value of aggregate net costs to society could be approximately \$15 billion.¹³

Table II-9 – Present Value of Estimated Benefits and Costs vs. No-Action Alternative for MYs through 2029

	3% Discount Rate (2.5% for SCC)	7% Discount Rate (3% for SCC)
Benefits	\$121b	\$76b
Costs	\$121b	\$91b
Net Benefits	<\$1b	-\$15b

Model results can be viewed many different ways, and NHTSA’s rulemaking considers both “model year” and “calendar year” perspectives. The “model year” perspective, above, considers vehicles projected to be produced in some range of model years, and accounts for impacts, benefits, and costs attributable to these vehicles from the present (from the model year’s perspective, 2020) until they are projected to be scrapped. The bulk of NHTSA’s analysis considers vehicles produced prior to model year 2030, accounting for the estimated indirect impacts new standards could have on the remaining operation of vehicles already in service. This perspective

emphasizes impacts on those model years nearest to those (2024–2026) for which NHTSA is proposing new standards. NHTSA’s analysis also presents some results focused only on model years 2024–2026, setting aside the estimated indirect impacts on earlier model years, and the impacts estimated to occur during model years 2027–2029, as some manufacturers and products “catch up” to the standards. Another way to present the benefits and costs of the proposal is the “calendar year” perspective shown in Table II-10, which is similar to how EPA presents benefits and costs in its proposal for GHG standards for MYs 2023–2026. The calendar year

perspective considers all vehicles projected to be in service in each of some range of future calendar years. NHTSA’s presentation of results from this perspective considers calendar years 2020–2050, because the model’s representation of the full on-road fleet extends through 2050. Unlike the model year perspective, this perspective includes vehicles projected produced during model years 2030–2050. This perspective emphasizes longer-term impacts that could accrue if standards were to continue without change. Table II-10 shows costs and benefits for MYs 2023–2026 while Table II-9 shows costs and benefits through MY 2029.

¹² Assumes no rebound effect.
¹³ NHTSA interprets the 2021 IWG draft guidance as indicating that a 2.5% discount rate for the SCC is consistent with discounting near-term benefits and costs of the proposal at the OMB-recommended

consumption discount rate of 3%. For the OMB-recommended discount rate of 7%, NHTSA concluded that a 3% discount rate for the SCC was reasonable given that the IWG draft guidance suggested that the appropriate discount rate for the SCC was likely lower than 3%. NHTSA refers

readers specifically to pp. 16–17 of that guidance, available at https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf?source=email.

Table II-10 – Estimates of Benefits and Costs of the Preferred Alternative for Model Years 2023 through 2026, 3% Discount Rate

MY	Cost	Benefit	Net Benefits
	Present Values		
2023	\$5.6	\$3.5	-\$2.1
2024	\$8.9	\$13.6	\$4.7
2025	\$10.7	\$21.2	\$10.5
2026	\$12.2	\$27.5	\$15.3
Sum	\$37.4	\$65.8	\$28.4

Though based on the exact same model results, these two perspectives provide considerably different views of estimated costs and benefits. Because technology costs account for a large share of overall estimated costs, and are also projected to decline over time (as manufacturers gain more experience with new technologies), costs tend to be “front loaded”—occurring early in a vehicle’s life and tending to be higher in earlier model years than in later model years. Conversely, because social benefits of standards occur as vehicles are driven, and because both fuel prices and the social cost of CO₂ emissions are projected to increase in the future, benefits tend to be “back loaded.” As a result, estimates of future fuel savings, CO₂ reductions, and net social benefits are higher under the calendar year perspective than under the model year perspective. On the other hand, with longer-term impacts playing a greater role, the calendar year perspective is more subject to uncertainties regarding, for example, future technology costs and fuel prices.

Even though NHTSA and EPA estimate benefits, costs, and net benefits using similar methodologies and achieve similar results, different approaches to accounting may give the false appearance of significant divergences. Table II–10 above presents NHTSA’s results using comparable accounting to EPA’s preamble Table 5. EPA also presents cost and benefit information in its RIA over calendar years 2021 through 2050. The numbers most comparable to those presented in EPA’s RIA are those NHTSA developed to complete its Supplemental Environmental Impact Statement (SEIS) using an identical accounting approach. This is because the statutory limitations constraining NHTSA’s standard setting analysis, such as those in 49 U.S.C. 32902(h) prohibiting consideration of full vehicle electrification during the rulemaking timeframe, or consideration

of the trading or transferring of overcompliance credits, do not similarly apply to its EIS analysis.¹⁴ NHTSA’s EIS analysis estimates \$312 billion in costs, \$443 billion in benefits, and \$132 billion in net benefits using a 3% discount rate over calendar years 2021 through 2050.¹⁵ NHTSA describes its cost and benefit accounting approach in Section V of this preamble.

C. Why does NHTSA tentatively believe the proposal would be maximum feasible, and how and why is this tentative conclusion different from the 2020 final rule?

NHTSA’s tentative conclusion, after consideration of the factors described below and information in the administrative record for this action, is that 8 percent increases in stringency for MYs 2024–2026 (Alternative 2 of this analysis) are maximum feasible. The Department of Transportation is deeply committed to working aggressively to improve energy conservation and reduce security risks associated with energy use, and higher standards appear increasingly likely to be economically practicable given almost-daily announcements by major automakers about forthcoming new high-fuel-economy vehicle models, as described in more detail below. Despite only one year having passed since the 2020 final rule, enough has changed in the U.S. and the world that revisiting the CAFE standards for MYs 2024–2026, and raising their stringency considerably, is both appropriate and reasonable.

The 2020 final rule set CAFE standards that increased at 1.5 percent

¹⁴ As the EIS analysis contains information that NHTSA is statutorily prevented from considering, the agency does not rely on this analysis in regulatory decision-making.

¹⁵ See PRIA Chapter 6.5 for more information regarding NHTSA’s estimates of annual benefits and costs using NHTSA’s standard setting analysis. See Tables B–7–25 through B–7–30 in Appendix II of the PRIA for a more detailed breakdown of NHTSA’s EIS analysis.

per year for cars and trucks for MYs 2021–2026, in large part because it prioritized industry concerns and reducing vehicle purchase costs to consumers and manufacturers. This proposed rule acknowledges the priority of energy conservation, consistent with NHTSA’s statutory authority. Moreover, NHTSA is also legally required to consider the environmental implications of this action under NEPA, and while the 2020 final rule did undertake a NEPA analysis, it did not prioritize the environmental considerations aspects of the statutory need of the U.S. to conserve energy.

NHTSA recognizes that the amount of lead time available before MY 2024 is less than what was provided in the 2012 rule. As will be discussed further in Section VI, NHTSA believes that the evidence suggests that the proposed standards are still economically practicable.

We note further that while this proposal is different from the 2020 final rule (and also from the 2012 final rule), NHTSA, like any other Federal agency, is afforded an opportunity to reconsider prior views and, when warranted, to adopt new positions. Indeed, as a matter of good governance, agencies *should* revisit their positions when appropriate, especially to ensure that their actions and regulations reflect legally sound interpretations of the agency’s authority and remain consistent with the agency’s views and practices. As a matter of law, “an Agency is entitled to change its interpretation of a statute.”¹⁶ Nonetheless, “[w]hen an Agency adopts a materially changed interpretation of a statute, it must in addition provide a ‘reasoned analysis’ supporting its decision to revise its interpretation.”¹⁷

¹⁶ Phoenix Hydro Corp. v. FERC, 775 F.2d 1187, 1191 (D.C. Cir. 1985).

¹⁷ Alabama Educ. Ass’n v. Chao, 455 F.3d 386, 392 (D.C. Cir. 2006) (quoting Motor Vehicle Mfrs. Ass’n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.,

This preamble and the accompanying TSD and PRIA all provide extensive detail on the agency's updated analysis, and Section VI contains the agency's explanation of how the agency has considered that analysis and other relevant information in tentatively determining that the proposed CAFE standards are maximum feasible for MYs 2024–2026 passenger cars and light trucks.

D. How is this proposal consistent with EPA's proposal and with California's programs?

The NHTSA and EPA proposals remain coordinated despite being issued as separate regulatory actions. Because NHTSA and EPA are regulating the exact same vehicles and manufacturer will use the same technologies to meet both sets of standards, NHTSA and EPA coordinated during the development of each agency's independent proposal to revise the standards set forth in the 2020 final rule. The NHTSA-proposed CAFE and EPA-proposed CO₂ standards for MY 2026 represent roughly equivalent levels of stringency and may serve as a coordinated starting point for subsequent standards. While the proposed CAFE and CO₂ standards for MYs 2024–2025 are different, this is largely due to the difference in the “start year” for the revised regulations—EPA is proposing to revise standards for MY 2023, while EPCA's lead time requirements, which do not apply to EPA, prevent NHTSA from proposing revised standards until MY 2024. In order to set standards for MY 2023, EPA intends to issue its final rule by December 31, 2021, whereas NHTSA has until April 2022 to finalize standards for MY 2024. The difference in timing makes separate rulemaking actions reasonable and prudent. The specific differences in what the two agencies' standards require become smaller each year, until alignment is achieved. The agencies still have coordinated closely to minimize inconsistency between the programs and will continue to do so through the final rule stage.

While NHTSA's and EPA's programs differ in certain other respects, like programmatic flexibilities, those differences are not new in this proposal. Some parts of the programs are harmonized, and others differ, often as a result of statute. Since NHTSA and EPA began regulating together under President Obama, differences in

programmatic flexibilities have meant that manufacturers have had (and will have) to plan their compliance strategies considering both the CAFE standards and the GHG standards and assure that they are in compliance with both, while still building a single fleet of vehicles to accomplish that goal. NHTSA is proposing CAFE standards that increase at 8 percent per year over MYs 2024–2026 because that is what NHTSA has tentatively concluded is maximum feasible in those model years, under the EPCA factors, and is confident that industry would still be able to build a single fleet of vehicles to meet both the NHTSA and EPA standards. Auto manufacturers are extremely sophisticated companies, well-able to manage complex compliance strategies that account for multiple regulatory programs concurrently. If different agencies' standards are more binding for some companies in certain years, this does not mean that manufacturers must build *multiple* fleets of vehicles, simply that they will have to be more strategic about *how* they build their fleet.

NHTSA has also considered and accounted for California's ZEV mandate (and its adoption by a number of other states) in developing the baseline for this proposal, and has also accounted for the Framework Agreements between California, BMW, Ford, Honda, VWA, and Volvo. NHTSA believes that it is reasonable to include ZEV in the baseline for this proposal regardless of whether California receives a waiver of preemption under the Clean Air Act (CAA) because, according to California, industry overcompliance with the ZEV mandate has been extensive, which indicates that whether or not a waiver exists, many companies intend to produce ZEVs in volumes comparable to what a ZEV mandate would require. Because no decision has yet been made on a CAA waiver for California, and because modeling a sub-national fleet is not currently an analytical option for NHTSA, NHTSA has not expressly accounted for California GHG standards in the analysis for this proposal, although we seek comment on whether and how to account for them in the final rule. Chapter 6 of the accompanying PRIA shows the estimated effects of all of these programs simultaneously.

III. Technical Foundation for NPRM Analysis

A. Why does NHTSA conduct this analysis?

NHTSA is proposing to establish revised CAFE standards for passenger cars and light trucks produced for model years (MYs) 2024–2026.

NHTSA's review of the existing standards is consistent with Executive Order 13990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, signed on January 20, 2021, directing the review of the 2020 final rule that established CAFE standards for MYs 2021–2026 and the consideration of whether to suspend, revise, or rescind that action by July 2021.¹⁸ NHTSA establishes CAFE standards under the Energy Policy and Conservation Act, as amended, and this proposal is undertaken pursuant to that authority. This proposal would require CAFE stringency for both passenger cars and light trucks to increase at a rate of 8 percent per year annually from MY 2024 through MY 2026. NHTSA estimates that over the useful lives of vehicles produced prior to MY 2030, the proposal would save about 50 billion gallons of gasoline and increase electricity consumption by about 275 TWh. Accounting for emissions from both vehicles and upstream energy sector processes (*e.g.*, petroleum refining and electricity generation), NHTSA estimates that the proposal would reduce greenhouse gas emissions by about 465 million metric tons of carbon dioxide (CO₂), about 500 thousand tons metric tons of methane (CH₄), and about 12 thousand tons of nitrous oxide (N₂O).

When NHTSA promulgates new regulations, it generally presents an analysis that estimates the impacts of such regulations, and the impacts of other regulatory alternatives. These analyses derive from statutes such as the Administrative Procedure Act (APA) and National Environmental Policy Act (NEPA), from Executive orders (such as Executive Order 12866 and 13653), and from other administrative guidance (*e.g.*, Office of Management Budget Circular A–4). For CAFE, the Energy Policy and Conservation Act (EPCA), as amended by the Energy Independence and Security Act (EISA), contains a variety of provisions that require NHTSA to consider certain compliance elements in certain ways and avoid considering other things, in determining maximum feasible CAFE standards. Collectively, capturing all of these requirements and guidance elements analytically means that, at least for CAFE, NHTSA presents an analysis that spans a meaningful range of regulatory alternatives, that quantifies a range of technological, economic, and environmental impacts, and that does so in a manner that accounts for EPCA's express requirements for the CAFE program

463 U.S. 29, 57 (1983)); *see also* Encino Motorcars, LLC v. Navarro, 136 S.Ct. 2117, 2125 (2016) (“Agencies are free to change their existing policies as long as they provide a reasoned explanation for the change.”) (Citations omitted).

¹⁸ 86 FR 7037 (Jan. 25, 2021).

(e.g., passenger cars and light trucks are regulated separately, and the standard for each fleet must be set at the maximum feasible level in each model year).

NHTSA's decision regarding the proposed standards is thus supported by extensive analysis of potential impacts of the regulatory alternatives under consideration. Along with this preamble, a Technical Support Document (TSD), a Preliminary Regulatory Impact Analysis (PRIA), and a Supplemental Environmental Impact Statement (SEIS), together provide an extensive and detailed enumeration of related methods, estimates, assumptions, and results. NHTSA's analysis has been constructed specifically to reflect various aspects of governing law applicable to CAFE standards and has been expanded and improved in response to comments received to the prior rulemaking and based on additional work conducted over the last year. Further improvements may be made based on comments received to this proposal, the 2021 NAS Report,¹⁹ and other additional work generally previewed in these rulemaking documents. The

¹⁹ National Academies of Sciences, Engineering, and Medicine (NASEM), 2021. *Assessment of Technologies for Improving Fuel Economy of Light-Duty Vehicles—2025–2035*, Washington, DC: The National Academies Press (hereafter, "2021 NAS Report"). Available at <https://www.nationalacademies.org/our-work/assessment-of-technologies-for-improving-fuel-economy-of-light-duty-vehicles-phase-3> and for hard-copy review at DOT headquarters.

analysis for this proposal aided NHTSA in implementing its statutory obligations, including the weighing of various considerations, by reasonably informing decision-makers about the estimated effects of choosing different regulatory alternatives.

NHTSA's analysis makes use of a range of data (*i.e.*, observations of things that have occurred), estimates (*i.e.*, things that may occur in the future), and models (*i.e.*, methods for making estimates). Two examples of *data* include (1) records of actual odometer readings used to estimate annual mileage accumulation at different vehicle ages and (2) CAFE compliance data used as the foundation for the "analysis fleet" containing, among other things, production volumes and fuel economy levels of specific configurations of specific vehicle models produced for sale in the U.S. Two examples of *estimates* include (1) forecasts of future GDP growth used, with other estimates, to forecast future vehicle sales volumes and (2) the "retail price equivalent" (RPE) factor used to estimate the ultimate cost to consumers of a given fuel-saving technology, given accompanying estimates of the technology's "direct cost," as adjusted to account for estimated "cost learning effects" (*i.e.*, the tendency that it will cost a manufacturer less to apply a technology as the manufacturer gains more experience doing so).

NHTSA uses the CAFE Compliance and Effects Modeling System (usually shortened to the "CAFE Model") to

estimate manufacturers' potential responses to new CAFE and CO₂ standards and to estimate various impacts of those responses. DOT's Volpe National Transportation Systems Center (often simply referred to as the "Volpe Center") develops, maintains, and applies the model for NHTSA. NHTSA has used the CAFE Model to perform analyses supporting every CAFE rulemaking since 2001. The 2016 rulemaking regarding heavy-duty pickup and van fuel consumption and CO₂ emissions also used the CAFE Model for analysis (81 FR 73478, October 25, 2016).

The basic design of the CAFE Model is as follows: the system first estimates how vehicle manufacturers might respond to a given regulatory scenario, and from that potential compliance solution, the system estimates what impact that response will have on fuel consumption, emissions, and economic externalities. In a highly-summarized form, Figure III–1 shows the basic categories of CAFE Model procedures and the sequential flow between different stages of the modeling. The diagram does not present specific model inputs or outputs, as well as many specific procedures and model interactions. The model documentation accompanying this preamble presents these details, and Chapter 1 of the TSD contains a more detailed version of this flow diagram for readers who are interested.

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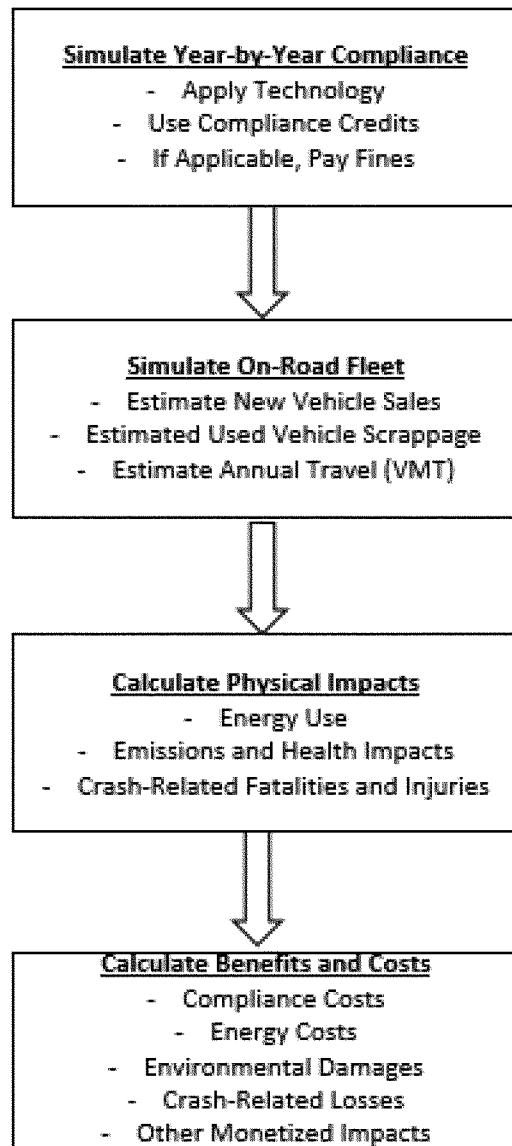


Figure III-1 – CAFE Model Procedures and Logical Flow

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More specifically, the model may be characterized as an integrated system of models. For example, one model estimates manufacturers' responses, another estimates resultant changes in total vehicle sales, and still another estimates resultant changes in fleet turnover (*i.e.*, scrappage). Additionally, and importantly, the model does not determine the form or stringency of the standards. Instead, the model applies inputs specifying the form and stringency of standards to be analyzed and produces outputs showing the impacts of manufacturers working to meet those standards, which become the basis for comparing between different potential stringencies. A regulatory scenario, meanwhile, involves specification of the form, or shape, of

the standards (*e.g.*, flat standards, or linear or logistic attribute-based standards), scope of passenger car and truck regulatory classes, and stringency of the CAFE standards for each model year to be analyzed. For example, a regulatory scenario may define CAFE standards that increase in stringency by 8 percent per year for 3 consecutive years.

Manufacturer compliance simulation and the ensuing effects estimation, collectively referred to as compliance modeling, encompass numerous subsidiary elements. Compliance simulation begins with a detailed user-provided²⁰ initial forecast of the vehicle

²⁰ Because the CAFE Model is publicly available, anyone can develop their own initial forecast (or other inputs) for the model to use. The DOT-

models offered for sale during the simulation period. The compliance simulation then attempts to bring each manufacturer into compliance with the standards²¹ defined by the regulatory scenario contained within an input file developed by the user.

Estimating impacts involves calculating resultant changes in new vehicle costs, estimating a variety of costs (*e.g.*, for fuel) and effects (*e.g.*, CO₂ emissions from fuel combustion) occurring as vehicles are driven over their lifetimes before eventually being

developed market data file that contains the forecast used for this proposal is available on NHTSA's website.

²¹ With appropriate inputs, the model can also be used to estimate impacts of manufacturers' potential responses to new CO₂ standards and to California's ZEV program.

scrapped, and estimating the monetary value of these effects. Estimating impacts also involves consideration of consumer responses—*e.g.*, the impact of vehicle fuel economy, operating costs, and vehicle price on consumer demand for passenger cars and light trucks. Both basic analytical elements involve the application of many analytical inputs. Many of these inputs are developed *outside* of the model and not *by* the model. For example, the model *applies* fuel prices; it does not *estimate* fuel prices.

NHTSA also uses EPA's MOVES model to estimate "tailpipe" (a.k.a. "vehicle" or "downstream") emission factors for criteria pollutants,²² and uses four Department of Energy (DOE) and DOE-sponsored models to develop inputs to the CAFE Model, including three developed and maintained by DOE's Argonne National Laboratory. The agency uses the DOE Energy Information Administration's (EIA's) National Energy Modeling System (NEMS) to estimate fuel prices,²³ and uses Argonne's Greenhouse gases, Regulated Emissions, and Energy use in Transportation (GREET) model to estimate emissions rates from fuel production and distribution processes.²⁴ DOT also sponsored DOE/Argonne to use Argonne's Autonomie full-vehicle modeling and simulation system to estimate the fuel economy impacts for roughly a million combinations of technologies and vehicle types.²⁵ ²⁶ The TSD and PRIA describe details of the agency's use of these models. In

²² See <https://www.epa.gov/moves>. This proposal uses version MOVES3, available at <https://www.epa.gov/moves/latest-version-motor-vehicle-emission-simulator-moves>.

²³ See https://www.eia.gov/outlooks/aeo/info_nems_archive.php. This proposal uses fuel prices estimated using the Annual Energy Outlook (AEO) 2021 version of NEMS (see <https://www.eia.gov/outlooks/aeo/pdf/02%20AEO2021%20Petroleum.pdf>).

²⁴ Information regarding GREET is available at <https://greet.es.anl.gov/index.php>. This NPRM uses the 2020 version of GREET.

²⁵ As part of the Argonne simulation effort, individual technology combinations simulated in Autonomie were paired with Argonne's BatPaC model to estimate the battery cost associated with each technology combination based on characteristics of the simulated vehicle and its level of electrification. Information regarding Argonne's BatPaC model is available at <https://www.anl.gov/cse/batpac-model-software>.

²⁶ In addition, the impact of engine technologies on fuel consumption, torque, and other metrics was characterized using GT-POWER simulation modeling in combination with other engine modeling that was conducted by IAV Automotive Engineering, Inc. (IAV). The engine characterization "maps" resulting from this analysis were used as inputs for the Autonomie full-vehicle simulation modeling. Information regarding GT-POWER is available at <https://www.gtisoft.com/gt-suite-applications/propulsion-systems/gt-power-engine-simulation-software>.

addition, as discussed in the SEIS accompanying this NPRM, DOT relied on a range of climate models to estimate impacts on climate, air quality, and public health. The SEIS discusses and describes the use of these models.

To prepare for analysis supporting this proposal, DOT has refined and expanded the CAFE Model through ongoing development. Examples of such changes, some informed by past external comments, made since early 2020 include:

- Inclusion of 400- and 500-mile BEVs;
- Inclusion of high compression ratio (HCR) engines with cylinder deactivation;
- Accounting for manufacturers' responses to both CAFE and CO₂ standards jointly (rather than only separately)
- Accounting for the ZEV mandates applicable in California and the "Section 177" states;
- Accounting for some vehicle manufacturers' (BMW, Ford, Honda, VW, and Volvo) voluntary agreement with the State of California to continued annual national-level reductions of vehicle greenhouse gas emissions through MY 2026, with greater rates of electrification than would have been required under the 2020 Federal final rule;²⁷

- Inclusion of CAFE civil penalties in the "effective cost" metric used when simulating manufacturers' potential application of fuel-saving technologies;
- Refined procedures to estimate health effects and corresponding monetized damages attributable to criteria pollutant emissions;
- New procedures to estimate the impacts and corresponding monetized damages of highway vehicle crashes that do not result in fatalities;
- Procedures to ensure that modeled technology application and production volumes are the same across all regulatory alternatives in the earliest model years; and
- Procedures to more precisely focus application of EPCA's "standard setting constraints" (*i.e.*, regarding the consideration of compliance credits and additional dedicated alternative fueled vehicles) to only those model years for which NHTSA is proposing or finalizing new standards.

These changes reflect DOT's long-standing commitment to ongoing refinement of its approach to estimating

²⁷ For more information on the Framework Agreements for Clean Cars, including the specific agreements signed by individual manufacturers, see <https://www2.arb.ca.gov/news/framework-agreements-clean-cars>.

the potential impacts of new CAFE standards.

NHTSA underscores that this analysis exercises the CAFE Model in a manner that explicitly accounts for the fact that in producing a single fleet of vehicles for sale in the United States, manufacturers face the *combination* of CAFE standards, EPA CO₂ standards, and ZEV mandates, and for five manufacturers, the voluntary agreement with California to more stringent CO₂ reduction requirements (also applicable to these manufacturers' total production for the U.S. market) through model year 2026. These regulations and contracts have important structural and other differences that affect the strategy a manufacturer could use to comply with each of the above.

As explained, the analysis is designed to reflect a number of statutory and regulatory requirements applicable to CAFE and tailpipe CO₂ standard-setting. EPCA contains a number of requirements governing the scope and nature of CAFE standard setting. Among these, some have been in place since EPCA was first signed into law in 1975, and some were added in 2007, when Congress passed EISA and amended EPCA. EPCA/EISA requirements regarding the technical characteristics of CAFE standards and the analysis thereof include, but are not limited to, the following, and the analysis reflects these requirements as summarized:

Corporate Average Standards: The provision at 49 U.S.C. 32902 requires standards that apply to the average fuel economy levels achieved by each corporation's fleets of vehicles produced for sale in the U.S.²⁸ The CAFE Model calculates the CAFE and CO₂ levels of each manufacturer's fleets based on estimated production volumes and characteristics, including fuel economy levels, of distinct vehicle models that could be produced for sale in the U.S.

Separate Standards for Passenger Cars and Light Trucks: The provision at 49 U.S.C. 32902 requires the Secretary of Transportation to set CAFE standards separately for passenger cars and light trucks. The CAFE Model accounts separately for passenger cars and light trucks when it analyzes CAFE or CO₂ standards, including differentiated standards and compliance.

²⁸ This differs from safety standards and traditional emissions standards, which apply separately to each vehicle. For example, every vehicle produced for sale in the U.S. must, on its own, meet all applicable Federal motor vehicle safety standards (FMVSS), but no vehicle produced for sale must, on its own, meet Federal fuel economy standards. Rather, each manufacturer is required to produce a mix of vehicles that, taken together, achieve an average fuel economy level no less than the applicable minimum level.

Attribute-Based Standards: The provision at 49 U.S.C. 32902 requires the Secretary of Transportation to define CAFE standards as mathematical functions expressed in terms of one or more vehicle attributes related to fuel economy. This means that for a given manufacturer's fleet of vehicles produced for sale in the U.S. in a given regulatory class and model year, the applicable minimum CAFE requirement (*i.e.*, the numerical value of the requirement) is computed based on the applicable mathematical function, and the mix and attributes of vehicles in the manufacturer's fleet. The CAFE Model accounts for such functions and vehicle attributes explicitly.

Separately Defined Standards for Each Model Year: The provision at 49 U.S.C. 32902 requires the Secretary to set CAFE standards (separately for passenger cars and light trucks²⁹) at the maximum feasible levels in each model year. The CAFE Model represents each model year explicitly, and accounts for the production relationships between model years.³⁰

Separate Compliance for Domestic and Imported Passenger Car Fleets: The provision at 49 U.S.C. 32904 requires the EPA Administrator to determine CAFE compliance separately for each manufacturer's fleets of domestic passenger cars and imported passenger cars, which manufacturers must consider as they decide how to improve the fuel economy of their passenger car fleets. The CAFE Model accounts explicitly for this requirement when simulating manufacturers' potential responses to CAFE standards, and combines any given manufacturer's domestic and imported cars into a single fleet when simulating that manufacturer's potential response to CO₂ standards (because EPA does not have separate standards for domestic and imported passenger cars).

Minimum CAFE Standards for Domestic Passenger Car Fleets: The provision at 49 U.S.C. 32902 requires that domestic passenger car fleets meet a minimum standard, which is calculated as 92 percent of the industry-wide average level required under the applicable attribute-based CAFE standard, as projected by the Secretary

²⁹ 49 U.S.C. chapter 329 uses the term "non-passenger automobiles," while NHTSA uses the term "light trucks" in its CAFE regulations. The terms' meanings are identical.

³⁰ For example, a new engine first applied to given vehicle model/configuration in model year 2020 will most likely be "carried forward" to model year 2021 of that same vehicle model/configuration, in order to reflect the fact that manufacturers do not apply brand-new engines to a given vehicle model every single year. The CAFE Model is designed to account for these real-world factors.

at the time the standard is promulgated. The CAFE Model accounts explicitly for this requirement for CAFE standards and sets this requirement aside for CO₂ standards.

Civil Penalties for Noncompliance: The provision at 49 U.S.C. 32912 (and implementing regulations) prescribes a rate (in dollars per tenth of a mpg) at which the Secretary is to levy civil penalties if a manufacturer fails to comply with a CAFE standard for a given fleet in a given model year, after considering available credits. Some manufacturers have historically demonstrated a willingness to pay civil penalties rather than achieving full numerical compliance across all fleets. The CAFE Model calculates civil penalties for CAFE shortfalls and provides means to estimate that a manufacturer might stop adding fuel-saving technologies once continuing to do so would be effectively more "expensive" (after accounting for fuel prices and buyers' willingness to pay for fuel economy) than paying civil penalties. The CAFE Model does not allow civil penalty payment as an option for CO₂ standards.

Dual-Fueled and Dedicated Alternative Fuel Vehicles: For purposes of calculating CAFE levels used to determine compliance, 49 U.S.C. 32905 and 32906 specify methods for calculating the fuel economy levels of vehicles operating on alternative fuels to gasoline or diesel through MY 2020. After MY 2020, methods for calculating alternative fuel vehicle (AFV) fuel economy are governed by regulation. The CAFE Model is able to account for these requirements explicitly for each vehicle model. However, 49 U.S.C. 32902 prohibits consideration of the fuel economy of dedicated alternative fuel vehicle (AFV) models when NHTSA determines what levels of CAFE standards are maximum feasible. The CAFE Model therefore has an option to be run in a manner that excludes the additional application of dedicated AFV technologies in model years for which maximum feasible standards are under consideration. As allowed under NEPA for analysis appearing in EISs informing decisions regarding CAFE standards, the CAFE Model can also be run without this analytical constraint. The CAFE Model does account for dual- and alternative fuel vehicles when simulating manufacturers' potential responses to CO₂ standards. For natural gas vehicles, both dedicated and dual-fueled, EPA has a multiplier of 2.0 for model years 2022–2026.³¹

³¹ While EPA is proposing changes to this and other flexibility provisions in its separate NPRM,

ZEV Mandates: The CAFE Model can simulate manufacturers' compliance with ZEV mandates applicable in California and "Section 177"³² states. The approach involves identifying specific vehicle model/configurations that could be replaced with PHEVs or BEVs, and immediately making these changes in each model year, before beginning to consider the potential that other technologies could be applied toward compliance with CAFE or CO₂ standards.

Creation and Use of Compliance Credits: The provision at 49 U.S.C. 32903 provides that manufacturers may earn CAFE "credits" by achieving a CAFE level beyond that required of a given fleet in a given model year, and specifies how these credits may be used to offset the amount by which a different fleet falls short of its corresponding requirement. These provisions allow credits to be "carried forward" and "carried back" between model years, transferred between regulated classes (domestic passenger cars, imported passenger cars, and light trucks), and traded between manufacturers. However, credit use is also subject to specific statutory limits. For example, CAFE compliance credits can be carried forward a maximum of five model years and carried back a maximum of three model years. Also, EPCA/EISA caps the amount of credit that can be transferred between passenger car and light truck fleets and prohibits manufacturers from applying traded or transferred credits to offset a failure to achieve the applicable minimum standard for domestic passenger cars. The CAFE Model explicitly simulates manufacturers' potential use of credits carried forward from prior model years or transferred from other fleets.³³ The provision at 49

for purposes of this NPRM, the CAFE Model only reflects the current EPA regulatory flexibilities.

³² The term "Section 177" states refers to states which have elected to adopt California's standards in lieu of Federal requirements, as allowed under Section 177 of the CAA.

³³ The CAFE Model does not explicitly simulate the potential that manufacturers would carry CAFE or CO₂ credits back (*i.e.*, borrow) from future model years, or acquire and use CAFE compliance credits from other manufacturers. At the same time, because EPA has currently elected not to limit credit trading, the CAFE Model can be exercised in a manner that simulates unlimited (a.k.a. "perfect") CO₂ compliance credit trading throughout the industry (or, potentially, within discrete trading "blocs"). NHTSA believes there is significant uncertainty in how manufacturers may choose to employ these particular flexibilities in the future: For example, while it is reasonably foreseeable that a manufacturer who over-complies in one year may "coast" through several subsequent years relying on those credits rather than continuing to make technology improvements, it is harder to assume with confidence that manufacturers will rely on

U.S.C. 32902 prohibits consideration of manufacturers' potential application of CAFE compliance credits when setting maximum feasible CAFE standards. The CAFE Model can be operated in a manner that excludes the application of CAFE credits for a given model year under consideration for standard setting. For modeling CO₂ standards, the CAFE Model does not limit transfers. Insofar as the CAFE Model can be exercised in a manner that simulates trading of CO₂ compliance credits, such simulations treat trading as unlimited.³⁴

Statutory Basis for Stringency: The provision at 49 U.S.C. 32902 requires the Secretary to set CAFE standards at the maximum feasible levels, considering technological feasibility, economic practicability, the need of the United States to conserve energy, and the impact of other motor vehicle standards of the Government. EPCA/EISA authorizes the Secretary to interpret these factors, and as the Department's interpretation has evolved, NHTSA has continued to expand and refine its qualitative and quantitative analysis to account for these statutory factors. For example, one of the ways that economic practicability considerations are incorporated into the analysis is through the technology effectiveness determinations: The Autonomie simulations reflect the agency's judgment that it would not be economically practicable for a manufacturer to "split" an engine

future technology investments to offset prior-year shortfalls, or whether/how manufacturers will trade credits with market competitors rather than making their own technology investments. Historically, carry-back and trading have been much less utilized than carry-forward, for a variety of reasons including higher risk and preference not to 'pay competitors to make fuel economy improvements we should be making' (to paraphrase one manufacturer), although NHTSA recognizes that carry-back and trading are used more frequently when standards increase in stringency more rapidly. Given the uncertainty just discussed, and given also the fact that the agency has yet to resolve some of the analytical challenges associated with simulating use of these flexibilities, the agency considers borrowing and trading to involve sufficient risk that it is prudent to support this proposal with analysis that sets aside the potential that manufacturers could come to depend widely on borrowing and trading. While compliance costs in real life may be somewhat different from what is modeled today as a result of this analytical decision, that is broadly true no matter what, and the agency does not believe that the difference would be so great that it would change the policy outcome. Furthermore, a manufacturer employing a trading strategy would presumably do so because it represents a lower-cost compliance option. Thus, the estimates derived from this modeling approach are likely to be conservative in this respect, with real-world compliance costs possibly being lower.

³⁴To avoid making judgments about possible future trading activity, the model simulates trading by combining all manufacturers into a single entity, so that the most cost-effective choices are made for the fleet as a whole.

shared among many vehicle model/configurations into myriad versions each optimized to a single vehicle model/configuration.

National Environmental Policy Act: In addition, NEPA requires the Secretary to issue an EIS that documents the estimated impacts of regulatory alternatives under consideration. The SEIS accompanying this NPRM documents changes in emission inventories as estimated using the CAFE Model, but also documents corresponding estimates—based on the application of other models documented in the SEIS, of impacts on the global climate, on tropospheric air quality, and on human health.

Other Aspects of Compliance: Beyond these statutory requirements applicable to DOT and/or EPA are a number of specific technical characteristics of CAFE and/or CO₂ regulations that are also relevant to the construction of this analysis. For example, EPA has defined procedures for calculating average CO₂ levels, and has revised procedures for calculating CAFE levels, to reflect manufacturers' application of "off-cycle" technologies that increase fuel economy (and reduce CO₂ emissions). Although too little information is available to account for these provisions explicitly in the same way that the agency has accounted for other technologies, the CAFE Model does include and makes use of inputs reflecting the agency's expectations regarding the extent to which manufacturers may earn such credits, along with estimates of corresponding costs. Similarly, the CAFE Model includes and makes use of inputs regarding credits EPA has elected to allow manufacturers to earn toward CO₂ levels (not CAFE) based on the use of air conditioner refrigerants with lower global warming potential (GWP), or on the application of technologies to reduce refrigerant leakage. In addition, the CAFE Model accounts for EPA "multipliers" for certain alternative fueled vehicles, based on current regulatory provisions or on alternative approaches. Although these are examples of regulatory provisions that arise from the exercise of discretion rather than specific statutory mandate, they can materially impact outcomes.

Besides the updates to the model described above, any analysis of regulatory actions that will be implemented several years in the future, and whose benefits and costs accrue over decades, requires a large number of assumptions. Over such time horizons, many, if not most, of the relevant assumptions in such an analysis are inevitably uncertain. Each successive

CAFE analysis seeks to update assumptions to reflect better the current state of the world and the best current estimates of future conditions.

A number of assumptions have been updated since the 2020 final rule for this proposal. While NHTSA would have made these updates as a matter of course, we note that the COVID-19 pandemic has been profoundly disruptive, including in ways directly material to major analytical inputs such as fuel prices, gross domestic product (GDP), vehicle production and sales, and highway travel. As discussed below, NHTSA has updated its "analysis fleet" from a model year 2017 reference to a model year 2020 reference, updated estimates of manufacturers' compliance credit "holdings," updated fuel price projections to reflect the U.S. Energy Information Administration's (EIA's) 2021 Annual Energy Outlook (AEO), updated projections of GDP and related macroeconomic measures, and updated projections of future highway travel. In addition, through Executive Order 13990, President Biden has required the formation of an Interagency Working Group (IWG) on the Social Cost of Greenhouse Gases and charged this body with updating estimates of the social costs of carbon, nitrous oxide, and methane. As discussed in the TSD, NHTSA has applied the IWG's interim guidance, which contains cost estimates (per ton of emissions) considerably greater than those applied in the analysis supporting the 2020 SAFE rule. These and other updated analytical inputs are discussed in detail in the TSD. NHTSA seeks comment on the above discussion.

B. What is NHTSA analyzing?

As in the CAFE and CO₂ rulemakings in 2010, 2012, and 2020, NHTSA is proposing to set attribute-based CAFE standards defined by a mathematical function of vehicle footprint, which has observable correlation with fuel economy. EPCA, as amended by EISA, expressly requires that CAFE standards for passenger cars and light trucks be based on one or more vehicle attributes related to fuel economy and be expressed in the form of a mathematical function.³⁵ Thus, the proposed standards (and regulatory alternatives) take the form of fuel economy targets expressed as functions of vehicle footprint (the product of vehicle wheelbase and average track width) that are separate for passenger cars and light trucks. Chapter 1.2.3 of the TSD discusses in detail NHTSA's continued

³⁵ 49 U.S.C. 32902(a)(3)(A).

reliance on footprint as the relevant attribute in this proposal.

Under the footprint-based standards, the function defines a fuel economy performance target for each unique footprint combination within a car or truck model type. Using the functions, each manufacturer thus will have a CAFE average standard for each year that is almost certainly unique to each of its fleets,³⁶ based upon the footprints and production volumes of the vehicle models produced by that manufacturer. A manufacturer will have separate footprint-based standards for cars and for trucks, consistent with 49 U.S.C.

32902(b)'s direction that NHTSA must set separate standards for cars and for trucks. The functions are mostly sloped, so that generally, larger vehicles (*i.e.*, vehicles with larger footprints) will be subject to lower mpg targets than smaller vehicles. This is because, generally speaking, smaller vehicles are more capable of achieving higher levels of fuel economy, mostly because they tend not to have to work as hard (and therefore require as much energy) to perform their driving task. Although a manufacturer's fleet average standards could be estimated throughout the model year based on the projected

production volume of its vehicle fleet (and are estimated as part of EPA's certification process), the standards with which the manufacturer must comply are determined by its final model year production figures. A manufacturer's calculation of its fleet average standards, as well as its fleets' average performance at the end of the model year, will thus be based on the production-weighted average target and performance of each model in its fleet.³⁷

For passenger cars, consistent with prior rulemakings, NHTSA is proposing to define fuel economy targets as shown in Equation III-1.

$$TARGET_{FE} = \frac{1}{MIN \left[MAX \left(c \times FOOTPRINT + d, \frac{1}{a} \right), \frac{1}{b} \right]}$$

Equation III-1 – Passenger Car Fuel Economy Footprint Target Curve

Where:

$TARGET_{FE}$ is the fuel economy target (in mpg) applicable to a specific vehicle model type with a unique footprint combination,

a is a minimum fuel economy target (in mpg),

b is a maximum fuel economy target (in mpg),

c is the slope (in gallons per mile per square foot, or gpm, per square foot) of a line relating fuel consumption (the inverse of fuel economy) to footprint, and

d is an intercept (in gpm) of the same line.

Here, MIN and MAX are functions that take the minimum and maximum values, respectively, of the set of included

values. For example, $MIN[40, 35] = 35$ and $MAX(40, 25) = 40$, such that $MIN[MAX(40, 25), 35] = 35$.

For the preferred alternative, this equation is represented graphically as the curves in Figure III-2.

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³⁶ EPCA/EISA requires NHTSA and EPA to separate passenger cars into domestic and import passenger car fleets for CAFE compliance purposes (49 U.S.C. 32904(b)), whereas EPA combines all passenger cars into one fleet.

³⁷ As discussed in prior rulemakings, a manufacturer may have some vehicle models that exceed their target and some that are below their target. Compliance with a fleet average standard is determined by comparing the fleet average standard

(based on the production-weighted average of the target levels for each model) with fleet average performance (based on the production-weighted average of the performance of each model).

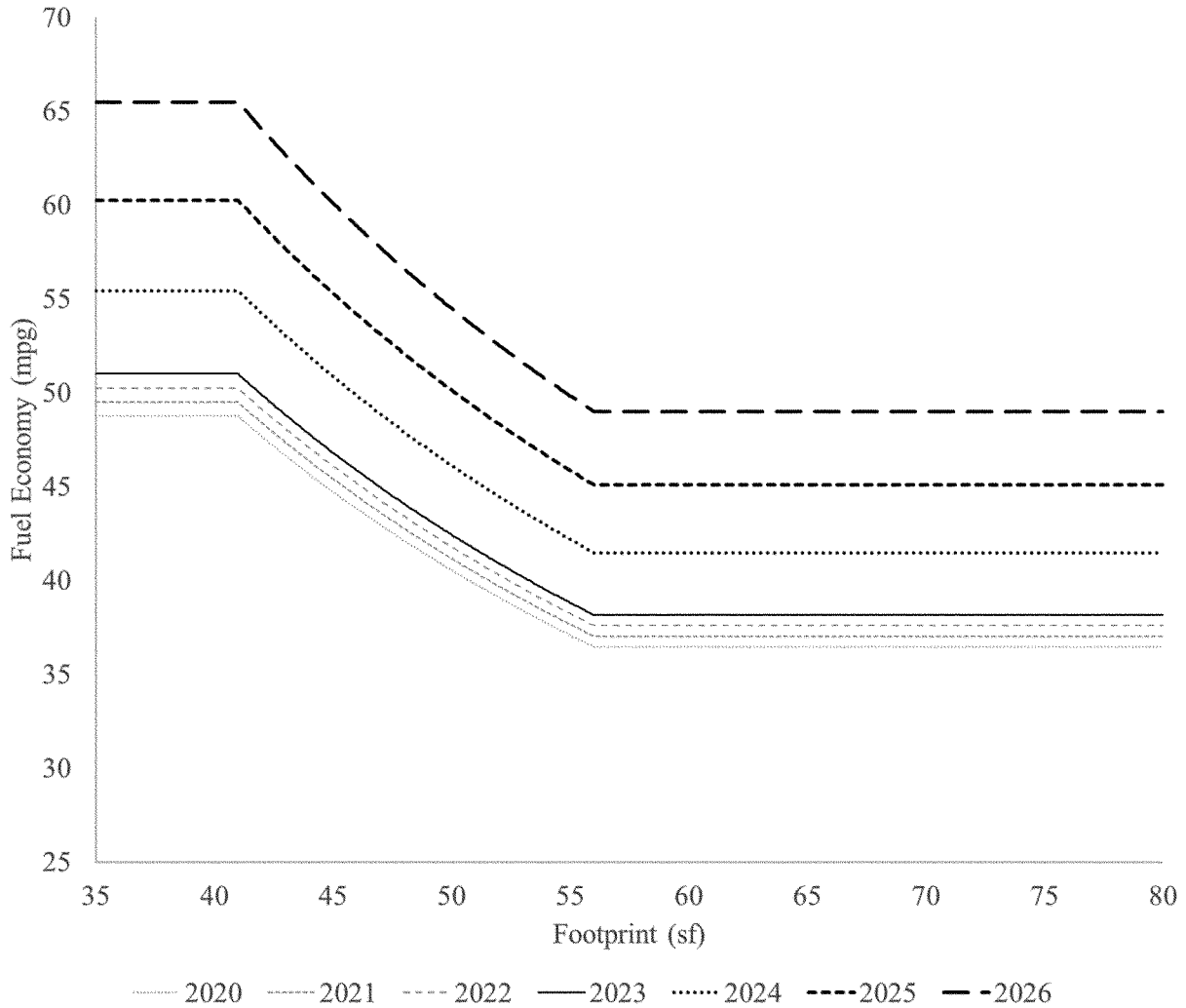


Figure III-2 – Preferred Alternative, Fuel Economy Target Curves, Passenger Cars

For light trucks, also consistent with prior rulemakings, NHTSA is proposing to define fuel economy targets as shown in Equation III-2.

$TARGET_{FE}$

$$= MAX \left(\frac{1}{MIN \left[MAX \left(c \times FOOTPRINT + d, \frac{1}{a} \right), \frac{1}{b} \right]}, \frac{1}{MIN \left[MAX \left(g \times FOOTPRINT + h, \frac{1}{e} \right), \frac{1}{f} \right]} \right)$$

Equation III-2 – Light Truck Fuel Economy Target Curve

Where:

$TARGET_{FE}$ is the fuel economy target (in mpg) applicable to a specific vehicle model type with a unique footprint combination, $a, b, c,$ and d are as for passenger cars, but taking values specific to light trucks,

e is a second minimum fuel economy target (in mpg), f is a second maximum fuel economy target (in mpg), g is the slope (in gpm per square foot) of a second line relating fuel consumption (the inverse of fuel economy) to footprint, and

h is an intercept (in gpm) of the same second line.

For the preferred alternative, this equation is represented graphically as the curves in Figure III-3.

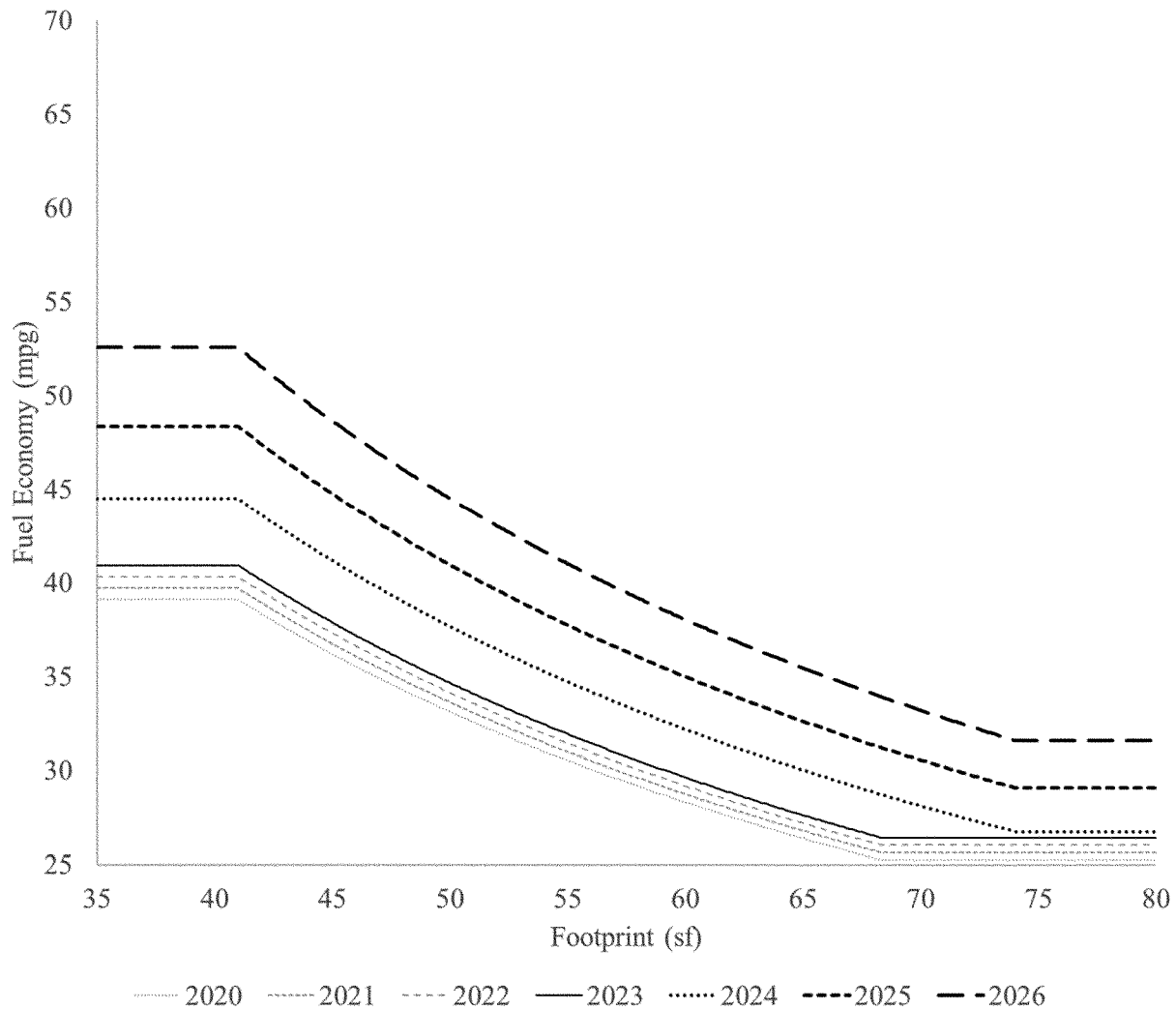


Figure III-3 – Preferred Alternative, Fuel Economy Target Curves, Light Trucks

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Although the general model of the target function equation is the same for each vehicle category (passenger cars and light trucks) and each model year, the parameters of the function equation differ for cars and trucks. The actual parameters for both the preferred alternative and the other regulatory alternatives are presented in Section IV.B of this preamble.

As has been the case since NHTSA began establishing attribute-based standards, no vehicle need meet the specific applicable fuel economy target, because compliance with CAFE

standards is determined based on corporate average fuel economy. In this respect, CAFE standards are unlike, for example, Federal Motor Vehicle Safety Standards (FMVSS) and certain vehicle criteria pollutant emissions standards where each car must meet the requirements. CAFE standards apply to the average fuel economy levels achieved by manufacturers' entire fleets of vehicles produced for sale in the U.S. Safety standards apply on a vehicle-by-vehicle basis, such that every single vehicle produced for sale in the U.S. must, on its own, comply with minimum FMVSS. When first

mandating CAFE standards in the 1970s, Congress specified a more flexible averaging-based approach that allows some vehicles to "under comply" (*i.e.*, fall short of the overall flat standard, or fall short of their target under attribute-based standards) as long as a manufacturer's overall fleet is in compliance.

The required CAFE level applicable to a given fleet in a given model year is determined by calculating the production-weighted harmonic average of fuel economy targets applicable to specific vehicle model configurations in the fleet, as shown in Equation III-3.

$$CAFE_{required} = \frac{\sum_i PRODUCTION_i}{\sum_i \frac{PRODUCTION_i}{TARGET_{FE,i}}}$$

Equation III-3 – Calculation for Required CAFE Level

Where:

$CAFE_{required}$ is the CAFE level the fleet is required to achieve,

i refers to specific vehicle model/configurations in the fleet,

$PRODUCTION_i$ is the number of model configuration i produced for sale in the U.S., and

$TARGET_{FE,i}$ is the fuel economy target (as defined above) for model configuration i .

Chapter 1 of the TSD describes the use of attribute-based standards, generally, and explains the specific decision, in past rules and for the current rule, to continue to use vehicle footprint as the attribute over which to vary stringency. That chapter also discusses the policy in selecting the specific mathematical function; the methodologies used to develop the current attribute-based standards; and methodologies previously used to reconsider the mathematical function for CAFE standards. NHTSA refers readers to the TSD for a full discussion of these topics.

While Chapter 1 of the TSD explains why the proposed standards for MYs 2024–2026 continue to be footprint-based, the question has arisen periodically of whether NHTSA should instead consider multi-attribute standards, such as those that also depend on weight, torque, power, towing capability, and/or off-road capability. To date, every time NHTSA has considered options for which attribute(s) to select, the agency has concluded that a properly-designed footprint-based approach provides the best means of achieving the basic policy goals (*i.e.*, by increasing the likelihood of improved fuel economy across the entire fleet of vehicles; by reducing disparities between manufacturers' compliance burdens; and by reducing incentives for manufacturers to respond to standards in ways that could compromise overall highway safety) involved in applying an attribute-based standard. At the same time, footprint-based standards need also to be structured in a way that furthers the energy and environmental policy goals of EPCA without creating inappropriate incentives to increase vehicle size in ways that could increase fuel consumption or compromise safety. That said, as NHTSA moves forward

with the CAFE program, and continues to refine our understanding of the light-duty vehicle market and trends in vehicle and highway safety, NHTSA will also continue to revisit whether other approaches (or other ways of applying the same basic approaches) could foreseeably provide better means of achieving policy goals.

For example, in the 2021 NAS Report, the committee recommended that if Congress does not act to remove the prohibition at 49 U.S.C. 32902(h) on considering the fuel economy of dedicated alternative fuel vehicles (like BEVs) in determining maximum feasible CAFE standards, then NHTSA should account for the fuel economy benefits of ZEVs by “setting the standard as a function of a second attribute in addition to footprint—for example, the expected market share of ZEVs in the total U.S. fleet of new light-duty vehicles—such that the standards increase as the share of ZEVs in the total U.S. fleet increases.”³⁸ DOE seconded this suggestion in its comments during interagency review of this proposal. Chapter 1 of the TSD contains an examination of this suggestion, and NHTSA seeks comment on whether and how NHTSA might consider adding electrification as an attribute on which to base CAFE standards.

Changes in the market that have occurred since NHTSA last examined the appropriateness of the footprint curves have been, for the most part, consistent with the trends that the agency identified in 2018. For the most part, the fleet has continued to grow somewhat in vehicle size, as vehicle manufacturers have continued over the past several years to reduce their offerings of smaller footprint vehicles and increase their sales of larger footprint vehicles and continue to sell many small to mid-size crossovers and SUVs, some of which are classified as passenger cars and some of which are

light trucks. Although this trend has had the effect of reducing the achieved fuel economy of the fleet (and thus increasing its carbon dioxide emissions) as compared to if vehicles had instead remained the same size or gotten smaller, NHTSA does not believe that there have been sufficiently major changes in the relationship between footprint and fuel economy over the last three years to warrant a detailed re-examination of that relationship as part of this proposal. Moreover, changes to the footprint curves can significantly affect manufacturers' ability to comply. Given the available lead time between now and the beginning of MY 2024, NHTSA believes it is unlikely any potential benefit of changing the shape of the footprint curves (when we are already proposing to change standard stringency) would outweigh the costs of doing so.

NHTSA seeks comment on the choice of footprint as the attribute on which the proposed standards are based, and particularly seeks comment on the 2021 NAS report recommendation described above. If commenters wish to provide comments on possible changes to the attribute(s) on which fuel economy standards should be based, including approaches for considering vehicle electrification in ways that would further a zero emissions fleet as discussed in Chapter 1 of the TSD, NHTSA would appreciate commenters including a discussion of the timeframe in which those changes should be made—for example, whether and how much lead time would be preferable for making such changes, particularly recognizing the available lead time for MY 2024. NHTSA also seeks comment on whether, to the extent that vehicle upsizing trends and fuel economy curves are causally related instead of correlated, it is the curve shape versus the choice of footprint that creates this relationship (or, alternatively, whether the relationship if any derives from vehicle classification). Again, if commenters wish to provide comments on possible changes to the curve shapes, NHTSA would appreciate commenters including a discussion of the timeframe in which those changes should be made.

NHTSA seeks comment on the discussion above and in the TSD.

³⁸ National Academies of Sciences, Engineering, and Medicine, 2021. *Assessment of Technologies for Improving Fuel Economy of Light-Duty Vehicles—2025–2035*, Washington, DC: The National Academies Press (hereafter, “2021 NAS Report”), at Summary Recommendation 5. Available at <https://www.nationalacademies.org/our-work/assessment-of-technologies-for-improving-fuel-economy-of-light-duty-vehicles-phase-3> and for hard-copy review at DOT headquarters.

C. What inputs does the compliance analysis require?

The CAFE Model applies various technologies to different vehicle models in each manufacturer's product line to simulate how each manufacturer might make progress toward compliance with the specified standard. Subject to a variety of user-controlled constraints, the model applies technologies based on their relative cost-effectiveness, as determined by several input assumptions regarding the cost and effectiveness of each technology, the cost of compliance (determined by the change in CAFE or CO₂ credits, CAFE-related civil penalties, or value of CO₂ credits, depending on the compliance program being evaluated), and the value of avoided fuel expenses. For a given manufacturer, the compliance simulation algorithm applies technologies either until the manufacturer runs out of cost-effective technologies,³⁹ until the manufacturer exhausts all available technologies, or, if the manufacturer is assumed to be willing to pay civil penalties or acquire credits from another manufacturer, until paying civil penalties or purchasing credits becomes more cost-effective than increasing vehicle fuel economy. At this stage, the system assigns an incurred technology cost and updated fuel economy to each vehicle model, as well as any civil penalties incurred/credits purchased by each manufacturer. This compliance simulation process is repeated for each model year included in the study period (through model year 2050 in this analysis).

At the conclusion of the compliance simulation for a given regulatory scenario the system transitions between compliance simulation and effects calculations. This is the point where the system produces a full representation of the registered light-duty vehicle population in the United States. The CAFE Model then uses this fleet to generate estimates of the following (for each model year and calendar year included in the analysis): Lifetime travel, fuel consumption, carbon dioxide and criteria pollutant emissions, the magnitude of various economic externalities related to vehicular travel (e.g., congestion and noise), and energy consumption (e.g., the economic costs of short-term increases in petroleum prices, or social damages associated

³⁹ Generally, the model considers a technology cost-effective if it pays for itself in fuel savings within 30 months. Depending on the settings applied, the model can continue to apply technologies that are *not* cost-effective rather than choosing other compliance options; if it does so, it will apply those additional technologies in order of cost-effectiveness (i.e., most cost-effective first).

with GHG emissions). The system then uses these estimates to measure the benefits and costs associated with each regulatory alternative (relative to the no-action alternative).

To perform this analysis, the CAFE Model uses millions of data points contained in several input files that have been populated by engineers, economists, and safety and environmental program analysts at both NHTSA and the DOT's Volpe National Transportation Systems Center (Volpe). In addition, some of the input data comes from modeling and simulation analysis performed by experts at Argonne National Laboratory using their Autonomie full vehicle simulation model and BatPaC battery cost model. Other inputs are derived from other models, such as the U.S. Energy Information Administration's (EIA's) National Energy Modeling System (NEMS), Argonne's "GREET" fuel-cycle emissions analysis model, and U.S. EPA's "MOVES" vehicle emissions analysis model. As NHTSA and Volpe are both organizations within DOT, we use DOT throughout these sections to refer to the collaborative work performed for this analysis.

This section and Section III.D describe the inputs that the compliance simulation requires, including an in-depth discussion of the technologies used in the analysis, how they are defined in the CAFE Model, how they are characterized on vehicles that already exist in the market, how they can be applied to realistically simulate manufacturer's decisions, their effectiveness, and their cost. The inputs and analyses for the effects calculations, including economic, safety, and environmental effects, are discussed later in Sections III.C through III.H. NHTSA seeks comment on the following discussion.

1. Overview of Inputs to the Analysis

As discussed above, the current analysis involves estimating four major swaths of effects. First, the analysis estimates how the application of various combinations of technologies could impact vehicles' costs and fuel economy levels (and CO₂ emission rates). Second, the analysis estimates how vehicle manufacturers might respond to standards by adding fuel-saving technologies to new vehicles. Third, the analysis estimates how changes in new vehicles might impact vehicle sales and operation. Finally, the analysis estimates how the combination of these changes might impact national-scale energy consumption, emissions, highway safety, and public health.

There are several CAFE Model input files important to the discussion these first two steps, and these input files are discussed in detail later in this section and in Section III.D. The Market Data file contains the detailed description of the vehicle models and model configurations each manufacturer produces for sale in the U.S. The file also contains a range of other inputs that, though not specific to individual vehicle models, may be specific to individual manufacturers. The Technologies file identifies about six dozen technologies to be included in the analysis, indicates when and how widely each technology can be applied to specific types of vehicles, provides most of the inputs involved in estimating what costs will be incurred, and provides some of the inputs involved in estimating impacts on vehicle fuel consumption and weight.

The CAFE Model also makes use of databases of estimates of fuel consumption impacts and, as applicable, battery costs for different combinations of fuel saving technologies.⁴⁰ These databases are termed the FE1 and FE2 Adjustments databases (the main database and the database specific to plug-in hybrid electric vehicles, applicable to those vehicles' operation on electricity) and the Battery Costs database. DOT developed these databases using a large set of full vehicle and accompanying battery cost model simulations developed by Argonne National Laboratory. The Argonne simulation outputs, battery costs, and other reference materials are also discussed in the following sections.⁴¹

The following discussion in this section and in Section III.D expands on the inputs used in the compliance analysis. Further detail is included in Chapters 2 and 3 of the TSD accompanying this proposal, and all input values relevant to the compliance analysis can be seen in the Market Data, Technologies, fuel consumption and battery cost database files, and Argonne

⁴⁰ To be used as files provided separately from the model and loaded every time the model is executed, these databases are prohibitively large, spanning more than a million records and more than half a gigabyte. To conserve memory and speed model operation, DOT has integrated the databases into the CAFE Model executable file. When the model is run, however, the databases are extracted and placed in an accessible location on the user's disk drive.

⁴¹ The Argonne workbooks included in the docket for this proposal include ten databases that contain the outputs of the Autonomie full vehicle simulations, two summary workbooks of assumptions used for the full vehicle simulations, a data dictionary, and the lookup tables for battery costs generated using the BatPaC battery cost model.

summary files included in the docket for this proposal. As previously mentioned, other model input files underlie the effects analysis, and these are discussed in detail in Sections III.C through III.H. NHTSA seeks comment on the above discussion.

2. The Market Data File

The Market Data file contains the detailed description of the vehicle models and model configurations each manufacturer produces for sale in the U.S. This snapshot of the recent light duty vehicle market, termed the analysis fleet, or baseline fleet, is the starting point for the evaluation of different stringency levels for future fuel economy standards. The analysis fleet provides a reference from which to project how manufacturers could apply additional technologies to vehicles to cost-effectively improve vehicle fuel economy, in response to regulatory action and market conditions.⁴² For this analysis, the MY 2020 light duty fleet was selected as the baseline for further evaluation of the effects of different fuel economy standards. The Market Data file also contains a range of other inputs that, though not specific to individual vehicle models, may be specific to individual manufacturers.

The Market Data file is an Excel spreadsheet that contains five worksheets. Three worksheets, the Vehicles worksheet, Engines worksheet, and Transmissions worksheet, characterize the baseline fleet for this analysis. The three worksheets contain a characterization of every vehicle sold in MY 2020 and their relevant technology content, including the engines and transmissions that a manufacturer uses in its vehicle platforms and how those technologies are shared across platforms. In addition, the Vehicles worksheet includes

baseline economic and safety inputs linked to each vehicle that allow the CAFE Model to estimate economic and safety impacts resulting from any simulated compliance pathway. The remaining two worksheets, the Manufacturers worksheet and Credits and Adjustments worksheet, include baseline compliance positions for each manufacturer, including each manufacturer's starting CAFE credit banks and whether the manufacturer is willing to pay civil penalties for noncompliance with CAFE standards, among other inputs.

New inputs have been added for this analysis in the Vehicles worksheet and Manufacturers worksheet. The new inputs indicate which vehicles a manufacturer may reasonably be expected to convert to a zero emissions vehicle (ZEV) at first redesign opportunity, to comply with several States' ZEV program provisions. The new inputs also indicate if a manufacturer has entered into an agreement with California to achieve more stringent CO₂ emissions reductions targets than those promulgated in the 2020 final rule.

The following sections discuss how we built the Market Data file, including characterizing vehicles sold in MY 2020 and their technology content, and baseline safety, economic, and manufacturer compliance positions. A detailed discussion of the Market Data file development process is in TSD Chapter 2.2. NHTSA seeks comment on the below discussion and the agency's approach to developing the Market Data file for this proposal.

(a) Characterizing Vehicles and Their Technology Content

The Market Data file integrates information from many sources, including manufacturer compliance submissions, publicly available information, and confidential business information. At times, DOT must populate inputs using analyst judgment, either because information is still incomplete or confidential, or because

the information does not yet exist.⁴³ For this analysis DOT uses mid-model year 2020 compliance data as the basis of the analysis fleet. The compliance data is supplemented for each vehicle nameplate with manufacturer specification sheets, usually from the manufacturer media website, or from online marketing brochures.⁴⁴ For additional information about how specification sheets inform MY 2020 vehicle technology assignments, see the technology specific assignments sections in Section III.D.

DOT uses the mid-model year 2020 compliance data to create a row on the Vehicles worksheet in the Market Data file for each vehicle (or vehicle variant⁴⁵) that lists a certification fuel economy, sales volume, regulatory class, and footprint. DOT identifies which combination of modeled technologies reasonably represents the fuel saving technologies already on each vehicle, and assigns those technologies to each vehicle, either on the Vehicles worksheet, the Engines worksheet, or the Transmissions worksheet. The fuel saving technologies considered in this analysis are listed in Table III-1.

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⁴³ Forward looking refresh/redesign cycles are one example of when analyst judgement is necessary.

⁴⁴ The catalogue of reference specification sheets (broken down by manufacturer, by nameplate) used to populate information in the market data file is available in the docket.

⁴⁵ The market data file often includes a few rows for vehicles that may have identical certification fuel economies, regulatory classes, and footprints (with compliance sales volumes divided out among rows), because other pieces of information used in the CAFE Model may be dissimilar. For instance, in the reference materials used to create the Market Data file, for a nameplate curb weight may vary by trim level (with premium trim levels often weighing more on account of additional equipment on the vehicle), or a manufacturer may provide consumers the option to purchase a larger fuel tank size for their vehicle. These pieces of information may not impact the observed compliance position directly, but curb weight (in relation to other vehicle attributes) is important to assess mass reduction technology already used on the vehicle, and fuel tank size is directly relevant to saving time at the gas pump, which the CAFE Model uses when calculating the value of avoided time spent refueling.

⁴² The CAFE Model does not generate compliance paths a manufacturer should, must, or will deploy. It is intended as a tool to demonstrate a compliance pathway a manufacturer *could* choose. It is almost certain all manufacturers will make compliance choices differing from those projected by the CAFE Model.

Table III-1 – Fuel Saving Technologies that the CAFE Model May Apply

Technology Name	Abbreviation	Market Data File Worksheet	Technology Group
Electric Power Steering	EPS	Vehicles	Additional technologies
Improved Accessory Devices	IACC	Vehicles	Additional technologies
Start-Stop system	12VSS	Vehicles	Electrification
Belt Integrated Starter Generator	BISG	Vehicles	Electrification
Strong Hybrid Electric Vehicle, Parallel	SHEVP2	Vehicles	Electrification
Strong Hybrid Electric Vehicle, Power Split with Atkinson Engine	SHEVPS	Vehicles	Electrification
Strong Hybrid Electric Vehicle, Parallel with HCR0 Engine (Alternative path for Turbo Engine Vehicles)	P2HCR0	Vehicles	Electrification
Strong Hybrid Electric Vehicle, Parallel with HCR1 Engine (Alternative path for Turbo Engine Vehicles)	P2HCR1	Vehicles	Electrification
Strong Hybrid Electric Vehicle, Parallel with HCR1D Engine (Alternative path for Turbo Engine Vehicles)	P2HCR1D	Vehicles	Electrification

Technology Name	Abbreviation	Market Data File Worksheet	Technology Group
Strong Hybrid Electric Vehicle, Parallel with HCR2 Engine (Alternative path for Turbo Engine Vehicles)	P2HCR2	Vehicles	Electrification
Plug-in Hybrid Vehicle with Atkinson Engine and 20 miles of electric range	PHEV20	Vehicles	Electrification
Plug-in Hybrid Vehicle with Atkinson Engine and 50 miles of electric range	PHEV50	Vehicles	Electrification
Plug-in Hybrid Vehicle with TURBO1 Engine and 20 miles of electric range	PHEV20T	Vehicles	Electrification
Plug-in Hybrid Vehicle with TURBO1 Engine and 50 miles of electric range	PHEV50T	Vehicles	Electrification
Plug-in Hybrid Vehicle with Atkinson Engine and 20 miles of electric range (Alternative path for Turbo Engine Vehicles)	PHEV20H	Vehicles	Electrification
Plug-in Hybrid Vehicle with Atkinson Engine and 50 miles of electric range (Alternative path for Turbo Engine Vehicles)	PHEV50H	Vehicles	Electrification
Battery Electric Vehicle with 200 miles of range	BEV200	Vehicles	Electrification
Battery Electric Vehicle with 300 miles of range	BEV300	Vehicles	Electrification
Battery Electric Vehicle with 400 miles of range	BEV400	Vehicles	Electrification
Battery Electric Vehicle with 500 miles of range	BEV500	Vehicles	Electrification
Fuel Cell Vehicle	FCV	Vehicles	Electrification
Low Drag Brakes	LDB	Vehicles	Additional technologies
Secondary Axle Disconnect	SAX	Vehicles	Additional technologies
Baseline Tire Rolling Resistance	ROLL0	Vehicles	Rolling Resistance
Tire Rolling Resistance, 10% Improvement	ROLL10	Vehicles	Rolling Resistance
Tire Rolling Resistance, 20% Improvement	ROLL20	Vehicles	Rolling Resistance
Baseline Aerodynamic Drag Technology	AERO0	Vehicles	Aerodynamic Drag
Aerodynamic Drag, 5% Drag Coefficient Reduction	AERO5	Vehicles	Aerodynamic Drag
Aerodynamic Drag, 10% Drag Coefficient Reduction	AERO10	Vehicles	Aerodynamic Drag
Aerodynamic Drag, 15% Drag Coefficient Reduction	AERO15	Vehicles	Aerodynamic Drag
Aerodynamic Drag, 20% Drag Coefficient Reduction	AERO20	Vehicles	Aerodynamic Drag
Baseline Mass Reduction Technology	MR0	Vehicles	Mass Reduction
Mass Reduction – 5.0% of Glider	MR1	Vehicles	Mass Reduction
Mass Reduction – 7.5% of Glider	MR2	Vehicles	Mass Reduction
Mass Reduction – 10.0% of Glider	MR3	Vehicles	Mass Reduction
Mass Reduction – 15.0% of Glider	MR4	Vehicles	Mass Reduction
Mass Reduction – 20.0% of Glider	MR5	Vehicles	Mass Reduction

Technology Name	Abbreviation	Market Data File Worksheet	Technology Group
Mass Reduction – 28.2% of Glider	MR6	Vehicles	Mass Reduction
Single Overhead Cam	SOHC	Engines	Basic Engines
Dual Overhead Cam	DOHC	Engines	Basic Engines
Engine Friction Reduction	EFR	Engines	Engine Improvements
Variable Valve Timing	VVT	Engines	Basic Engines
Variable Valve Lift	VVL	Engines	Basic Engines
Stoichiometric Gasoline Direct Injection	SGDI	Engines	Basic Engines
Cylinder Deactivation	DEAC	Engines	Basic Engines
Turbocharged Engine	TURBO1	Engines	Advanced Engines
Advanced Turbocharged Engine	TURBO2	Engines	Advanced Engines
Turbocharged Engine with Cooled Exhaust Gas Recirculation	CEGR1	Engines	Advanced Engines
Advanced Cylinder Deactivation	ADEAC	Engines	Advanced Engines
High Compression Ratio Engine (Atkinson Cycle)	HCR0	Engines	Advanced Engines
Advanced High Compression Ratio Engine (Atkinson Cycle)	HCR1	Engines	Advanced Engines
Advanced High Compression Ratio Engine (Atkinson Cycle) with Cylinder Deactivation	HCR1D	Engines	Advanced Engines
EPA, 2016 Vintage Characterization High Compression Ratio Engine (Atkinson Cycle), with Cylinder Deactivation	HCR2	Engines	Advanced Engines
Variable Compression Ratio Engine	VCR	Engines	Advanced Engines
Variable Turbo Geometry Engine	VTG	Engines	Advanced Engines
Variable Turbo Geometry Engine with eBooster	VTGE	Engines	Advanced Engines
Turbocharged Engine with Cylinder Deactivation	TURBOD	Engines	Advanced Engines
Turbocharged Engine with Advanced Cylinder Deactivation	TURBOAD	Engines	Advanced Engines
Advanced Diesel Engine	ADSL	Engines	Advanced Engines
Advanced Diesel Engine with Improvements	DSLII	Engines	Advanced Engines
Advanced Diesel Engine with Improvements and Advanced Cylinder Deactivation	DSLIIAD	Engines	Advanced Engines
Compressed Natural Gas Engine	CNG	Engines	Advanced Engines

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For additional information on the characterization of these technologies (including the cost, prevalence in the 2020 fleet, effectiveness estimates, and considerations for their adoption) see the appropriate technology section in Section III.D or TSD Chapter 3.

DOT also assigns each vehicle a technology class. The CAFE Model uses the technology class (and engine class, discussed below) in the Market Data file

to reference the most relevant technology costs for each vehicle, and fuel saving technology combinations. We assign each vehicle in the fleet a technology class using a two-step algorithm that takes into account key characteristics of vehicles in the fleet compared to the baseline characteristics

of each technology class.⁴⁶ As discussed further in Section III.C.4.b), there are ten technology classes used in the CAFE analysis that span five vehicle types and two performance variants. The

⁴⁶ Baseline 0 to 60 mph accelerations times are assumed for each technology class as part of the Autonomie full vehicle simulations. DOT calculates class baseline curb weights and footprints by averaging the curb weights and footprints of vehicles within each technology class as assigned in previous analyses.

technology class algorithm and assignment process is discussed in more detail in TSD Chapter 2.4.2.

We also assign each vehicle an engine technology class so that the CAFE Model can reference the powertrain costs in the Technologies file that most reasonably align with the observed vehicle. DOT assigns engine technology classes for all vehicles, including electric vehicles. If an electric powertrain replaces an internal combustion engine, the electric motor specifications may be different (and hence costs may be different) depending on the capabilities of the internal combustion engine it is replacing, and the costs in the technologies file (on the engine tab) account for the power output and capability of the gasoline or electric drivetrain.

Parts sharing helps manufacturers achieve economies of scale, deploy capital efficiently, and make the most of shared research and development expenses, while still presenting a wide array of consumer choices to the market. The CAFE Model simulates part sharing by implementing shared engines, shared transmissions, and shared mass reduction platforms. Vehicles sharing a part (as recognized in the CAFE Model), will adopt fuel saving technologies affecting that part together. To account for parts sharing across products, vehicle model/configurations that share engines are assigned the same engine code,⁴⁷ vehicle model/configurations that share transmissions have the same transmission code, and vehicles that adopt mass reduction technologies together share the same platform. For more information about engine codes, transmission codes, and mass reduction platforms see TSD Chapter 3.

Manufacturers often introduce fuel saving technologies at a major redesign of their product or adopt technologies at minor refreshes in between major product redesigns. To support the CAFE Model accounting for new fuel saving technology introduction as it relates to product lifecycle, the Market Data file includes a projection of redesign and refresh years for each vehicle. DOT projects future redesign years and refresh years based on the historical cadence of that vehicle's product lifecycle. For new nameplates, DOT considers the manufacturer's treatment

of product lifecycles for past products in similar market segments. When considering year-by-year analysis of standards, the sizing of redesign and refresh intervals will affect projected compliance pathways and how quickly manufacturers can respond to standards. TSD Chapter 2.2.1.7 includes additional information about the product design cycles assumed for this proposal based on historical manufacturer product design cycles.

The Market Data file also includes information about air conditioning (A/C) and off-cycle technologies, but the information is not currently broken out at a row level, vehicle by vehicle.⁴⁸ Instead, historical data (and forecast projections, which are used for analysis regardless of regulatory scenario) are listed by manufacturer, by fleet on the Credits and Adjustments worksheet of the Market Data file. Section III.D.8 shows model inputs specifying estimated adjustments (all in grams/mile) for improvements to air conditioner efficiency and other off-cycle energy consumption, and for reduced leakage of air conditioner refrigerants with high global warming potential (GWP). DOT estimated future values based on an expectation that manufacturers already relying heavily on these adjustments would continue to do so, and that other manufacturers would, over time, also approach the limits on adjustments allowed for such improvements.

(b) Characterizing Baseline Safety, Economic, and Compliance Positions

In addition to characterizing vehicles and their technology content, the Market Data file contains a range of other inputs that, though not specific to individual vehicle models, may be specific to individual manufacturers, or that characterize baseline safety or economic information.

First, the CAFE Model considers the potential safety effect of mass reduction technologies and crash compatibility of different vehicle types. Mass reduction technologies lower the vehicle's curb weight, which may improve crash compatibility and safety, or not, depending on the type of vehicle. DOT assigns each vehicle in the Market Data file a safety class that best aligns with the mass-size-safety analysis. This

analysis is discussed in more detail in Section III.H of this proposal and TSD Chapter 7.

The CAFE Model also includes procedures to consider the direct labor impacts of manufacturer's response to CAFE regulations, considering the assembly location of vehicles, engines, and transmissions, the percent U.S. content (that reflects percent U.S. and Canada content),⁴⁹ and the dealership employment associated with new vehicle sales. The Market Data file therefore includes baseline labor information, by vehicle. Sales volumes also influence total estimated direct labor projections in the analysis.

We hold the percent U.S. content constant for each vehicle row for the duration of the analysis. In practice, this may not be the case. Changes to trade policy and tariff policy may affect percent U.S. content in the future. Also, some technologies may be more or less likely to be produced in the U.S., and if that is the case, their adoption could affect future U.S. content. NHTSA does not have data at this time to support varying the percent U.S. content.

We also hold the labor hours projected in the Market Data file per unit transacted at dealerships, per unit produced for final assembly, per unit produced for engine assembly, and per unit produced for transmission assembly constant for the duration of the analysis, and project that the origin of these activities to remain unchanged. In practice, it is reasonable to expect that plants could move locations, or engine and transmission technologies are replaced by another fuel saving technology (like electric motors and fixed gear boxes) that could require a meaningfully different amount of assembly labor hours. NHTSA does not have data at this time to support varying labor hours projected in the Market Data file, but we will continue to explore methods to estimate the direct labor impacts of manufacturer's responses to CAFE standards in future analyses.

As observed from Table III-2, manufacturers employ U.S. labor with varying intensity. In many cases, vehicles certifying in the light truck (LT) regulatory class have a larger percent U.S. content than vehicles certifying in the passenger car (PC) regulatory class.

⁴⁷ Engines (or transmissions) may not be exactly identical, as specifications or vehicle integration features may be different. However, the architectures are similar enough that it is likely the powertrain systems share research and development (R&D), tooling, and production resources in a meaningful way.

⁴⁸ Regulatory provisions regarding off-cycle technologies are new, and manufacturers have only recently begun including related detailed information in compliance reporting data. For this analysis, though, such information was not sufficiently complete to support a detailed representation of the application of off-cycle

technology to specific vehicle model/configurations in the MY 2020 fleet.

⁴⁹ Percent U.S. content was informed by the 2020 Part 583 American Automobile Labeling Act Reports, appearing on NHTSA's website.

Table III-2 – Sales Weighted Percent U.S. Content by Manufacturer, by Regulatory Class

Manufacturer	PC	LT	Total MY 2020 Sales Weighted Percent U.S. Content	Portion of Vehicles Assembled in the U.S.	Portion of Engines Assembled in the U.S.	Portion of Transmissions Assembled in the U.S.
BMW	7.1%	29.3%	15.4%	42.4%	0.0%	0.0%
Daimler	19.1%	36.2%	28.1%	41.2%	39.8%	0.0%
Fiat Chrysler Automobiles (FCA)	47.7%	52.9%	52.2%	68.0%	41.3%	45.7%
Ford	35.2%	47.5%	44.2%	83.4%	32.9%	88.5%
General Motors (GM)	39.8%	47.0%	44.7%	68.3%	69.8%	86.1%
Honda	55.8%	61.7%	58.3%	74.9%	85.9%	58.6%
Hyundai Kia-H	21.8%	0.0%	19.4%	46.0%	46.0%	34.3%
Hyundai Kia-K	12.8%	33.3%	20.7%	38.4%	17.2%	37.8%
JLR	2.6%	6.3%	6.2%	0.0%	0.0%	31.7%
Mazda	1.1%	1.1%	1.1%	0.0%	0.0%	0.0%
Mitsubishi	0.0%	0.3%	0.2%	0.0%	0.0%	0.0%
Nissan	29.0%	32.6%	30.1%	49.9%	47.5%	0.0%
Subaru	35.5%	22.9%	25.6%	53.2%	0.0%	0.0%
Tesla ⁵⁰	50.6%	50.0%	50.6%	100.0%	100.0%	100.0%
Toyota	35.2%	42.7%	38.7%	42.4%	46.0%	19.4%
Volvo	10.2%	1.1%	3.4%	12.4%	0.0%	0.0%
VWA	10.3%	8.8%	9.4%	13.5%	0.0%	0.0%
TOTAL	32.4%	41.2%	37.4%	57.1%	44.1%	44.1%

Next, manufacturers may over-comply with CAFE standards and bank so-called over compliance credits. As discussed further in Section III.C.7, manufacturers may use these credits later, sell them to other manufacturers, or let them expire. The CAFE Model does not explicitly trade credits between and among manufacturers, but staff have adjusted starting credit banks in the Market Data file to reflect trades that are likely to happen when the simulation begins (in MY 2020). Considering information manufacturers have reported regarding compliance credits, and considering recent manufacturers' compliance

positions, DOT estimates manufacturers' potential use of compliance credits in earlier MYs. This aligns to an extent that represents how manufacturers could deplete their credit banks rather than producing high volume vehicles with fuel saving technologies in earlier MYs. This also avoids the unrealistic application of technologies for manufacturers in early analysis years that typically rely on credits. For a complete discussion about how this data is collected and assigned in the Market Data file, see TSD Chapter 2.2.2.3.

The Market Data file also includes assumptions about a vehicle manufacturer's preferences towards civil penalty payments. EPCA requires that if a manufacturer does not achieve compliance with a CAFE standard in a

given model year and cannot apply credits sufficient to cover the compliance shortfall, the manufacturer must pay civil penalties (*i.e.*, fines) to the Federal Government. If inputs indicate that a manufacturer treats civil penalty payment as an economic choice (*i.e.*, one to be taken if doing so would be economically preferable to applying further technology toward compliance), the CAFE Model, when evaluating the manufacturer's response to CAFE standards in a given model year, will apply fuel-saving technology only up to the point beyond which doing so would be more expensive (after subtracting the value of avoided fuel outlays) than paying civil penalties.

For this analysis, DOT exercises the CAFE Model with inputs treating all manufacturers as treating civil penalty

⁵⁰ Tesla does not have internal combustion engines, or multi-speed transmissions, even though they are identified as producing engine and transmission systems in the United States in the Market Data file.

payment as an economic choice through model year 2023. While DOT expects that only manufacturers with some history of paying civil penalties would actually treat civil penalty payment as an acceptable option, the CAFE Model does not currently simulate compliance credit trading between manufacturers, and DOT expects that this treatment of civil penalty payment will serve as a reasonable proxy for compliance credit purchases some manufacturers might actually make through model year 2023. These input assumptions for model years through 2023 reduce the potential that the model will overestimate technology application in the model years leading up to those for which the agency is proposing new standards. As in past CAFE rulemaking analyses (except that supporting the 2020 final rule), DOT has treated manufacturers with some history of civil penalty payment (*i.e.*, BMW, Daimler, FCA, Jaguar-Land Rover, Volvo, and Volkswagen) as continuing to treat civil penalty payment as an acceptable option beyond model year 2023, but has treated all other manufacturers as unwilling to do so beyond model year 2023.

Next, the CAFE Model uses an “effective cost” metric to evaluate options to apply specific technologies to specific engines, transmissions, and vehicle model configurations. Expressed on a \$/gallon basis, the analysis computes this metric by subtracting the estimated values of avoided fuel outlays and civil penalties from the corresponding technology costs, and then dividing the result by the quantity of avoided fuel consumption. The analysis computes the value of fuel outlays over a “payback period” representing the manufacturer’s expectation that the market will be willing to pay for some portion of fuel savings achieved through higher fuel economy. Once the model has applied enough technology to a manufacturer’s fleet to achieve compliance with CAFE standards (and CO₂ standards and ZEV mandates) in a given model year, the model will apply any further fuel economy improvements estimated to produce a negative effective cost (*i.e.*, any technology applications for which avoided fuel outlays during the payback period are larger than the corresponding technology costs). As discussed above in Section III.A and below in Section III.C, DOT anticipates that manufacturers are likely to act as if the market is willing to pay for avoided fuel outlays expected during the first 30 months of vehicle operation.

We seek comment on whether this expectation is appropriate, or whether

some other amount of time should be used. If commenters believe a different amount of time should be used for the payback assumption, it would be most helpful if commenters could define the amount of time, provide an explanation of why that amount of time is preferable, provide any data or information on which the amount of time is based, and provide any discussion of how changing this assumption would interact with other elements in the analysis.

In addition, the Market Data file includes two new sets of inputs for this analysis. In 2020, five vehicle manufacturers reached a voluntary commitment with the state of California to improve the fuel economy of their future nationwide fleets above levels required by the 2020 final rule. For this analysis, compliance with this agreement is in the baseline case for designated manufacturers. The Market Data file contains inputs indicating whether each manufacturer has committed to exceed Federal requirements per this agreement.

Finally, when considering other standards that may affect fuel economy compliance pathways, DOT includes projected zero emissions vehicles (ZEV) that would be required for manufacturers to meet standards in California and Section 177 States, per the waiver granted under the Clean Air Act. To support the inclusion of the ZEV program in the analysis, DOT identifies specific vehicle model/configurations that could adopt BEV technology in response to the ZEV program, independent of CAFE standards, at the first redesign opportunity. These ZEVs are identified in the Market Data file as future BEV200s, BEV300s, or BEV400s. Not all announced BEV nameplates appear in the MY 2020 Market Data file; in these cases, in consultation with CARB, DOT used the volume from a comparable vehicle in the manufacturer’s Market Data file portfolio as a proxy. The Market Data file also includes information about the portion of each manufacturer’s sales that occur in California and Section 177 states, which is helpful for determining how many ZEV credits each manufacturer will need to generate in the future to comply with the ZEV program with their own portfolio in the rulemaking timeframe. These new procedures are described in detail below and in TSD Chapter 2.3.

3. Simulating the Zero Emissions Vehicle Program

California’s Zero Emissions Vehicle (ZEV) program is one part of a program of coordinated standards that the

California Air Resources Board (CARB) has enacted to control emissions of criteria pollutants and greenhouse gas emissions from vehicles. The program began in 1990, within the low-emission vehicle (LEV) regulation,⁵¹ and has since expanded to include eleven other states.⁵² These states may be referred to as Section 177 states, in reference to Section 177 of the Clean Air Act’s grant of authority to allow these states to adopt California’s air quality standards,⁵³ but it is important to note that not all Section 177 states have adopted the ZEV program component.⁵⁴ In the following discussion of the incorporation of the ZEV program into the CAFE Model, any reference to the Section 177 states refers to those states that have adopted California’s ZEV program requirements.

To account for the ZEV program, and particularly as other states have recently adopted California’s ZEV standards, DOT includes the main provisions of the ZEV program in the CAFE Model’s analysis of compliance pathways. As explained below, incorporating the ZEV program into the model includes converting vehicles that have been identified as potential ZEV candidates into battery-electric vehicles (BEVs) at the first redesign opportunity, so that a manufacturer’s fleet meets calculated ZEV credit requirements. Since ZEV program compliance pathways happen independently from the adoption of fuel saving technology in response to increasing CAFE standards, the ZEV program is considered in the baseline of the analysis, and in all other regulatory alternatives.

Through its ZEV program, California requires that all manufacturers that sell cars within the state meet ZEV credit standards. The current credit requirements are calculated based on manufacturers’ California sales volumes. Manufacturers primarily earn ZEV credits through the production of BEVs, fuel cell vehicles (FCVs), and

⁵¹ California Air Resource Board (CARB), Zero-Emission Vehicle Program. California Air Resources Board. Accessed April 12, 2021. <https://ww2.arb.ca.gov/our-work/programs/zero-emission-vehicle-program/about>.

⁵² At the time of writing, the Section 177 states that have adopted the ZEV program are Colorado, Connecticut, Maine, Maryland, Massachusetts, New Jersey, New York, Oregon, Rhode Island, Vermont, and Washington. See Vermont Department of Environmental Conservation, Zero Emission Vehicles. Accessed April 12, 2021. <https://dec.vermont.gov/air-quality/mobile-sources/zev#:~:text=To%20date%2C%2012%20states%20have,ZEVs%20over%20the%20next%20decade>.

⁵³ Section 177 of the Clean Air Act allows other states to adopt California’s air quality standards.

⁵⁴ At the time of writing, Delaware and Pennsylvania are the two states that have adopted the LEV standards, but not the ZEV portion.

transitional zero-emissions vehicles (TZEVs), which are vehicles with partial electrification, namely plug-in hybrids (PHEVs). Total credits are calculated by multiplying the credit value each ZEV receives by the vehicle's volume.

The ZEV and PHEV/TZEV credit value per vehicle is calculated based on the vehicle's range; ZEVs may earn up to 4 credits each and PHEVs with a US06 all-electric range capability of 10 mi or higher receive an additional 0.2 credits on top of the credits received based on all-electric range.⁵⁵ The maximum PHEV credit amount available per vehicle is 1.10.⁵⁶ Note however that CARB only allows intermediate-volume manufacturers to meet their ZEV credit requirements through PHEV production.⁵⁷

DOT's method for simulating the ZEV program involves several steps; first, DOT calculates an approximate ZEV credit target for each manufacturer based on the manufacturer's national sales volumes, share of sales in Section 177 states, and the CARB credit requirements. Next, DOT identifies a general pathway to compliance that involves accounting for manufacturers' potential use of ZEV overcompliance credits or other credit mechanisms, and the likelihood that manufacturers would choose to comply with the requirements with BEVs rather than PHEVs or other types of compliant vehicles, in addition to other factors. For this analysis, as discussed further below, DOT consulted with CARB to determine reasonable assumptions for this compliance pathway. Finally, DOT identifies vehicles in the MY 2020 analysis fleet that manufacturers could reasonably adapt to comply with the ZEV standards at the first opportunity for vehicle redesign, based on publicly announced product plans and other information. Each of these steps is discussed in turn, below, and a more detailed description of DOT's simulation of the ZEV program is included in TSD Chapter 2.3.

The CAFE Model is designed to present outcomes at a national scale, so the ZEV analysis considers the Section 177 states as a group as opposed to estimating each state's ZEV credit requirements individually. To capture the appropriate volumes subject to the ZEV requirement, DOT calculates each manufacturer's total market share in Section 177 states. DOT also calculates

the overall market share of ZEVs in Section 177 states, in order to estimate as closely as possible the number of predicted ZEVs we expect all manufacturers to sell in those states. These shares are then used to scale down national-level information in the CAFE Model to ensure that we represent only Section 177 states in the final calculation of ZEV credits that we project each manufacturer to earn in future years.

DOT uses model year 2019 National Vehicle Population Profile (NVPP) from IHS Markit—Polk to calculate these percentages.⁵⁸ These data include vehicle characteristics such as powertrain, fuel type, manufacturer, nameplate, and trim level, as well as the state in which each vehicle is sold, which allows staff to identify the different types of ZEVs manufacturers sell in the Section 177 state group. DOT may make use of future Polk data in updating the analysis for the final rule and may include other states that join the ZEV program after the publication of this proposal, if necessary.

We calculate sales volumes for the ZEV credit requirement based on each manufacturer's future assumed market share in Section 177 states. DOT decided to carry each manufacturer's ZEV market shares forward to future years, after examination of past market share data from model year 2016, from the 2017 version of the NVPP.⁵⁹ Comparison of these data to the 2020 version showed that manufacturers' market shares remain fairly constant in terms of geographic distribution. Therefore, we determined that it was reasonable to carry forward the recently calculated market shares to future years.

We calculate total credits required for ZEV compliance by multiplying the percentages from CARB's ZEV requirement schedule by the Section 177 state volumes. CARB's credit percentage requirement schedule for the years covered in this analysis begins at 9.5% in 2020 and ramps up in increments to 22% by 2025.⁶⁰ Note that the requirements do not currently change after 2025.⁶¹

We generate national sales volume predictions for future years using the

Compliance Report, a CAFE Model output file that includes simulated sales by manufacturer, fleet, and model year. We use a Compliance Report that corresponds to the baseline scenario of 1.5% per year increases in standards for both passenger car and light truck fleets. The resulting national sales volume predictions by manufacturer are then multiplied by each manufacturer's total market share in the Section 177 states to capture the appropriate volumes in the ZEV credits calculation. Required credits by manufacturer, per year, are determined by multiplying the Section 177 state volumes by CARB's ZEV credit percentage requirement. These required credits are subsequently added to the CAFE Model inputs as targets for manufacturer compliance with ZEV standards in the CAFE baseline.

The estimated ZEV credit requirements serve as a target for simulating ZEV compliance in the baseline. To achieve this, DOT determines a modeling philosophy for ZEV pathways, reviews various sources for information regarding upcoming ZEV programs, and inserts those programs into the analysis fleet inputs. As manufacturers can meet ZEV standards in a variety of different ways, using various technology combinations, the analysis must include certain simplifying assumptions in choosing ZEV pathways. We made these assumptions in conjunction with guidance from CARB staff. The following sections discuss the approach used to simulate a pathway to ZEV program compliance in this analysis.

First, DOT targeted 2025 compliance, as opposed to assuming manufacturers would perfectly comply with their credit requirements in each year prior to 2025. This simplifying assumption was made upon review of past history of ZEV credit transfers, existing ZEV credit banks, and redesign schedules. DOT focused on integrating ZEV technology throughout that timeline with the target of meeting 2025 obligations; thus, some manufacturers are estimated to over-comply or under-comply, depending on their individual situations, in the years 2021–2024.

Second, DOT determined that the most reasonable way to model ZEV compliance would be to allow under-compliance in certain cases and assume that some manufacturers would not meet their ZEV obligation on their own in 2025. Instead, these manufacturers were assumed to prefer to purchase credits from another manufacturer with a credit surplus. Reviews of past ZEV credit transfers between manufacturers informed the decision to make this

⁵⁵ US06 is one of the drive cycles used to test fuel economy and all-electric range, specifically for the simulation of aggressive driving. See Dynamometer Drive Schedules | Vehicle and Fuel Emissions Testing | U.S. EPA for more information, as well as Section III.C.4 and Section III.D.3.d).

⁵⁶ 13 CCR 1962.2(c)(3).

⁵⁷ 13 CCR 1962.2(c)(3).

⁵⁸ National Vehicle Population Profile (NVPP) 2020, IHS Markit—Polk. At the time of the analysis, model year 2019 data from the NVPP contained the most current estimate of market shares by manufacturer, and best represented the registered vehicle population on January 1, 2020.

⁵⁹ National Vehicle Population Profile (NVPP) 2017, IHS Markit—Polk.

⁶⁰ See 13 CCR 1962.2(b). The percentage credit requirements are as follows: 9.5% in 2020, 12% in 2021, 14.5% in 2022, 17% in 2023, 19.5% in 2024, and 22% in 2025 and onward.

⁶¹ 13 CCR 1962.2(b).

simplifying assumption.⁶² CARB advised that for these manufacturers, the CAFE Model should still project that each manufacturer meet approximately 80% of their ZEV requirements with technology included in their own portfolio. Manufacturers that were observed to have generated many ZEV credits in the past or had announced major upcoming BEV initiatives were projected to meet 100% of their ZEV requirements on their own, without purchasing ZEV credits from other manufacturers.⁶³

Third, DOT agreed that manufacturers would meet their ZEV credit requirements in 2025 though the production of BEVs. As discussed above, manufacturers may choose to build PHEVs or FCVs to earn some portion of their required ZEV credits. However, DOT projected that manufacturers would rely on BEVs to meet their credit requirements, based on reviews of press releases and industry news, as well as discussion with CARB. Since nearly all manufacturers have announced some plans to produce BEVs at a scale meaningful to future ZEV requirements, DOT agreed that this was a reasonable assumption.⁶⁴ Furthermore, as CARB only allows intermediate-volume manufacturers to meet their ZEV credit requirements through the production of PHEVs, and the volume status of these few manufacturers could change over the years, assuming BEV production for ZEV compliance is the most straightforward path.

Fourth, to account for the new BEV programs announced by some manufacturers, DOT identified vehicles in the 2020 fleet that closely matched the upcoming BEVs, by regulatory class, market segment, and redesign schedule. DOT made an effort to distribute ZEV candidate vehicles by CAFE regulatory class (light truck, passenger car), by manufacturer, in a manner consistent with the 2020 manufacturer fleet mix. Since passenger car and light truck mixes by manufacturer could change in response to the CAFE policy alternative under consideration, this effort was deemed necessary in order to avoid redistributing the fleet mix in an

unrealistic manner. However, there were some exceptions to this assumption, as some manufacturers are already closer to meeting their ZEV obligation through 2025 with BEVs currently produced, and some manufacturers underperform their compliance targets more so in one fleet than another. In these cases, DOT deviated from keeping the LT/PC mix of BEVs evenly distributed across the manufacturer's portfolio.⁶⁵

DOT then identified future ZEV programs that could plausibly contribute towards the ZEV requirements for each manufacturer by 2025. To obtain this information, DOT examined various sources, including trade press releases, industry announcements, and investor reports. In many cases, these BEV programs are in addition to programs already in production.⁶⁶ Some manufacturers have not yet released details of future electric vehicle programs at the time of writing, but have indicated goals of reaching certain percentages of electric vehicles in their portfolios by a specified year. In these cases, DOT reviewed the manufacturer's current fleet characteristics as well as the aspirational information in press releases and other news in order to make reasonable assumptions about the vehicle segment and range of those future BEVs. DOT may reassign some manufacturer's ZEV programs in the analysis fleet for the final rule based on stakeholder comments or other public information releases that occur in time for the final rule analysis.

Overall, analysts assumed that manufacturers would lean towards producing BEV300s rather than BEV200s, based on the information reviewed and an initial conversation with CARB.⁶⁷ Phase-in caps were also considered, especially for BEV200, with the understanding that the CAFE Model will always pick BEV200 before BEV300 or BEV400, until the quantity of BEV200s is exhausted. See Section III.D.3.c) for details regarding BEV phase-in caps.

BEVs, especially BEVs with smaller battery packs and less range, are less likely to meet all the performance needs of traditional pickup truck owners today. However, new markets for BEVs may emerge, potentially in the form of

electric delivery trucks and some light-duty electric truck applications in state and local government. The extent to which BEVs will be used in these and other new markets is difficult to project. DOT did identify certain trucks as upcoming BEVs for ZEV compliance, and these BEVs were expected to have higher ranges, due to the specific performance needs associated with these vehicles. Outside of the ZEV inputs described here, the CAFE Model does not handle the application of BEV technology with any special considerations as to whether the vehicle is a pickup truck or not. Comments from manufacturers are solicited on this issue.

Finally, in order to simulate manufacturers' compliance with their particular ZEV credits target, 142 rows in the analysis fleet were identified as substitutes for future ZEV programs. As discussed above, the analysis fleet summarizes the roughly 13.6 million light-duty vehicles produced and sold in the United States in the 2020 model year with more than 3,500 rows, each reflecting information for one vehicle type observed. Each row includes the vehicle's nameplate and trim level, the sales volume, engine, transmission, drive configuration, regulatory class, projected redesign schedule, and fuel saving technologies, among other attributes.

As the goal of the ZEV analysis is to simulate compliance with the ZEV program in the baseline, and the analysis fleet only contains vehicles produced during model year 2020, DOT identified existing models in the analysis fleet that shared certain characteristics with upcoming BEVs. DOT also focused on identifying substitute vehicles with redesign years similar to the future BEV's introduction year. The sales volumes of those existing models, as predicted for 2025, were then used to simulate production of the upcoming BEVs. DOT identified a combination of rows that would meet the ZEV target, could contribute productively towards CAFE program obligations (by manufacturer and by fleet), and would introduce BEVs in each manufacturer's portfolio in a way that reasonably aligned with projections and announcements. DOT tagged each of these rows with information in the Market Data file, instructing the CAFE Model to apply the specified BEV technology to the row at the first redesign year, regardless of the scenario or type of CAFE or GHG simulation.

The CAFE Model does not optimize compliance with the ZEV mandate; it relies upon the inputs described in this section in order to estimate each

⁶² See <https://ww2.arb.ca.gov/our/work/programs/advanced-clean-cars-program/zev-program-zero-emission-vehicle-credit-balances> for past credit balances and transfer information.

⁶³ The following manufacturers were assumed to meet 100% ZEV compliance: Ford, General Motors, Hyundai, Kia, Jaguar Land Rover, and Volkswagen Automotive. Tesla was also assumed to meet 100% of its required standards, but the analyst team did not need to add additional ZEV substitutes to the baseline for this manufacturer.

⁶⁴ See TSD Chapter 2.3 for a list of potential BEV programs recently announced by manufacturers.

⁶⁵ The GM light truck and passenger car distribution is one such example.

⁶⁶ Examples of BEV programs already in production include the Nissan Leaf and the Chevrolet Bolt.

⁶⁷ BEV300s are 300-mile range battery-electric vehicles. See Section III.D.3.b) for further information regarding electrification fleet assignments.

manufacturer's resulting ZEV credits. The resulting amount of ZEV credits earned by manufacturer for each model year can be found in the CAFE Model's Compliance file.

Not all ZEV-qualifying vehicles in the U.S. earn ZEV credits, as they are not all sold in states that have adopted ZEV regulations. In order to reflect this in the CAFE Model, which only estimates sales volumes at the national level, the percentages calculated for each manufacturer are used to scale down the national-level volumes. Multiplying national-level ZEV sales volumes by these percentages ensures that only the ZEVs sold in Section 177 states count towards the ZEV credit targets of each manufacturer.⁶⁸ See Section 5.8 of the CAFE Model Documentation for a detailed description of how the model applied these ZEV technologies and any changes made to the model's programming for the incorporation of the ZEV program into the baseline.

As discussed above, DOT made an effort to distribute the newly identified ZEV candidates between CAFE regulatory classes (light truck and passenger car) in a manner consistent with the proportions seen in the 2020 analysis fleet, by manufacturer. As mentioned previously, there were a few exceptions to this assumption in cases where manufacturers' regulatory class distribution of current or planned ZEV programs clearly differed from their regulatory class distribution as a whole.

In some instances, the regulatory distribution of flagged ZEV candidates leaned towards a higher portion of PCs. The reasoning behind this differs in each case, but there is an observed pattern in the 2020 analysis fleet of fewer BEVs being light trucks, especially pickups. The 2020 analysis fleet contains no BEV pickups in the light truck segment. The slow emergence of electric pickups could be linked to the specific performance needs associated with pickup trucks. However, the market for BEVs may emerge in unexpected ways that are difficult to project. Examples of this include anticipated electric delivery trucks and light-duty electric trucks used by state and local governments. Due to these considerations, DOT tagged some trucks as BEVs for ZEV, and expected that

⁶⁸The single exception to this assumption is Mazda, as Mazda has not yet produced any ZEV-qualifying vehicles at the time of writing. Thus, the percentage of ZEVs sold in Section 177 states cannot be calculated from existing data. However, Mazda has indicated its intention to produce ZEV-qualifying vehicles in the future, so DOT assumed that 100% of future ZEVs would be sold in Section 177 states for the purposes of estimating ZEV credits in the CAFE Model.

these would generally be of higher ranges.

TSD Chapter 2.3 includes more information about the process we use to simulate ZEV program compliance in this analysis.

4. Technology Effectiveness Values

The next input we use to simulate manufacturers' decision-making processes for the year-by-year application of technologies to specific vehicles are estimates of how effective each technology would be at reducing fuel consumption. For this analysis, we use full-vehicle modeling and simulation to estimate the fuel economy improvements manufacturers could make to a fleet of vehicles, considering the vehicles' technical specifications and how combinations of technologies interact. Full-vehicle modeling and simulation uses physics-based models to predict how combinations of technologies perform as a full system under defined conditions. We use full vehicle simulations performed in Autonomie, a physics-based full-vehicle modeling and simulation software developed and maintained by the U.S. Department of Energy's Argonne National Laboratory.⁶⁹

A model is a mathematical representation of a system, and simulation is the behavior of that mathematical representation over time. In this analysis, the model is a mathematical representation of an entire vehicle,⁷⁰ including its individual components such as the engine and transmission, overall vehicle characteristics such as mass and aerodynamic drag, and the environmental conditions, such as ambient temperature and barometric pressure. We simulate the model's behavior over test cycles, including the 2-cycle laboratory compliance tests (or 2-cycle tests),⁷¹ to determine how the individual components interact.

⁶⁹Islam, E. S., A. Moawad, N. Kim, R. Vijayagopal, and A. Rousseau. *A Detailed Vehicle Simulation Process to Support CAFE Standards for the MY 2024–2026 Analysis*. ANL/ESD–21/9 [hereinafter Autonomie model documentation].

⁷⁰Each full vehicle model in this analysis is composed of sub-models, which is why the full vehicle model could also be referred to as a full system model, composed of sub-system models.

⁷¹EPA's compliance test cycles are used to measure the fuel economy of a vehicle. For readers unfamiliar with this process, it is like running a car on a treadmill following a program—or more specifically, two programs. The "programs" are the "urban cycle," or Federal Test Procedure (abbreviated as "FTP"), and the "highway cycle," or Highway Fuel Economy Test (abbreviated as "HFET" or "HWFET"), and they have not changed substantively since 1975. Each cycle is a designated speed trace (of vehicle speed versus time) that all certified vehicles must follow during testing. The FTP is meant roughly to simulate stop and go city

Using full-vehicle modeling and simulation to estimate technology efficiency improvements has two primary advantages over using single or limited point estimates. An analysis using single or limited point estimates may assume that, for example, one fuel economy-improving technology with an effectiveness value of 5 percent by itself and another technology with an effectiveness value of 10 percent by itself, when applied together achieve an additive improvement of 15 percent. Single point estimates generally do not provide accurate effectiveness values because they do not capture complex relationships among technologies. Technology effectiveness often differs significantly depending on the vehicle type (e.g., sedan versus pickup truck) and the way in which the technology interacts with other technologies on the vehicle, as different technologies may provide different incremental levels of fuel economy improvement if implemented alone or in combination with other technologies. Any oversimplification of these complex interactions leads to less accurate and often overestimated effectiveness estimates.

In addition, because manufacturers often implement several fuel-saving technologies simultaneously when redesigning a vehicle, it is difficult to isolate the effect of individual technologies using laboratory measurement of production vehicles alone. Modeling and simulation offer the opportunity to isolate the effects of individual technologies by using a single or small number of baseline vehicle configurations and incrementally adding technologies to those baseline configurations. This provides a consistent reference point for the incremental effectiveness estimates for each technology and for combinations of technologies for each vehicle type. Vehicle modeling also reduces the potential for overcounting or undercounting technology effectiveness.

An important feature of this analysis is that the incremental effectiveness of each technology and combinations of technologies should be accurate and relative to a consistent baseline vehicle. For this analysis, the baseline absolute fuel economy value for each vehicle in the analysis fleet is based on CAFE compliance data for each make and model.⁷² The absolute fuel economy values of the full vehicle simulations are

driving, and the HFET is meant roughly to simulate steady flowing highway driving at about 50 mph.

⁷²See Section III.C.2 for further discussion of CAFE compliance data in the Market Data file.

used only to determine incremental effectiveness and are never used directly to assign an absolute fuel economy value to any vehicle model or configuration. For subsequent technology changes, we apply the incremental effectiveness values of one or more technologies to the baseline fuel economy value to determine the absolute fuel economy achieved for applying the technology change.

As an example, if a Ford F-150 2-wheel drive crew cab and short bed in the analysis fleet has a fuel economy value of 30 mpg for CAFE compliance, 30 mpg will be considered the reference absolute fuel economy value. A similar full vehicle model node in the Autonomie simulation may begin with an average fuel economy value of 32 mpg, and with incremental addition of a specific technology X its fuel economy improves to 35 mpg, a 9.3 percent improvement. In this example, the incremental fuel economy improvement (9.3 percent) from technology X would be applied to the F-150's 30 mpg absolute value.

We determine the incremental effectiveness of technologies as applied to the thousands of unique vehicle and technology combinations in the analysis fleet. Although, as mentioned above, full-vehicle modeling and simulation reduces the work and time required to assess the impact of moving a vehicle from one technology state to another, it would be impractical—if not impossible—to build a unique vehicle model for every individual vehicle in the analysis fleet. Therefore, as discussed in the following sections, the Autonomie analysis relies on ten vehicle technology class models that are representative of large portions of the analysis fleet vehicles. The vehicle technology classes ensure that key vehicle characteristics are reasonably represented in the full vehicle models. The next sections discuss the details of the technology effectiveness analysis input specifications and assumptions. NHTSA seeks comment on the following discussion.

(a) Full Vehicle Modeling and Simulation

As discussed above, for this analysis we use Argonne's full vehicle modeling tool, Autonomie, to build vehicle models with different technology combinations and simulate the performance of those models over regulatory test cycles. The difference in the simulated performance between full vehicle models, with differing technology combination, is used to determine effectiveness values. We consider over 50 individual

technologies as inputs to the Autonomie modeling.⁷³ These inputs consist of engine technologies, transmission technologies, powertrain electrification, lightweighting, aerodynamic improvements, and tire rolling resistance improvements. Section III.D broadly discusses each of the technology groupings definitions, inputs, and assumptions. A deeper discussion of the Autonomie modeled subsystems, and how inputs feed the sub models resulting in outputs, is contained in the Autonomie model documentation that accompanies this analysis. The 50 individual technologies, when considered with the ten vehicle technology classes, result in over 1.1 million individual vehicle technology combination models. For additional discussion on the full vehicle modeling used in this analysis see TSD Chapter 2.

While Argonne built full-vehicle models and ran simulations for many combinations of technologies, it did not simulate literally every single vehicle model/configuration in the analysis fleet. Not only would it be impractical to assemble the requisite detailed information specific to each vehicle/model configuration, much of which would likely only be provided on a confidential basis, doing so would increase the scale of the simulation effort by orders of magnitude. Instead, Argonne simulated ten different vehicle types, corresponding to the five "technology classes" generally used in CAFE analysis over the past several rulemakings, each with two performance levels and corresponding vehicle technical specifications (*e.g.*, small car, small performance car, pickup truck, performance pickup truck, etc.).

Technology classes are a means of specifying common technology input assumptions for vehicles that share similar characteristics. Because each vehicle technology class has unique characteristics, the effectiveness of technologies and combinations of technologies is different for each technology class. Conducting Autonomie simulations uniquely for each technology class provides a specific set of simulations and effectiveness data for each technology class. In this analysis the technology classes are compact cars, midsize cars, small SUVs, large SUVs, and pickup trucks. In addition, for each vehicle class there are two levels of performance attributes (for a total of 10 technology

classes). The high performance and low performance vehicles classifications allow for better diversity in estimating technology effectiveness across the fleet.

For additional discussion on the development of the vehicle technology classes used in this analysis and the attributes used to characterize each vehicle technology class, see TSD Chapter 2.4 and the Autonomie model documentation.

Before any simulation is initiated in Autonomie, Argonne must "build" a vehicle by assigning reference technologies and initial attributes to the components of the vehicle model representing each technology class. The reference technologies are baseline technologies that represent the first step on each technology pathway used in the analysis. For example, a compact car is built by assigning it a baseline engine (DOHC, VVT, port fuel injection (PFI)), a baseline transmission (AT5), a baseline level of aerodynamic improvement (AERO0), a baseline level of rolling resistance improvement (ROLL0), a baseline level of mass reduction technology (MR0), and corresponding attributes from the Argonne vehicle assumptions database like individual component weights. A baseline vehicle will have a unique starting point for the simulation and a unique set of assigned inputs and attributes, based on its technology class. Argonne collected over a hundred baseline vehicle attributes to build the baseline vehicle for each technology class. In addition, to account for the weight of different engine sizes, like 4-cylinder versus 8-cylinder or turbocharged versus naturally aspirated engines, Argonne developed a relationship curve between peak power and engine weight based on the A2Mac1 benchmarking data. Argonne uses the developed relationship to estimate mass for all engines. For additional discussion on the development and optimization of the baseline vehicle models and the baseline attributes used in this analysis see TSD Chapter 2.4 and the Autonomie model documentation.

The next step in the process is to run a powertrain sizing algorithm that ensures the built vehicle meets or exceeds defined performance metrics, including low-speed acceleration (time required to accelerate from 0–60 mph), high-speed passing acceleration (time required to accelerate from 50–80 mph), gradeability (the ability of the vehicle to maintain constant 65 miles per hour speed on a six percent upgrade), and towing capacity. Together, these performance criteria are widely used by the automotive industry as metrics to quantify vehicle performance attributes

⁷³ See Autonomie model documentation; ANL—All Assumptions_Summary_NPRM_022021.xlsx; ANL—Data Dictionary_January 2021.xlsx.

that consumers observe and that are important for vehicle utility and customer satisfaction.

As with conventional vehicle models, electrified vehicle models were also built from the ground up. For MY 2020, the U.S. market has an expanded number of available hybrid and electric vehicle models. To capture improvements for electrified vehicles for this analysis, DOT applied a mass regression analysis process that considers electric motor weight versus electric motor power (similar to the regression analysis for internal combustion engine weights) for vehicle models that have adopted electric motors. Benchmarking data for hybrid and electric vehicles from the A2Mac1 database were analyzed to develop a regression curve of electric motor peak power versus electric motor weight.⁷⁴

We maintain performance neutrality in the full vehicle simulations by resizing engines, electric machines, and hybrid electric vehicle battery packs at specific incremental technology steps. To address product complexity and economies of scale, engine resizing is limited to specific incremental technology changes that would typically be associated with a major vehicle or engine redesign. This is intended to reflect manufacturers' comments to DOT on how they consider engine resizing and product complexity, and DOT's observations on industry product complexity. A detailed discussion on powertrain sizing can be found in TSD Chapter 2.4 and in the Autonomie model documentation.

After all vehicle class and technology combination models have been built, Autonomie simulates the vehicles' performance on test cycles to calculate the effectiveness improvement of adding fuel-economy-improving technologies to the vehicle. Simulating vehicles' performance using tests and procedures specified by Federal law and regulations minimizes the potential variation in determining technology effectiveness.

For vehicles with conventional powertrains and micro hybrids, Autonomie simulates the vehicles per EPA 2-cycle test procedures and guidelines.⁷⁵ For mild and full hybrid electric vehicles and FCVs, Autonomie simulates the vehicles using the same EPA 2-cycle test procedure and guidelines, and the drive cycles are repeated until the initial and final state of charge are within a SAE J1711 tolerance. For PHEVs, Autonomie simulates vehicles per similar

procedures and guidelines as prescribed in SAE J1711.⁷⁶ For BEVs Autonomie simulates vehicles per similar procedures and guidelines as prescribed in SAE J1634.⁷⁷

(b) Performance Neutrality

The purpose of the CAFE analysis is to examine the impact of technology application that can improve fuel economy. When the fuel economy-improving technology is applied, often the manufacturer must choose how the technology will affect the vehicle. The advantages of the new technology can either be completely applied to improving fuel economy or be used to increase vehicle performance while maintaining the existing fuel economy, or some mix of the two effects. Historically, vehicle performance has improved over the years as more technology is applied to the fleet. The average horsepower is the highest that it has ever been; all vehicle types have improved horsepower by at least 42 percent compared to the 1978 model year, and pickup trucks have improved by 48 percent.⁷⁸ Fuel economy has also improved, but the horsepower and acceleration trends show that not 100 percent of technological improvements have been applied to fuel savings. While future trends are uncertain, the past trends suggest vehicle performance is unlikely to *decrease*, as it seems reasonable to assume that customers will, at a minimum, demand vehicles that offer the same utility as today's fleet.

For this rulemaking analysis, DOT analyzed technology pathways manufacturers could use for compliance that attempt to maintain vehicle attributes, utility, and performance. Using this approach allows DOT to assess the costs and benefits of potential standards under a scenario where consumers continue to get the similar vehicle attributes and features, other than changes in fuel economy. The purpose of constraining vehicle attributes is to simplify the analysis and reduce variance in other attributes that consumers may value across the analyzed regulatory alternatives. This allows for a streamlined accounting of costs and benefits by not requiring the

⁷⁶ PHEV testing is broken into several phases based on SAE J1711: Charge-sustaining on the city cycle and HWFET cycle, and charge-depleting on the city and HWFET cycles.

⁷⁷ SAE J1634. "Battery Electric Vehicle Energy Consumption and Range Test Procedure." July 12, 2017.

⁷⁸ "The 2020 EPA Automotive Trends Report, Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975," EPA-420-R-21-003, January 2021 [hereinafter 2020 EPA Automotive Trends Report].

values of other vehicle attributes that trade off with fuel economy.

To confirm minimal differences in performance metrics across regulatory alternatives, DOT analyzed the sales-weighted average 0–60 mph acceleration performance of the entire simulated vehicle fleet for MYs 2020 and 2029. The analysis compared performance under the baseline standards and preferred alternative. This analysis identified that the analysis fleet under no action standards in MY 2029 had a 0.77 percent worse 0–60 mph acceleration time than under the preferred alternative, indicating there is minimal difference in performance between the alternatives. This assessment shows that for this analysis, the performance difference is minimal across regulatory alternatives and across the simulated model years, which allows for fair, direct comparison among the alternatives. Further details about this assessment can be found in TSD Chapter 2.4.5.

(c) Implementation in the CAFE Model

The CAFE Model uses two elements of information from the large amount of data generated by the Autonomie simulation runs: Battery costs, and fuel consumption on the city and highway cycles. DOT combines the fuel economy information from the two cycles to produce a composite fuel economy for each vehicle, and for each fuel used in dual fuel vehicles. The fuel economy information for each simulation run is converted into a single value for use in the CAFE Model.

In addition to the technologies in the Autonomie simulation, the CAFE Model also incorporated a handful of technologies not explicitly simulated in Autonomie. These technologies' performance either could not be captured on the 2-cycle test, or there was no robust data usable as an input for full-vehicle modeling and simulation. The specific technologies are discussed in the individual technology sections below and in TSD Chapter 3. To calculate fuel economy improvements attributable to these additional technologies, estimates of fuel consumption improvement factors were developed and scale multiplicatively when applied together. See TSD Chapter 3 for a complete discussion on how these factors were developed. The Autonomie-simulated results and additional technologies are combined, forming a single dataset used by the CAFE Model.

Each line in the CAFE Model dataset represents a unique combination of technologies. DOT organizes the records using a unique technology state vector,

⁷⁴ See Autonomie model documentation, Chapter 5.2.10 Electric Machines System Weight.

⁷⁵ 40 CFR part 600.

or technology key (tech key), that describes the technology content associated with each unique record. The modeled 2-cycle fuel economy (miles per gallon) of each combination is converted into fuel consumption (gallons per mile) and then normalized relative to a baseline tech key. The improvement factors used by the model are a given combination's fuel consumption improvement relative to the baseline tech key in its technology class.

The tech key format was developed by recognizing that most of the technology pathways are unrelated and are only logically linked to designate the direction in which technologies are allowed to progress. As a result, it is possible to condense the paths into groups based on the specific technology. These groups are used to define the technology vector, or tech key. The following technology groups defined the tech key: Engine cam configuration (CONFIG), VVT engine technology (VVT), VVL engine technology (VVL), SGDI engine technology (SGDI), DEAC engine technology (DEAC), non-basic engine technologies (ADVENG), transmission technologies (TRANS), electrification and hybridization (ELEC), low rolling resistance tires (ROLL), aerodynamic improvements (AERO), mass reduction levels (MR), EFR engine technology (EFR), electric accessory improvement technologies (ELECACC), LDB technology (LDB), and SAX technology (SAX). This summarizes to a tech key with the following fields: CONFIG; VVT; VVL; SGDI; DEAC; ADVENG; TRANS; ELEC; ROLL; AERO; MR; EFR; ELECACC; LDB; SAX. It should be noted that some of the fields may be blank for some tech key combinations. These fields will be left visible for the examples below, but blank fields may be omitted from tech keys shown elsewhere in the documentation.

As an example, a technology state vector describing a vehicle with a SOHC engine, variable valve timing (only), a 6-speed automatic transmission, a belt-integrated starter generator, rolling resistance (level 1), aerodynamic improvements (level 2), mass reduction (level 1), electric power steering, and low drag brakes, would be specified as "SOHC; VVT; ; ; ; AT6; BISG; ROLL10; AERO20; MR1; ; EPS; LDB ; ." ⁷⁹

⁷⁹In the example tech key, the series of semicolons between VVT and AT6 correspond to the engine technologies which are not included as part of the combination, while the gap between MR1 and EPS corresponds to EFR and the omitted technology after LDB is SAX. The extra semicolons for omitted technologies are preserved in this

Once a vehicle is assigned (or mapped) to an appropriate tech key, adding a new technology to the vehicle simply represents progress from a previous tech key to a new tech key. The previous tech key refers to the technologies that are currently in use on a vehicle. The new tech key is determined, in the simulation, by adding a new technology to the combination represented by the previous state vector while simultaneously removing any technologies that are superseded by the newly added one.

For example, start with a vehicle with the tech key: SOHC; VVT; AT6; BISG; ROLL10; AERO20; MR1; EPS; LDB. Assume the simulation is evaluating PHEV20 as a candidate technology for application on this vehicle. The new tech key for this vehicle is computed by removing SOHC, VVT, AT6, and BISG technologies from the previous state vector,⁸⁰ and adding PHEV20, resulting a tech key that looks like this: PHEV20; ROLL10; AERO20; MR1; EPS; LDB.

From here, the simulation obtains a fuel economy improvement factor for the new combination of technologies and applies that factor to the fuel economy of a vehicle in the analysis fleet. The resulting improvement is applied to the original compliance fuel economy value for a discrete vehicle in the MY 2020 analysis fleet.

5. Defining Technology Adoption in the Rulemaking Timeframe

As discussed in Section III.C.2, starting with a fixed analysis fleet (for this analysis, the model year 2020 fleet indicated in manufacturers' early CAFE compliance data), the CAFE Model estimates ways each manufacturer could potentially apply specific fuel-saving technologies to specific vehicle model/configurations in response to, among other things (such as fuel prices), CAFE standards, CO₂ standards, commitments some manufacturers have made to CARB's "Framework Agreement", and ZEV mandates imposed by California and several other States. The CAFE Model follows a year-by-year approach to simulating manufacturers' potential decisions to apply technology, accounting for multiyear planning within the context of estimated schedules for future vehicle redesigns and refreshes during which significant technology changes may most practicably be implemented.

example for clarity and emphasis and will not be included in future examples.

⁸⁰For more discussion of how the CAFE Model handles technology supersession, see S4.5 of the CAFE Model Documentation.

The modeled technology adoption for each manufacturer under each regulatory alternative depends on this representation of multiyear planning, and on a range of other factors represented by other model characteristics and inputs, such as the logical progression of technologies defined by the model's technology pathways; the technologies already present in the analysis fleet; inputs directing the model to "skip" specific technologies for specific vehicle model/configurations in the analysis fleet (e.g., because secondary axle disconnect cannot be applied to 2-wheel-drive vehicles, and because manufacturers already heavily invested in engine turbocharging and downsizing are unlikely to abandon this approach in favor of using high compression ratios); inputs defining the sharing of engines, transmissions, and vehicle platforms in the analysis fleet; the model's logical approach to preserving this sharing; inputs defining each regulatory alternative's specific requirements; inputs defining expected future fuel prices, annual mileage accumulation, and valuation of avoided fuel consumption; and inputs defining the estimated efficacy and future cost (accounting for projected future "learning" effects) of included technologies; inputs controlling the maximum pace the simulation is to "phase in" each technology; and inputs further defining the availability of each technology to specific technology classes.

Two of these inputs—the "phase-in cap" and the "phase-in start year"—apply to the manufacturer's entire estimated production and, for each technology, define a share of production in each model year that, once exceeded, will stop the model from further applying that technology to that manufacturer's fleet in that model year. The influence of these inputs varies with regulatory stringency and other model inputs. For example, setting the inputs to allow immediate 100% penetration of a technology will not guarantee any application of the technology if stringency increases are low and the technology is not at all cost effective. Also, even if these are set to allow only very slow adoption of a technology, other model aspects and inputs may nevertheless force more rapid application than these inputs, alone, would suggest (e.g., because an engine technology propagates quickly due to sharing across multiple vehicles, or because BEV application must increase quickly in response to ZEV requirements). For this analysis, nearly

all of these inputs are set at levels that do not limit the simulation at all.

As discussed below, for the most advanced engines (advanced cylinder deactivation, variable compression ratio, variable turbocharger geometry, and turbocharging with cylinder deactivation), DOT has specified phase-in caps and phase-in start years that limit the pace at which the analysis shows the technology being adopted in the rulemaking timeframe. For example, this analysis applies a 34% phase-in cap and MY 2019 phase-in start year for advanced cylinder deactivation (ADEAC), meaning that in MY 2021 (using a MY 2020 fleet, the analysis begins simulating further technology application in MY 2021), the model will stop adding ADEAC to a manufacturer's MY 2021 fleet once ADEAC reaches more than 68% penetration, because $34\% \times (2021 - 2019) = 34\% \times 2 = 68\%$.

This analysis also applies phase-in caps and corresponding start years to prevent the simulation from showing inconceivable rates of applying battery-electric vehicles (BEVs), such as showing that a manufacturer producing very few BEVs in MY 2020 could plausibly replace every product with a 300- or 400-mile BEV by MY 2025. Also, as discussed in Section III.D.4, this analysis applies phase-in caps and corresponding start years intended to ensure that the simulation's plausible application of the highest included levels of mass reduction (20% and 28.2% reductions of vehicle "glider" weight) do not, for example, outpace plausible supply of raw materials and development of entirely new manufacturing facilities.

These model logical structures and inputs act together to produce estimates of ways each manufacturer could potentially shift to new fuel-saving technologies over time, reflecting some measure of protection against rates of change not reflected in, for example, technology cost inputs. This does not mean that every modeled solution would necessarily be economically practicable. Using technology adoption features like phase-in caps and phase-in start years is one mechanism that can be used so that the analysis better represents the potential costs and benefits of technology application in the rulemaking timeframe.

6. Technology Costs

DOT estimates present and future costs for fuel-saving technologies taking into consideration the type of vehicle, or type of engine if technology costs vary by application. These cost estimates are based on three main inputs. First, direct manufacturing costs (DMCs), or the

component and labor costs of producing and assembling the physical parts and systems, are estimated assuming high volume production. DMCs generally do not include the indirect costs of tools, capital equipment, financing costs, engineering, sales, administrative support or return on investment. DOT accounts for these indirect costs via a scalar markup of direct manufacturing costs (the retail price equivalent, or RPE). Finally, costs for technologies may change over time as industry streamlines design and manufacturing processes. To reflect this, DOT estimates potential cost improvements with learning effects (LE). The retail cost of equipment in any future year is estimated to be equal to the product of the DMC, RPE, and LE. Considering the retail cost of equipment, instead of merely direct manufacturing costs, is important to account for the real-world price effects of a technology, as well as market realities. Absent a Government mandate, motor vehicle manufacturers will not undertake expensive development and production efforts to implement technologies without realistic prospects of consumers being willing to pay enough for such technology to allow for the manufacturers to recover their investment.

(a) Direct Manufacturing Costs

Direct manufacturing costs (DMCs) are the component and assembly costs of the physical parts and systems that make up a complete vehicle. The analysis used agency-sponsored tear-down studies of vehicles and parts to estimate the DMCs of individual technologies, in addition to independent tear-down studies, other publications, and confidential business information. In the simplest cases, the agency-sponsored studies produced results that confirmed third-party industry estimates and aligned with confidential information provided by manufacturers and suppliers. In cases with a large difference between the tear-down study results and credible independent sources, DOT scrutinized the study assumptions, and sometimes revised or updated the analysis accordingly.

Due to the variety of technologies and their applications, and the cost and time required to conduct detailed tear-down analyses, the agency did not sponsor teardown studies for every technology. In addition, some fuel-saving technologies were considered that are pre-production or are sold in very small pilot volumes. For those technologies, DOT could not conduct a tear-down study to assess costs because the

product is not yet in the marketplace for evaluation. In these cases, DOT relied upon third-party estimates and confidential information from suppliers and manufacturers; however, there are some common pitfalls with relying on confidential business information to estimate costs. The agency and the source may have had incongruent or incompatible definitions of "baseline." The source may have provided DMCs at a date many years in the future, and assumed very high production volumes, important caveats to consider for agency analysis. In addition, a source, under no contractual obligation to DOT, may provide incomplete and/or misleading information. In other cases, intellectual property considerations and strategic business partnerships may have contributed to a manufacturer's cost information and could be difficult to account for in the CAFE Model as not all manufacturers may have access to proprietary technologies at stated costs. The agency carefully evaluates new information in light of these common pitfalls, especially regarding emerging technologies.

While costs for fuel-saving technologies reflect the best estimates available today, technology cost estimates will likely change in the future as technologies are deployed and as production is expanded. For emerging technologies, DOT uses the best information available at the time of the analysis and will continue to update cost assumptions for any future analysis. The discussion of each category of technologies in Section III.D (e.g., engines, transmissions, electrification) and corresponding TSD Chapter 3 summarizes the specific cost estimates DOT applied for this analysis.

(b) Indirect Costs (Retail Price Equivalent)

As discussed above, direct costs represent the cost associated with acquiring raw materials, fabricating parts, and assembling vehicles with the various technologies manufacturers are expected to use to meet future CAFE standards. They include materials, labor, and variable energy costs required to produce and assemble the vehicle. However, they do not include overhead costs required to develop and produce the vehicle, costs incurred by manufacturers or dealers to sell vehicles, or the profit manufacturers and dealers make from their investments. All of these items contribute to the price consumers ultimately pay for the vehicle. These components of retail prices are illustrated in Table III-3 below.

Table III-3 – Retail Price Components

Direct Costs	
Manufacturing Cost	Cost of materials, labor, and variable energy needed for production
Indirect Costs	
Production Overhead	
Warranty	Cost of providing product warranty
Research and Development	Cost of developing and engineering the product
Depreciation and amortization	Depreciation and amortization of manufacturing facilities and equipment
Maintenance, repair, operations	Cost of maintaining and operating manufacturing facilities and equipment
Corporate Overhead	
General and Administrative	Salaries of nonmanufacturing labor, operations of corporate offices, etc.
Retirement	Cost of pensions for nonmanufacturing labor
Health Care	Cost of health care for nonmanufacturing labor
Selling Costs	
Transportation	Cost of transporting manufactured goods
Marketing	Manufacturer costs of advertising manufactured goods
Dealer Costs	
Dealer selling expense	Dealer selling and advertising expense
Dealer profit	Net Income to dealers from sales of new vehicles
Net income	Net income to manufacturers from production and sales of new vehicles

To estimate the impact of higher vehicle prices on consumers, both direct and indirect costs must be considered. To estimate total consumer costs, DOT multiplies direct manufacturing costs by an indirect cost factor to represent the average price for fuel-saving technologies at retail.

Historically, the method most commonly used to estimate indirect costs of producing a motor vehicle has been the retail price equivalent (RPE). The RPE markup factor is based on an examination of historical financial data contained in 10-K reports filed by manufacturers with the Securities and Exchange Commission (SEC). It represents the ratio between the retail price of motor vehicles and the direct

costs of all activities that manufacturers engage in.

Figure III-4 indicates that for more than three decades, the retail price of motor vehicles has been, on average, roughly 50 percent above the direct cost expenditures of manufacturers. This ratio has been remarkably consistent, averaging roughly 1.5 with minor variations from year to year over this period. At no point has the RPE markup exceeded 1.6 or fallen below 1.4.⁸¹ During this time frame, the average annual increase in real direct costs was 2.5 percent, and the average annual increase in real indirect costs was also 2.5 percent. Figure III-4 illustrates the historical relationship between retail prices and direct manufacturing costs.⁸²

An RPE of 1.5 does not imply that manufacturers automatically mark up each vehicle by exactly 50 percent. Rather, it means that, over time, the competitive marketplace has resulted in pricing structures that average out to this relationship across the entire industry. Prices for any individual model may be marked up at a higher or lower rate depending on market demand. The consumer who buys a popular vehicle may, in effect, subsidize the installation of a new technology in a less marketable vehicle. But, on average, over time and across the vehicle fleet, the retail price paid by consumers has risen by about \$1.50 for each dollar of direct costs incurred by manufacturers.

⁸¹ Based on data from 1972–1997 and 2007. Data were not available for intervening years, but results for 2007 seem to indicate no significant change in the historical trend.

⁸² Rogozhin, A., Gallaher, M., & McManus, W., 2009, Automobile Industry Retail Price Equivalent

and Indirect Cost Multipliers. Report by RTI International to Office of Transportation Air Quality. U.S. Environmental Protection Agency, RTI Project Number 0211577.002.004, February, Research Triangle Park, NC.

Spinney, B.C., Faigin, B., Bowie, N., & St. Kratzke, 1999, Advanced Air Bag Systems Cost, Weight, and Lead Time analysis Summary Report, Contract NO. DTNH22–96–0–12003, Task Orders—001, 003, and 005. Washington, DC, U.S. Department of Transportation.

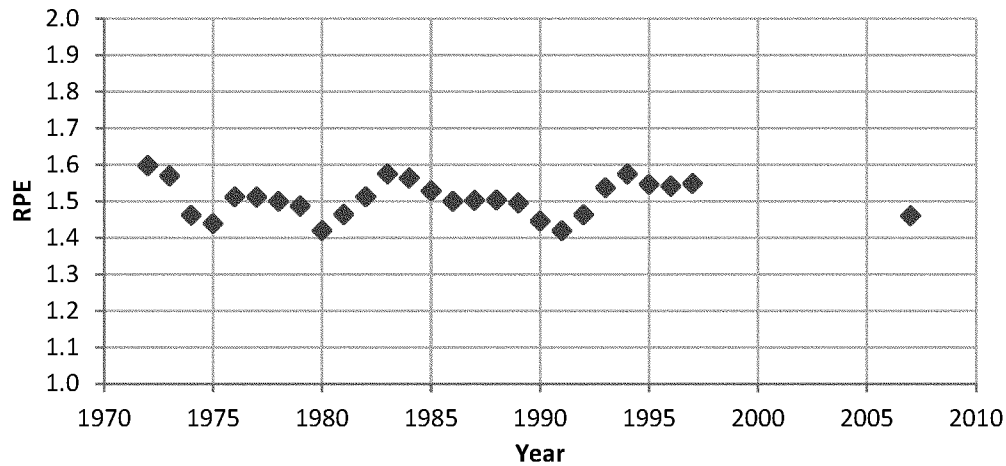


Figure III-4 – Historical Data for Retail Price Equivalent (RPE), 1972-1997 and 2007

It is also important to note that direct costs associated with any specific technology will change over time as some combination of learning and resource price changes occurs. Resource costs, such as the price of steel, can fluctuate over time and can experience real long-term trends in either direction, depending on supply and demand. However, the normal learning process generally reduces direct production costs as manufacturers refine production techniques and seek out less costly parts and materials for increasing production volumes. By contrast, this learning process does not generally influence indirect costs. The implied RPE for any given technology would thus be expected to grow over time as direct costs decline relative to indirect costs. The RPE for any given year is

based on direct costs of technologies at different stages in their learning cycles, and that may have different implied RPEs than they did in previous years. The RPE averages 1.5 across the lifetime of technologies of all ages, with a lower average in earlier years of a technology's life, and, because of learning effects on direct costs, a higher average in later years.

The RPE has been used in all NHTSA safety and most previous CAFE rulemakings to estimate costs. In 2011, the National Academy of Sciences recommended RPEs of 1.5 for suppliers and 2.0 for in-house production be used to estimate total costs.⁸³ The Alliance of Automobile Manufacturers also advocates these values as appropriate markup factors for estimating costs of technology changes.⁸⁴ In their 2015

report, the National Academy of Sciences recommend 1.5 as an overall RPE markup.⁸⁵ An RPE of 2.0 has also been adopted by a coalition of environmental and research groups (Northeast States Center for a Clean Air Future (NESCCAF), International Council on Clean Transportation (ICCT), Southwest Research Institute, and TIAX-LLC) in a report on reducing heavy truck emissions, and 2.0 is recommended by the U.S. Department of Energy for estimating the cost of hybrid-electric and automotive fuel cell costs (see Vyas et al. (2000) in Table III-4 below). Table III-4 below also lists other estimates of the RPE. Note that all RPE estimates vary between 1.4 and 2.0, with most in the 1.4 to 1.7 range.

Table III-4—Alternate Estimates of the RPE⁸⁶

⁸³ Effectiveness and Impact of Corporate Average Fuel Economy Standards, Washington, DC—The National Academies Press; NRC, 2011.

⁸⁴ Communication from Chris Nevers (Alliance) to Christopher Lieske (EPA) and James Tamm (NHTSA), <http://www.regulations.gov> Docket ID Nos. NHTSA-2018-0067; EPA-HQ-OAR-2018-0283, p.143.

⁸⁵ National Research Council 2015. Cost, Effectiveness, and Deployment of Fuel Economy Technologies for Light Duty Vehicles. Washington, DC: The National Academies Press. <https://doi.org/10.17226/21744> [hereinafter 2015 NAS report].

⁸⁶ Duleep, K.G. 2008 *Analysis of Technology Cost and Retail Price*. Presentation to Committee on

Assessment of Technologies for Improving Light Duty Vehicle Fuel Economy, January 25, Detroit, MI; Jack Faucett Associates, September 4, 1985. Update of EPA's Motor Vehicle Emission Control Equipment Retail Price Equivalent (RPE) Calculation Formula. Chevy Chase, MD—Jack Faucett Associates; McKinsey & Company, October 2003. Preface to the Auto Sector Cases. *New Horizons—Multinational Company Investment in Developing Economies*, San Francisco, CA.; NRC (National Research Council), 2002. Effectiveness and Impact of Corporate Average Fuel Economy Standards, Washington, DC—The National Academies Press; NRC, 2011. Assessment of Fuel Economy Technologies for Light Duty Vehicles.

Washington, DC—The National Academies Press; Cost, Effectiveness, and Deployment of Fuel Economy Technologies in Light Duty Vehicles. Washington, DC—The National Academies Press, 2015; Sierra Research, Inc., November 21, 2007, Study of Industry-Average Mark-Up Factors used to Estimate Changes in Retail Price Equivalent (RPE) for Automotive Fuel Economy and Emissions Control Systems, Sacramento, CA—Sierra Research, Inc.; Vyas, A. Santini, D., & Cuenca, R. 2000. Comparison of Indirect Cost Multipliers for Vehicle Manufacturing. Center for Transportation Research, Argonne National Laboratory, April. Argonne, Ill.

Table III-4 – Alternate Estimates of the RPE⁸⁶

Author and Year	Value, Comments
Jack Faucett Associates for EPA, 1985	1.26 initial value, later corrected to 1.7+ by Sierra research
Vyas et al., 2000	1.5 for outsourced, 2.0 for original equipment manufacturer (OEM), electric, and hybrid vehicles
NRC, 2002	1.4 (corrected to > by Duleep)
McKinsey and Company, 2003	1.7 based on European study
CARB, 2004	1.4 (derived using the JFA initial 1.26 value, not the corrected 1.7+ value)
Sierra Research for AAA, 2007	2.0 or >, based on Chrysler data
Duleep, 2008	1.4, 1.56, 1.7 based on integration complexity
NRC, NAS 2011	1.5 for Tier 1 supplier, 2.0 for OEM
NRC, NAS 2015	1.5 for OEM

The RPE has thus enjoyed widespread use and acceptance by a variety of governmental, academic, and industry organizations.

In past rulemakings, a second type of indirect cost multiplier has also been examined. Known as the “Indirect Cost Multiplier” (ICM) approach, ICMs were first examined alongside the RPE approach in the 2010 rulemaking regarding standards for MYs 2012–2016 (75 FR 25324, May 7, 2010). Both methods have been examined in subsequent rulemakings.

Consistent with the 2020 final rule, we continue to employ the RPE approach to account for indirect manufacturing costs. The RPE accounts for indirect costs like engineering, sales, and administrative support, as well as other overhead costs, business expenses, warranty costs, and return on capital considerations. A detailed discussion of indirect cost methods and the basis for our use of the RPE to reflect these costs is available in the Final Regulatory Impact Analysis (FRIA) for the 2020 final rule.⁸⁷

(c) Stranded Capital Costs

The idea behind stranded capital is that manufacturers amortize research, development, and tooling expenses over many years, especially for engines and transmissions. The traditional production life-cycles for transmissions and engines have been a decade or longer. If a manufacturer launches or updates a product with fuel-saving technology, and then later replaces that technology with an unrelated or different fuel-saving technology before the equipment and research and

development investments have been fully paid off, there will be unrecouped, or stranded, capital costs. Quantifying stranded capital costs accounts for such lost investments.

As DOT has observed previously, manufacturers may be shifting their investment strategies in ways that may alter how stranded capital could be considered. For example, some suppliers sell similar transmissions to multiple manufacturers. Such arrangements allow manufacturers to share in capital expenditures or amortize expenses more quickly. Manufacturers share parts on vehicles around the globe, achieving greater scale and greatly affecting tooling strategies and costs.

As a proxy for stranded capital in recent CAFE analyses, the CAFE Model has accounted for platform and engine sharing and includes redesign and refresh cycles for significant and less significant vehicle updates. This analysis continues to rely on the CAFE Model’s explicit year-by-year accounting for estimated refresh and redesign cycles, and shared vehicle platforms and engines, to moderate the cadence of technology adoption and thereby limit the implied occurrence of stranded capital and the need to account for it explicitly. In addition, confining some manufacturers to specific advanced technology pathways through technology adoption features acts as a proxy to indirectly account for stranded capital. Adoption features specific to each technology, if applied on a manufacturer-by-manufacturer basis, are discussed in each technology section. The agency will monitor these trends to assess the role of stranded capital moving forward.

(d) Cost Learning

Manufacturers make improvements to production processes over time, which often result in lower costs. “Cost learning” reflects the effect of experience and volume on the cost of production, which generally results in better utilization of resources, leading to higher and more efficient production. As manufacturers gain experience through production, they refine production techniques, raw material and component sources, and assembly methods to maximize efficiency and reduce production costs. Typically, a representation of this cost learning, or learning curves, reflects initial learning rates that are relatively high, followed by slower learning as additional improvements are made and production efficiency peaks. This eventually produces an asymptotic shape to the learning curve, as small percent decreases are applied to gradually declining cost levels. These learning curve estimates are applied to various technologies that are used to meet CAFE standards.

We estimate cost learning by considering methods established by T.P. Wright and later expanded upon by J.R. Crawford.^{88 89} Wright, examining aircraft production, found that every doubling of cumulative production of airplanes resulted in decreasing labor hours at a fixed percentage. This fixed percentage is commonly referred to as the progress rate or progress ratio, where a lower rate implies faster learning as cumulative

⁸⁸ Wright, T.P., Factors Affecting the Cost of Airplanes. *Journal of Aeronautical Sciences*, Vol. 3 (1936), at 124–25. Available at <http://www.uvm.edu/pdodds/research/papers/others/1936/wright1936a.pdf>.

⁸⁹ Crawford, J.R., *Learning Curve, Ship Curve, Ratios, Related Data*, Burbank, California-Lockheed Aircraft Corporation (1944).

⁸⁷ Final Regulatory Impact Analysis, The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Year 2021–2026 Passenger Cars and Light Trucks, USDOT, EPA, March 2020, at 354–76.

production increases. J.R. Crawford expanded upon Wright's learning curve theory to develop a single unit cost model, that estimates the cost of the n th unit produced given the following information is known: (1) Cost to produce the first unit; (2) cumulative production of n units; and (3) the progress ratio.

As pictured in Figure III-5, Wright's learning curve shows the first unit is produced at a cost of \$1,000. Initially cost per unit falls rapidly for each successive unit produced. However, as production continues, cost falls more gradually at a decreasing rate. For each doubling of cumulative production at any level, cost per unit declines 20

percent, so that 80 percent of cost is retained. The CAFE Model uses the basic approach by Wright, where cost reduction is estimated by applying a fixed percentage to the projected cumulative production of a given fuel economy technology.

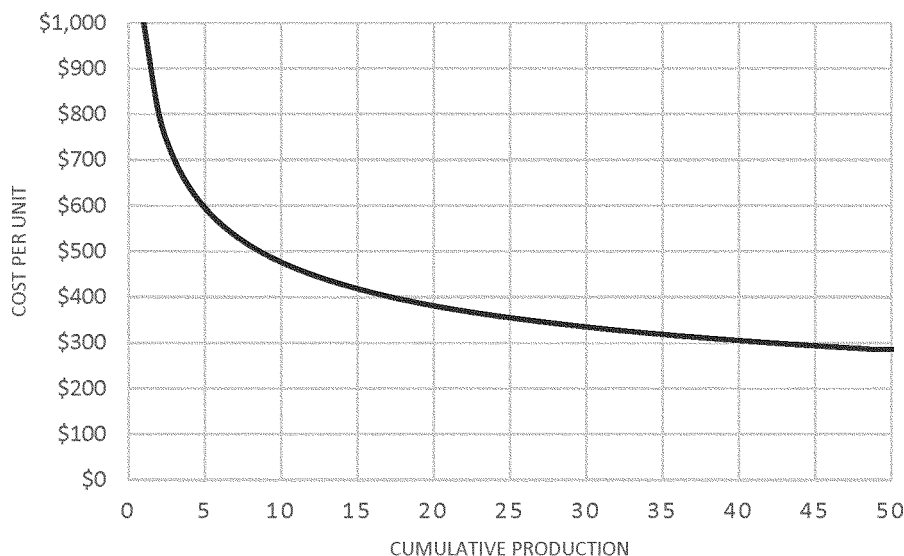


Figure III-5 – Wright's Learning Curve (Progress Ratio = 0.8)

The analysis accounts for learning effects with model year-based cost learning forecasts for each technology that reduces direct manufacturing costs over time. We evaluate the historical use of technologies, and reviews industry forecasts to estimate future volumes to develop the model year-based technology cost learning curves.

The following section discusses the development of model year-based cost learning forecasts for this analysis, including how the approach has evolved from the 2012 rulemaking for MY 2017–2025 vehicles, and how the progress ratios were developed for different technologies considered in the analysis. Finally, we discuss how these learning effects are applied in the CAFE Model.

(1) Time Versus Volume-Based Learning

For the 2012 joint CAFE and GHG rulemaking, DOT developed learning curves as a function of vehicle model year.⁹⁰ Although the concept of this methodology is derived from Wright's cumulative production volume-based learning curve, its application for CAFE technologies was more of a function of time. More than a dozen learning curve schedules were developed, varying

between fast and slow learning, and assigned to each technology corresponding to its level of complexity and maturity. The schedules were applied to the base year of direct manufacturing cost and incorporate a percentage of cost reduction by model year, declining at a decreasing rate through the technology's production life. Some newer technologies experience 20 percent cost reductions for introductory model years, while mature or less complex technologies experience 0–3 percent cost reductions over a few years.

In their 2015 report to Congress, the National Academy of Sciences (NAS) recommended NHTSA should "continue to conduct and review empirical evidence for the cost reductions that occur in the automobile industry with volume, especially for large-volume technologies that will be relied on to meet the CAFE/GHG standards."⁹¹

In response, we incorporated statically projected cumulative volume production data of fuel economy-

improving technologies, representing an improvement over the previously used time-based method. Dynamic projections of cumulative production are not feasible with current CAFE Model capabilities, so one set of projected cumulative production data for most vehicle technologies was developed for the purpose of determining cost impact. We obtained historical cumulative production data for many technologies produced and/or sold in the U.S. to establish a starting point for learning schedules. Groups of similar technologies or technologies of similar complexity may share identical learning schedules.

The slope of the learning curve, which determines the rate at which cost reductions occur, has been estimated using research from an extensive literature review and automotive cost tear-down reports (see below). The slope of the learning curve is derived from the progress ratio of manufacturing automotive and other mobile source technologies.

(2) Deriving the Progress Ratio Used in This Analysis

Learning curves vary among different types of manufactured products. Progress ratios can range from 70 to 100

⁹⁰ 77 FR 62624 (Oct. 15, 2012).

⁹¹ National Research Council 2015. Cost, Effectiveness, and Deployment of Fuel Economy Technologies for Light-Duty Vehicles. Washington, DC: The National Academies Press. <https://doi.org/10.17226/21744>.

percent, where 100 percent indicates no learning can be achieved.⁹² Learning effects tend to be greatest in operations where workers often touch the product, while effects are less substantial in operations consisting of more automated processes. As automotive manufacturing plant processes become increasingly automated, a progress ratio towards the higher end would seem more suitable. We incorporated findings from automotive cost-teardown studies with EPA's 2015 literature review of learning-related studies to estimate a progress ratio used to determine learning schedules of fuel economy-improving technologies.

EPA's literature review examined and summarized 20 studies related to

learning in manufacturing industries and mobile source manufacturing.⁹³ The studies focused on many industries, including motor vehicles, ships, aviation, semiconductors, and environmental energy. Based on several criteria, EPA selected five studies providing quantitative analysis from the mobile source sector (progress ratio estimates from each study are summarized in Table III-5, below). Further, those studies expand on Wright's learning curve function by using cumulative output as a predictor variable, and unit cost as the response variable. As a result, EPA determined a best estimate of 84 percent as the progress ratio in mobile source industries. However, of those five

studies, EPA at the time placed less weight on the Epple et al. (1991) study, because of a disruption in learning due to incomplete knowledge transfer from the first shift to introduction of a second shift at a North American truck plant. While learning may have decelerated immediately after adding a second shift, we note that unit costs continued to fall as the organization gained experience operating with both shifts. We recognize that disruptions are an essential part of the learning process and should not, in and of themselves, be discredited. For this reason, the analysis uses a re-estimated average progress ratio of 85 percent from those five studies (equally weighted).

Table III-5 – Progress Ratios from EPA's Literature Review

Author (Publication Date)	Industry	Progress Ratio (Cumulative Output Approach)
Argote et al. (1997) ⁹⁴	Trucks	85%
Benkard (2000) ⁹⁵	Aircraft (commercial)	82%
Epple et al. (1991) ⁹⁶	Trucks	90%
Epple et al. (1996) ⁹⁷	Trucks	85%
Levitt et al. (2013) ⁹⁸	Automobiles	82%

In addition to EPA's literature review, this progress ratio estimate was informed based on findings from automotive cost-teardown studies. NHTSA routinely performs evaluations of costs of previously issued Federal Motor Vehicle Safety Standards (FMVSS) for new motor vehicles and equipment. NHTSA engages contractors to perform detailed engineering "tear-down" analyses for representative

samples of vehicles, to estimate how much specific FMVSS add to the weight and retail price of a vehicle. As part of the effort, the agency examines cost and production volume for automotive safety technologies. In particular, we estimated costs from multiple cost tear-down studies for technologies with actual production data from the *Cost and weight added by the Federal Motor*

Vehicle Safety Standards for MY 1968–2012 passenger cars and LTVs (2017).⁹⁹

We chose five vehicle safety technologies with sufficient data to estimate progress ratios of each, because these technologies are large-volume technologies and are used by almost all vehicle manufacturers. Table III-6 includes these five technologies and yields an average progress rate of 92 percent.

⁹² Martin, J., "What is a Learning Curve?" Management and Accounting Web, University of South Florida, available at: <https://www.maaw.info/LearningCurveSummary.htm>.

⁹³ *Cost Reduction through Learning in Manufacturing Industries and in the Manufacture of Mobile Sources*, United States Environmental Protection Agency (2015). Prepared by ICF International and available at <https://19january2017snapshot.epa.gov/sites/production/files/2016-11/documents/420r16018.pdf>.

⁹⁴ Argote, L., Epple, D., Rao, R. D., & Murphy, K., *The acquisition and depreciation of knowledge in a manufacturing organization—Turnover and plant*

productivity, Working paper, Graduate School of Industrial Administration, Carnegie Mellon University (1997).

⁹⁵ Benkard, C. L., *Learning and Forgetting—The Dynamics of Aircraft Production*, *The American Economic Review*, Vol. 90(4), at 1034–54 (2000).

⁹⁶ Epple, D., Argote, L., & Devadas, R., *Organizational Learning Curves—A Method for Investigating Intra-Plant Transfer of Knowledge Acquired through Learning by Doing*, *Organization Science*, Vol. 2(1), at 58–70 (1991).

⁹⁷ Epple, D., Argote, L., & Murphy, K., *An Empirical Investigation of the Microstructure of*

Knowledge Acquisition and Transfer through Learning by Doing, *Operations Research*, Vol. 44(1), at 77–86 (1996).

⁹⁸ Levitt, S. D., List, J. A., & Syverson, C., *Toward an Understanding of Learning by Doing—Evidence from an Automobile Assembly Plant*, *Journal of Political Economy*, Vol. 121 (4), at 643–81 (2013).

⁹⁹ Simons, J. F., *Cost and weight added by the Federal Motor Vehicle Safety Standards for MY 1968–2012 Passenger Cars and LTVs* (Report No. DOT HS 812 354). Washington, DC—National Highway Traffic Safety Administration (November 2017), at 30–33.

Table III-6 – Progress Ratios Researched by NHTSA

Technology	Progress Ratio
Anti-lock Brake Systems	87%
Driver Airbags	93%
Manual 3-pt lap shoulder safety belts	96%
Adjustable Head Restraints	91%
Dual Master Cylinder	95%

For the final progress ratio used in the CAFE Model, the five progress rates from EPA’s literature review and five progress rates from NHTSA’s evaluation of automotive safety technologies results were averaged. This resulted in an average progress rate of approximately 89 percent. We placed equal weight on progress ratios from all 10 sources. More specifically, we placed equal weight on the *Epple et al. (1991)* study, because disruptions have more recently been recognized as an essential part in the learning process, especially in an effort to increase the rate of output.

(3) Obtaining Appropriate Baseline Years for Direct Manufacturing Costs

DOT obtained direct manufacturing costs for each fuel economy-improving technology from various sources, as discussed above. To establish a consistent basis for direct manufacturing costs in the rulemaking analysis, we adjusted each technology cost to MY 2018 dollars. For each technology, the DMC is associated with a specific model year, and sometimes a specific production volume, or cumulative production volume. The base model year is established as the MY in which direct manufacturing costs were assessed (with learning factor of 1.00). With the aforementioned data on cumulative production volume for each technology and the assumption of a 0.89 progress ratio for all automotive technologies, we can solve for an implied cost for the first unit produced. For some technologies, we used modestly different progress ratios to match detailed cost projections if available from another source (for instance, batteries for plug-in hybrids and battery electric vehicles).

This approach produces reasonable estimates for technologies already in production, and some additional steps are required to set appropriate learning rates for technologies not yet in production. Specifically, for technologies not yet in production in MY 2017, the cumulative production volume in MY 2017 is zero, because

manufacturers have not yet produced the technologies. For pre-production cost estimates in previous CAFE rulemakings, we often relied on confidential business information sources to predict future costs. Many sources for pre-production cost estimates include significant learning effects, often providing cost estimates assuming high volume production, and often for a timeframe late in the first production generation or early in the second generation of the technology. Rapid doubling and re-doubling of a low cumulative volume base with Wright’s learning curves can provide unrealistic cost estimates. In addition, direct manufacturing cost projections can vary depending on the initial production volume assumed. Accordingly, we carefully examined direct costs with learning, and made adjustments to the starting point for those technologies on the learning curve to better align with the assumptions used for the initial direct cost estimate.

(4) Cost Learning Applied in the CAFE Model

For this analysis, we applied learning effects to the incremental cost over the null technology state on the applicable technology tree. After this step, we calculated year-by-year incremental costs over preceding technologies on the tech tree to create the CAFE Model inputs.¹⁰⁰ The shift from incremental cost accounting to absolute cost accounting in recent CAFE analyses made cost inputs more transparently relatable to detailed model output, and relevant to this discussion, made it easier to apply learning curves in the course of developing inputs to the CAFE Model.

We grouped certain technologies, such as advanced engines, advanced transmissions, and non-battery electric components and assigned them to the same learning schedule. While these grouped technologies differ in operating

¹⁰⁰ These costs are located in the CAFE Model Technologies file.

characteristics and design, we chose to group them based on their complexity, technology integration, and economies of scale across manufacturers. The low volume of certain advanced technologies, such as hybrid and electric technologies, poses a significant issue for suppliers and prevents them from producing components needed for advanced transmissions and other technologies at more efficient high scale production. The technology groupings consider market availability, complexity of technology integration, and production volume of the technologies that can be implemented by manufacturers and suppliers. For example, technologies like ADEAC and VCR are grouped together; these technologies were not in production or were only in limited introduction in MY 2017 and are planned to be introduced in limited production by a few manufacturers. The details of these technologies are discussed in Section III.D.

In addition, we expanded model inputs to extend the explicit simulation of technology application through MY 2050. Accordingly, we updated the learning curves for each technology group to cover MYs through 2050. For MYs 2017–2032, we expect incremental improvements in all technologies, particularly in electrification technologies because of increased production volumes, labor efficiency, improved manufacturing methods, specialization, network building, and other factors. While these and other factors contribute to continual cost learning, we believe that many fuel economy-improving technologies considered in this rule will approach a flat learning level by the early 2030s. Specifically, older and less complex internal combustion engine technologies and transmissions will reach a flat learning curve sooner when compared to electrification technologies, which have more opportunity for improvement. For batteries and non-battery electrification components, we estimated a steeper learning curve that

will gradually flatten after MY 2040. For a more detailed discussion of the electrification learning curves, see Section III.D.3.

Each technology in the CAFE Model is assigned a learning schedule developed from the methodology explained previously. For example, the following chart shows learning rates for several technologies applicable to midsize sedans, demonstrating that while we estimate that such learning effects have already been almost entirely realized for engine turbocharging (a

technology that has been in production for many years), we estimate that significant opportunities to reduce the cost of the greatest levels of mass reduction (e.g., MR5) remain, and even greater opportunities remain to reduce the cost of batteries for HEVs, PHEVs, BEVs. In fact, for certain advanced technologies, we determined that the results predicted by the standard learning curves progress ratio was not realistic, based on unusual market price and production relationships. For these

technologies, we developed specific learning estimates that may diverge from the 0.89 progress rate. As shown in Figure III-6, these technologies include: turbocharging and downsizing level 1 (TURBO1), variable turbo geometry electric (VTGE), aerodynamic drag reduction by 15 percent (AERO15), mass reduction level 5 (MR5), 20 percent improvement in low-rolling resistance tire technology (ROLL20) over the baseline, and battery integrated starter/generator (BISG).

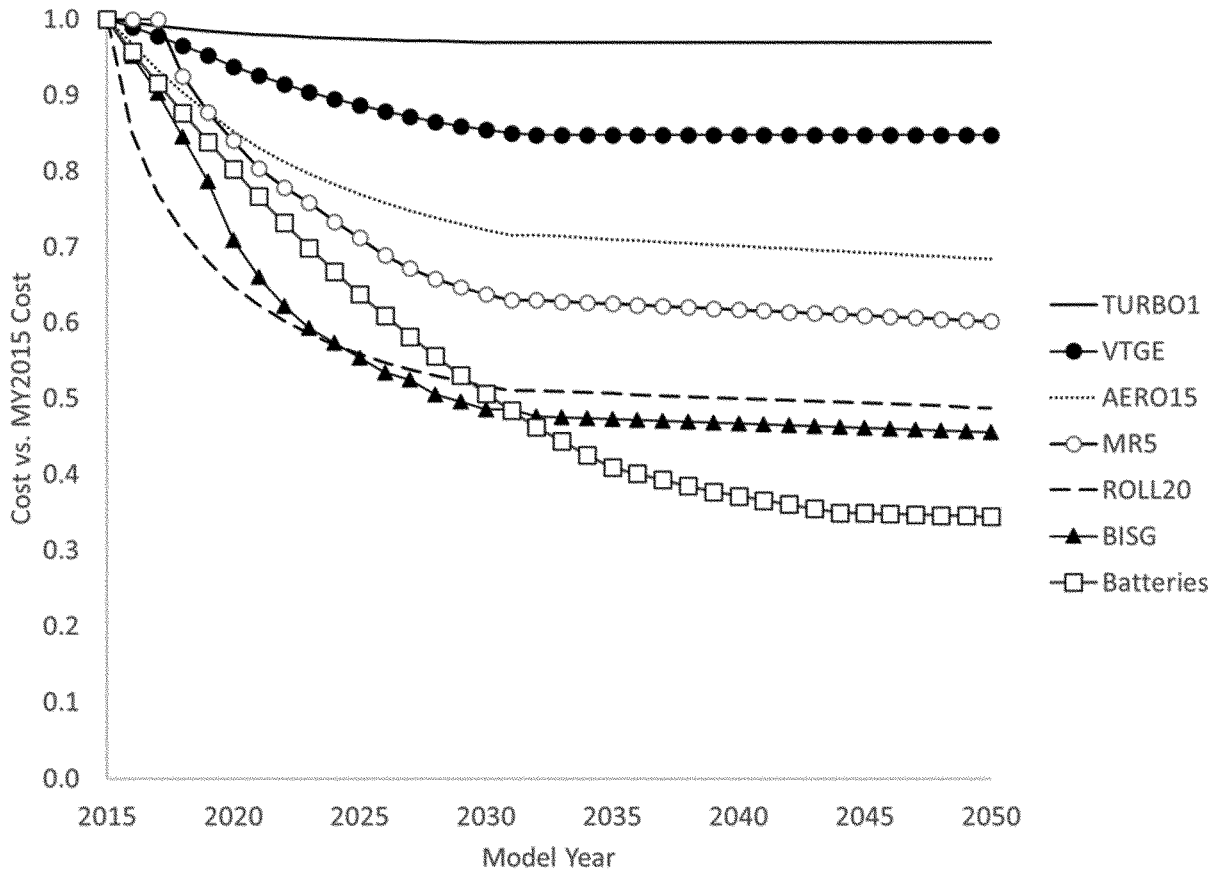


Figure III-6 – Examples of Year-by-Year Cost Learning Effects (Midsize Sedan)

(e) Cost Accounting

To facilitate specification of detailed model inputs and review of detailed model outputs, the CAFE Model continues to use absolute cost inputs relative to a known base component cost, such that the estimated cost of each technology is specified relative to a common reference point for the relevant technology pathway. For example, the cost of a 7-speed transmission is specified relative to a 5-speed transmission, as is the cost of every other transmission technology.

Conversely, in some earlier versions of the CAFE Model, *incremental cost* inputs were estimated relative to the technology immediately preceding on the relevant technology pathway. For our 7-speed transmission example, the incremental cost would be relative to a 6-speed transmission. This change in the structure of cost inputs does not, by itself, change model results, but it does make the connection between these inputs and corresponding outputs more transparent. The CAFE Model Documentation accompanying our

analysis presents details of the structure for model cost inputs.¹⁰¹ The individual technology sections in Section III.D provide a detailed discussion of cost accounting for each technology.

7. Manufacturer’s Credit Compliance Positions

This proposed rule involves a variety of provisions regarding “credits” and other compliance flexibilities. Some regulatory provisions allow a manufacturer to earn “credits” that will

¹⁰¹ CAFE Model Documentation, S4.7.

be counted toward a vehicle's rated CO₂ emissions level, or toward a fleet's rated average CO₂ or CAFE level, without reference to required levels for these average levels of performance. Such flexibilities effectively modify emissions and fuel economy test procedures or methods for calculating fleets' CAFE and average CO₂ levels. Other provisions (for CAFE, statutory provisions) allow manufacturers to earn credits by achieving CAFE or average CO₂ levels beyond required levels; these provisions may hence more appropriately be termed "compliance credits." We described in the 2020 final rule how the CAFE Model simulates these compliance credit provisions for both the CAFE program and for EPA's CO₂ standards.¹⁰² For this analysis, we modeled the no-action and action alternatives as a set of CAFE standards in place simultaneously with EPA baseline (*i.e.*, 2020 final) CO₂ standards, related CARB agreements with five manufacturers, and ZEV mandates in place in California and some other states. The modeling of CO₂ standards and standard-like contractual obligations includes our representation of applicable credit provisions.

EPCA has long provided that, by exceeding the CAFE standard applicable to a given fleet in a given model year, a manufacturer may earn corresponding "credits" that the same manufacturer may, within the same regulatory class, apply toward compliance in a different model year. EISA amended these provisions by providing that manufacturers may, subject to specific statutory limitations, transfer compliance credits between regulatory classes and trade compliance credits with other manufacturers. The CAA provides the EPA with broad standard-setting authority for the CO₂ program, with no specific directives regarding CO₂ standards or CO₂ compliance credits.

EPCA also specifies that NHTSA may not consider the availability of CAFE credits (for transfer, trade, or direct application) toward compliance with new standards when establishing the standards themselves.¹⁰³ Therefore, this analysis excludes model years 2024–2026 from those in which carried-forward or transferred credits can be applied for the CAFE program.

The "unconstrained" perspective acknowledges that these flexibilities exist as part of the program and, while not considered by NHTSA in setting standards, are nevertheless important to consider when attempting to estimate

the real impact of any alternative. Under the "unconstrained" perspective, credits may be earned, transferred, and applied to deficits in the CAFE program throughout the full range of model years in the analysis. The Draft Supplemental Environmental Impact Statement (SEIS) accompanying this proposed rule, like the corresponding SEIS analysis, presents "unconstrained" modeling results. Also, because the CAA provides no direction regarding consideration of any CO₂ credit provisions, this analysis includes simulation of carried-forward and transferred CO₂ credits in all model years.

The CAFE Model, therefore, does provide means to simulate manufacturers' potential application of some compliance credits, and both the analysis of CO₂ standards and the NEPA analysis of CAFE standards do make use of this aspect of the model. On the other hand, 49 U.S.C. 32902(h) prevents NHTSA from, in its standard setting analysis, considering the potential that manufacturers could use compliance credits in model years for which the agency is establishing maximum feasible CAFE standards. Further, as discussed below, we also continue to find it appropriate for the analysis largely to refrain from simulating two of the mechanisms allowing the use of compliance credits.

The CAFE Model's approach to simulating compliance decisions accounts for the potential to earn and use CAFE credits as provided by EPCA/EISA. The model similarly accumulates and applies CO₂ credits when simulating compliance with EPA's standards. Like past versions, the current CAFE Model can simulate credit carry-forward (*i.e.*, banking) between model years and transfers between the passenger car and light truck fleets but not credit carry-back (*i.e.*, borrowing) from future model years or trading between manufacturers.

While NHTSA's "unconstrained" evaluation can consider the potential to carry back compliance credits from later to earlier model years, past examples of failed attempts to carry back CAFE credits (*e.g.*, a MY 2014 carry back default leading to a civil penalty payment) underscore the riskiness of such "borrowing." Recent evidence indicates manufacturers are disinclined to take such risks, and we find it reasonable and prudent to refrain from attempting to simulate such "borrowing" in rulemaking analysis.

Like the previous version, the current CAFE Model provides a basis to specify (in model inputs) CAFE credits available from model years earlier than those being explicitly simulated. For

example, with this analysis representing model years 2020–2050 explicitly, credits earned in the model year 2015 are made available for use through the model year 2020 (given the current five-year limit on carry-forward of credits). The banked credits are specific to both the model year and fleet in which they were earned.

To increase the realism with which the model transitions between the early model years (MYs 2020–2023) and the later years that are the subject of this action, we have accounted for the potential that some manufacturers might trade credits earned prior to 2020 to other manufacturers. However, the analysis refrains from simulating the potential that manufacturers might continue to trade credits during and beyond the model years covered by this action. In 2018 and 2020, the analysis included idealized cases simulating "perfect" (*i.e.*, wholly unrestricted) trading of CO₂ compliance credits by treating all vehicles as being produced by a single manufacturer. Even for CO₂ compliance credit trading, these scenarios were not plausible, because it is exceedingly unlikely that some pairs of manufacturers would trade compliance credits. NHTSA did not include such cases for CAFE compliance credits, because EPCA provisions (such as the minimum domestic passenger car standard requirement) make such scenarios impossible. At this time, we remain concerned that any realistic simulation of such trading would require assumptions regarding which specific pairs of manufacturers might trade compliance credits, and the evidence to date makes it clear that the credit market is far from fully "open."

We also remain concerned that to set standards based on an analysis that presumes the use of program flexibilities risks making the corresponding actions mandatory. Some flexibilities—credit carry-forward (banking) and transfers between fleets in particular—involve little risk because they are internal to a manufacturer and known in advance. As discussed above, credit carry-back involves significant risk because it amounts to borrowing against future improvements, standards, and production volume and mix. Similarly, credit trading also involves significant risk, because the ability of manufacturer A to acquire credits from manufacturer B depends not just on manufacturer B actually earning the expected amount of credit, but also on manufacturer B being willing to trade with manufacturer A, and on potential interest by other manufacturers. Manufacturers' compliance plans have

¹⁰² See 85 FR 24174, 24303 (April 30, 2020).

¹⁰³ 49 U.S.C. 32902(h)(3).

already evidenced cases of compliance credit trades that were planned and subsequently aborted, reinforcing our judgment that, like credit banking, credit trading involves too much risk to be included in an analysis that informs decisions about the stringency of future standards.

As discussed in the CAFE Model Documentation, the model's default logic attempts to maximize credit carry-forward—that is, to “hold on” to credits for as long as possible. If a manufacturer needs to cover a shortfall that occurs when insufficient opportunities exist to add technology to achieve compliance with a standard, the model will apply credits. Otherwise, the manufacturer carries forward credits until they are about to expire, at which point it will use them before adding technology that is not considered cost-effective. The model attempts to use credits that will expire within the next three years as a means to smooth out technology applications over time to avoid both compliance shortfalls and high levels of over-compliance that can result in a surplus of credits. Although it remains impossible precisely to predict the manufacturer's actual earning and use of compliance credits, and this aspect of the model may benefit from future refinement as manufacturers and regulators continue to gain experience with these provisions, this approach is generally consistent with manufacturers' observed practices.

NHTSA introduced the CAFE Public Information Center (PIC) to provide public access to a range of information regarding the CAFE program,¹⁰⁴ including manufacturers' credit balances. However, there is a data lag in the information presented on the CAFE PIC that may not capture credit actions across the industry for as much as several months. Furthermore, CAFE credits that are traded between manufacturers are adjusted to preserve the gallons saved that each credit represents.¹⁰⁵ The adjustment occurs at the time of application rather than at the time the credits are traded. This means that a manufacturer who has acquired credits through trade, but has not yet applied them, may show a credit balance that is either considerably higher or lower than the real value of the credits when they are applied. For example, a manufacturer that buys 40

million credits from Tesla may show a credit balance in excess of 40 million. However, when those credits are applied, they may be worth only 1/10 as much—making that manufacturer's true credit balance closer to 4 million than 40 million (e.g., when another manufacturer uses credits acquired from Tesla, the manufacturer may only be able to offset a 1 mpg compliance shortfall, even though the credits' “face value” suggests the manufacturer could offset a 10 mpg compliance shortfall).

Specific inputs accounting for manufacturers' accumulated compliance credits are discussed in TSD Chapter 2.2.2.3.

In addition to the inclusion of these existing credit banks, the CAFE Model also updated its treatment of credits in the rulemaking analysis. EPCA requires that NHTSA set CAFE standards at maximum feasible levels for each model year without consideration of the program's credit mechanisms. However, as recent CAFE rulemakings have evaluated the effects of standards over longer time periods, the early actions taken by manufacturers required more nuanced representation. Accordingly, the CAFE Model now provides means to exclude the simulated application of CAFE compliance credits only from specific model years for which standards are being set (for this analysis, 2024–2026), while allowing CAFE credits to be applied in other model years.

In addition to more rigorous accounting of CAFE and CO₂ compliance credits, the model also accounts for air conditioning efficiency and off-cycle adjustments. NHTSA's program considers those adjustments in a manufacturer's compliance calculation starting in MY 2017, and specific estimates of each manufacturer's reliance on these adjustments are discussed above in Section III.C.2.a). Because air conditioning efficiency and off-cycle adjustments are not credits in NHTSA's program, but rather adjustments to compliance fuel economy, they may be included under either a “standard setting” or “unconstrained” analysis perspective.

The manner in which the CAFE Model treats the EPA and CAFE A/C efficiency and off-cycle credit programs is similar, but the model also accounts for A/C leakage (which is not part of NHTSA's program). When determining the compliance status of a manufacturer's fleet (in the case of EPA's program, PC and LT are the only fleet distinctions), the CAFE Model weighs future compliance actions against the presence of existing (and expiring) CO₂ credits resulting from

over-compliance with earlier years' standards, A/C efficiency credits, A/C leakage credits, and off-cycle credits.

The model currently accounts for any off-cycle adjustments associated with technologies that are included in the set of fuel-saving technologies explicitly simulated as part of this proposal (for example, start-stop systems that reduce fuel consumption during idle or active grille shutters that improve aerodynamic drag at highway speeds) and accumulates these adjustments up to the cap. As discussed further in Section III.D.8, this analysis considers that some manufacturers may apply up to 15.0 g/mi of off-cycle credit by MY 2032. We considered the potential to model the application of off-cycle technologies explicitly. However, doing so would require data regarding which vehicle models already possess these improvements as well as the cost and expected value of applying them to other models in the future. Such data are currently too limited to support explicit modeling of these technologies and adjustments.

When establishing maximum feasible fuel economy standards, NHTSA is prohibited from considering the availability of alternatively fueled vehicles,¹⁰⁶ and credit provisions related to AFVs that significantly increase their fuel economy for CAFE compliance purposes. Under the “standard setting” perspective, these technologies (pure battery electric vehicles and fuel cell vehicles¹⁰⁷) are not available in the compliance simulation to improve fuel economy. Under the “unconstrained” perspective, such as is documented in the SEIS, the CAFE Model considers these technologies in the same manner as other available technologies and may apply them if they represent cost-effective compliance pathways. However, under both perspectives, the analysis continues to include dedicated AFVs that could be produced in response to CAFE standards outside the model years for which standards are being set, or for other reasons (e.g., ZEV mandates, as accounted for in this analysis).

EPCA also provides that CAFE levels may, subject to limitations, be adjusted upward to reflect the sale of flexible fuel vehicles (FFVs). Because these adjustments ended in model year 2020, this analysis assumes no manufacturer

¹⁰⁴ CAFE Public Information Center, https://one.nhtsa.gov/cafe_pic/cafe_pic_home.htm (last visited May 11, 2021).

¹⁰⁵ CO₂ credits for EPA's program are denominated in metric tons of CO₂ rather than gram/mile compliance credits and require no adjustment when traded between manufacturers or fleets.

¹⁰⁶ 49 U.S.C. 32902(h).

¹⁰⁷ Dedicated compressed natural gas (CNG) vehicles should also be excluded in this perspective but are not considered as a compliance strategy under any perspective in this analysis.

will earn FFV credits within the modeling horizon.

Also, the CAA provides no direction regarding consideration of alternative fuels, and EPA has provided that manufacturers selling PHEVs, BEVs, and FCVs may, when calculating fleet average CO₂ levels, “count” each unit of production as more than a single unit. The CAFE Model accounts for these “multipliers.” For example, under EPA’s current regulation, when calculating the average CO₂ level achieved by its MY 2019 passenger car fleet, a manufacturer may treat each 1,000 BEVs as 2,000 BEVs. When calculating the average level required of this fleet, the manufacturer must use the actual production volume (in this example, 1,000 units). Similarly, the manufacturer must use the actual production volume when calculating compliance credit balances.

There were no natural gas vehicles in the baseline fleet, and the analysis did not apply natural gas technology due to cost effectiveness. The application of a 2.0 multiplier for natural gas vehicles for MYs 2024–2026 would have no impact on the analysis because given the state of natural gas vehicle refueling infrastructure, the cost to equip vehicles with natural gas tanks, the outlook for petroleum prices, and the outlook for battery prices, we have little basis to project more than an inconsequential response to this incentive in the foreseeable future.

D. Technology Pathways, Effectiveness, and Cost

Vehicle manufacturers meet increasingly more stringent fuel economy standards by applying increasing levels of fuel-economy-improving technologies to their vehicles. An appropriate characterization of the technologies available to manufacturers to meet fuel economy standards is, therefore, an important input required to assess the levels of standards that manufacturers can achieve. Like previous CAFE standards analyses, this proposal considers over 50 fuel-economy-improving technologies that manufacturers could apply to their MY 2020 fleet of vehicles to meet proposed levels of CAFE standards in MYs 2024–2026. The characterization of these technologies, the technology effectiveness values, and technology cost assumptions build on work performed by DOT, EPA, the National Academy of Sciences, and other Federal and state government agencies including the Department of Energy’s Argonne National Laboratory and the California Air Resources Board.

After spending approximately a decade refining the technology pathways, effectiveness, and cost assumptions used in successive CAFE Model analyses, DOT has developed guiding principles to ensure that the CAFE Model’s simulation of manufacturer compliance pathways results in impacts that we would reasonably expect to see in the real world. These guiding principles are as follows:

Even though the analysis considers over 50 individual technologies, the fuel economy improvement from any individual technology must be considered in conjunction with the other fuel-economy-improving technologies applied to the vehicle. For example, there is an obvious fuel economy benefit that results from converting a vehicle with a traditional internal combustion engine to a battery electric vehicle; however, the benefit of the electrification technology depends on the other road load reducing technologies (*i.e.*, mass reduction, aerodynamic, and rolling resistance) on the vehicle.

Technologies added in combination to a vehicle will not result in a simply additive fuel economy improvement from each individual technology. As discussed in Section III.C.4, full vehicle modeling and simulation provides the required degree of accuracy to project how different technologies will interact in the vehicle system. For example, as discussed further in Sections III.D.1 and III.D.3, a parallel hybrid architecture powertrain improves fuel economy, in part, by allowing the internal combustion engine to spend more time operating at efficient engine speed and load conditions. This reduces the advantage of adding advanced internal combustion engine technologies, which also improve fuel economy, by broadening the range of speed and load conditions for the engine to operate at high efficiency. This redundancy in fuel savings mechanism results in a reduced effectiveness improvement when the technologies are added to each other.

The effectiveness of a technology depends on the type of vehicle the technology is being applied to. For example, applying mass reduction technology results in varying effectiveness as the absolute mass reduced is a function of the starting vehicle mass, which varies across technology classes. See Section III.D.4 for more details.

The cost and effectiveness values for each technology should be reasonably representative of what can be achieved across the entire industry. Each technology model employed in the

analysis is designed to be representative of a wide range of specific technology applications used in industry. Some vehicle manufacturer’s systems may perform better and cost less than our modeled systems and some may perform worse and cost more. However, employing this approach will ensure that, on balance, the analysis captures a reasonable level of costs and benefits that would result from any manufacturer applying the technology.

The baseline for cost and effectiveness values must be identified before assuming that a cost or effectiveness value could be employed for any individual technology. For example, as discussed further in Section III.D.1.d) below, this analysis uses a set of engine map models that were developed by starting with a small number of baseline engine configurations, and then, in a very systematic and controlled process, adding specific well-defined technologies to create a new map for each unique technology combination.

The following sections discuss the engine, transmission, electrification, mass reduction, aerodynamic, tire rolling resistance, and other vehicle technologies considered in this analysis. Each section discusses how we define the technology in the CAFE Model,¹⁰⁸ how we assigned the technology to vehicles in the MY 2020 analysis fleet used as a starting point for this analysis, any adoption features applied to the technology so the analysis better represents manufacturers’ real-world decisions, the technology effectiveness values, and technology cost.

Please note that the following technology effectiveness sections provide *examples* of the range of effectiveness values that a technology could achieve when applied to the entire vehicle system, in conjunction with the other fuel-economy-improving technologies already on or also applied at the same time to the vehicle. To see the incremental effectiveness values for any particular vehicle moving from one technology key to a more advanced technology key, see the FE_1 and FE_2 Adjustments files that are integrated in the CAFE Model executable file. Similarly, the technology costs provided in each section are *examples* of absolute costs seen in specific model years (MYs 2020, 2025, and 2030 for most technologies), for specific vehicle classes. To see all absolute technology costs used in the analysis across all model years, see the Technologies file.

¹⁰⁸ Note, due to the diversity of definitions industry sometimes employs for technology terms, or in describing the specific application of technology, the terms defined here may differ from how the technology is defined in the industry.

NHTSA seeks comment on the following discussion.

1. Engine Paths

For this analysis, the extensive variety of light duty vehicle internal combustion (IC) engine technologies are classified into discrete engine technology paths. These paths are used to model the most representative characteristics, costs, and performance of the fuel-economy improving technologies most likely available during the rulemaking time frame, MYs 2024–2026. Due to uncertainties in the cost and capabilities of emerging technologies, some new and pre-production technologies are not part of this analysis. We did not include technologies unlikely to be feasible in the rulemaking timeframe, technologies unlikely to be compatible with U.S. fuels, or technologies for which there was not appropriate data available to allow the simulation of effectiveness

across all vehicle technology classes in this analysis.

The following sections discuss IC engine technologies considered in this analysis, general technology categories used by the CAFE Model, and how the engine technologies are assigned in the MY 2020 analysis fleet. The following sections also discuss adoption features applicable to engine technologies, engine technologies’ effectiveness when combined in a full vehicle model, and the engine technologies’ costs.

(a) Engine Modeling in the CAFE Model

DOT models IC engine technologies that manufacturers can use to improve fuel economy. Some engine technologies can be incorporated into existing engines with minor or moderate changes to the engines, but many engine technologies require an entirely new engine architecture.

We divide engine technologies into two categories, “basic engine technologies” and “advanced engine

technologies.” “Basic engine technologies” refer to technologies adaptable to an existing engine with minor or moderate changes to the engine. “Advanced engine technologies” refer to technologies that generally require significant changes or an entirely new engine architecture. The words “basic” and “advanced” are not meant to confer any information about the level of sophistication of the technology. Many advanced engine technology definitions also include some basic engine technologies, and these basic technologies are accounted for in the costs and effectiveness values of the advanced engine. Figure III–7 shows how the basic and other engines are laid out on pathways evaluated in the compliance simulation. Each engine technology is briefly described, below. It is important to note the “Basic Engine Path” shows that every engine starts with VVT and can add one, some, or all the technologies in the dotted box, as discussed in Section III.D.1.a)(1).

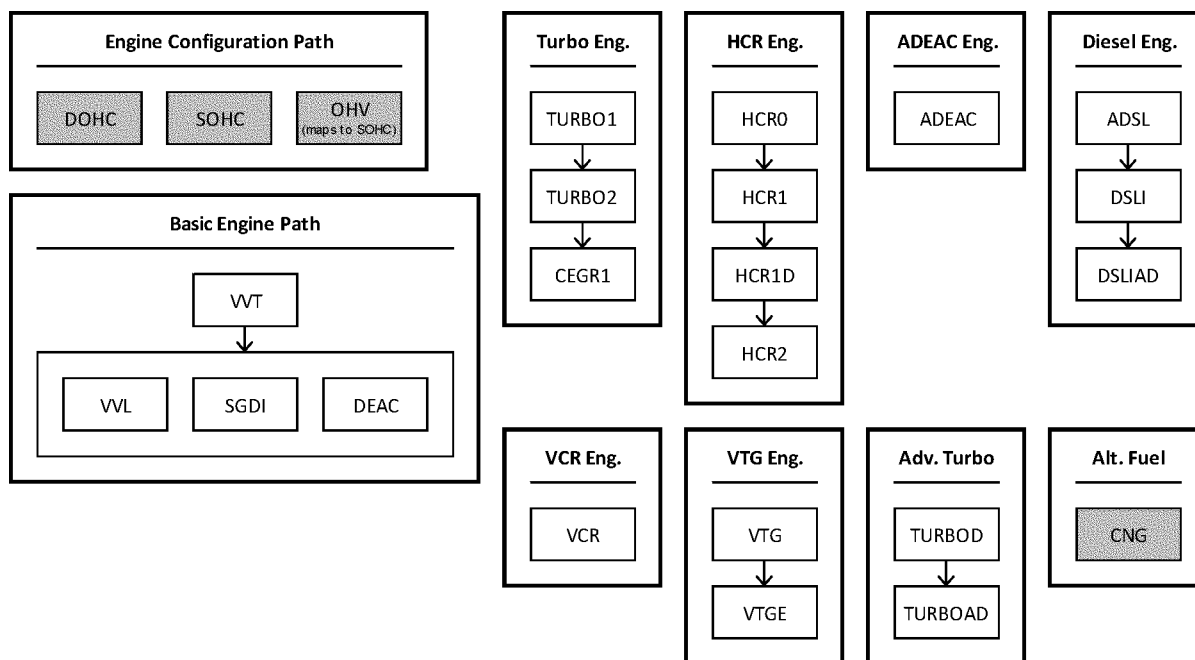


Figure III-7 – Engine Technology Paths in the CAFE Model

(1) Basic Engines

In the CAFE Model, basic engine technologies may be applied individually or in combination with other basic engine technologies. The basic engine technologies include variable valve timing (VVT), variable valve lift (VVL), stoichiometric gasoline direct injection (SGDI), and cylinder deactivation. Cylinder deactivation

includes a basic level (DEAC) and an advanced level (ADEAC). DOT applies the basic engine technologies across two engine architectures: dual over-head camshaft (DOHC) engine architecture and single over-head camshaft (SOHC) engine architecture.

VVT: Variable valve timing is a family of valve-train designs that dynamically adjusts the timing of the intake valves, exhaust valves, or both, in relation to

piston position. VVT can reduce pumping losses, provide increased engine torque and horsepower over a broad engine operating range, and allow unique operating modes, such as Atkinson cycle operation, to further enhance efficiency.¹⁰⁹ VVT is nearly universally used in the MY 2020 fleet. VVT enables more control of in-cylinder

¹⁰⁹ 2015 NAS report, at 31.

air flow for exhaust scavenging and combustion relative to fixed valve timing engines. Engine parameters such as volumetric efficiency, effective compression ratio, and internal exhaust gas recirculation (iEGR) can all be enabled and accurately controlled by a VVT system.

VVL: Variable valve lift dynamically adjusts the distance a valve travels from the valve seat. The dynamic adjustment can optimize airflow over a broad range of engine operating conditions. The technology can increase effectiveness by reducing pumping losses and by affecting the fuel and air mixture motion and combustion in-cylinder.¹¹⁰ VVL is less common in the MY 2020 fleet than VVT, but still prevalent. Some manufacturers have implemented a limited, discrete approach to VVL. The discrete approach allows only limited (e.g., two) valve lift profiles versus allowing a continuous range of lift profiles.

SGDI: Stoichiometric gasoline direct injection sprays fuel at high pressure directly into the combustion chamber, which provides cooling of the in-cylinder charge via in-cylinder fuel vaporization to improve spark knock tolerance and enable an increase in compression ratio and/or more optimal spark timing for improved efficiency.¹¹¹ SGDI is common in the MY 2020 fleet, and the technology is used in many advanced engines as well.

DEAC: Basic cylinder deactivation disables intake and exhaust valves and turns off fuel injection for the deactivated cylinders during light load operation. DEAC is characterized by a small number of discrete operating configurations.¹¹² The engine runs temporarily as though it were a smaller engine, reducing pumping losses and improving efficiency. DEAC is present in the MY 2020 baseline fleet.

ADEAC: Advanced cylinder deactivation systems, also known as rolling or dynamic cylinder deactivation systems, allow a further degree of cylinder deactivation than the base DEAC. ADEAC allows the engine to vary the percentage of cylinders deactivated and the sequence in which cylinders are deactivated, essentially providing “displacement on demand” for low load operations. A small number of vehicles have ADEAC in the MY 2020 baseline fleet.

Section III.D.1.d) contains additional information about each basic engine technology used in this analysis, including information about the engine

map models used in the full vehicle technology effectiveness modeling.

(2) Advanced Engines

DOT defines advanced engine technologies in the analysis as technologies that require significant changes in engine structure, or an entirely new engine architecture.¹¹³ The advanced engine technologies represent the application of alternate combustion cycles or changes in the application of forced induction to the engine. Each advanced engine technology has a discrete pathway for progression to improved versions of the technology, as seen above in Figure III–7. The advanced engine technology pathways include a turbocharged pathway, a high compression ratio (Atkinson) engine pathway, a variable turbo geometry (Miller Cycle) engine pathway, a variable compression ratio pathway, and a diesel engine pathway. Although the CAFE Model includes a compressed natural gas (CNG) pathway, that technology is a baseline-only technology and was not included in the analysis; currently, there are no dedicated CNG vehicles in the MY 2020 analysis fleet.

TURBO: Forced induction engines, or turbocharged downsized engines, are characterized by technology that can create greater-than-atmospheric pressure in the engine intake manifold when higher output is needed. The raised pressure results in an increased amount of airflow into the cylinder supporting combustion, increasing the specific power of the engine. Increased specific power means the engine can generate more power per unit of cylinder volume. The higher power per cylinder volume allows the overall engine volume to be reduced, while maintaining performance. The overall engine volume decrease results in an increase in fuel efficiency by reducing parasitic loads associated with larger engine volumes.¹¹⁴

Cooled exhaust gas recirculation is also part of the advanced forced induction technology path. The basic recycling of exhaust gases using VVT is called internal EGR (iEGR) and is included as part of the performance improvements provided by the VVT basic engine technology. Cooled EGR (cEGR) is a second method for diluting the incoming air that takes exhaust gases, passes them through a heat exchanger to reduce their temperature, and then mixes them with incoming air

in the intake manifold.¹¹⁵ As discussed in Section III.D.1.d), many advanced engine maps include EGR.

Five levels of turbocharged engine downsizing technologies are considered in this analysis: A ‘basic’ level of turbocharged downsized technology (TURBO1), an advanced turbocharged downsized technology (TURBO2), an advanced turbocharged downsized technology with cooled exhaust gas recirculation applied (cEGR), a turbocharged downsized technology with basic cylinder deactivation applied (TURBOD), and a turbocharged downsized technology with advanced cylinder deactivation applied (TURBOAD).

HCR: Atkinson engines, or high compression ratio engines, represent a class of engines that achieve a higher level of fuel efficiency by implementing an alternate combustion cycle.¹¹⁶ Historically, the Otto combustion cycle has been used by most gasoline-based spark ignition engines. Increased research into improving fuel economy has resulted in the development of alternate combustion cycles that allow for greater levels of thermal efficiency. One such alternative combustion cycle is the Atkinson cycle. Atkinson cycle operation is achieved by allowing the expansion stroke of the engine to overextend allowing the combustion products to achieve the lowest possible pressure before the exhaust stroke.^{117 118 119}

Descriptions of Atkinson cycle engines and Atkinson mode or Atkinson-enabled engine technologies have been used interchangeably in association with high compression ratio (HCR) engines, for past rulemaking analyses. Both technologies achieve a higher thermal efficiency than traditional Otto cycle-only engines, however, the two engine types operate differently. For purposes of this analysis, Atkinson technologies can be categorized into two groups to reduce confusion: (1) Atkinson-enabled engines and (2) Atkinson engines.

Atkinson-enabled engines, or high compression ratio engines (HCR),

¹¹⁵ 2015 NAS report, at 35.

¹¹⁶ See the 2015 NAS report, Appendix D, for a short discussion on thermodynamic engine cycles.

¹¹⁷ Otto cycle is a four-stroke cycle that has four piston movements over two engine revolutions for each cycle. First stroke: Intake or induction; second stroke: Compression; third stroke: Expansion or power stroke; and finally, fourth stroke: Exhaust.

¹¹⁸ Compression ratio is the ratio of the maximum to minimum volume in the cylinder of an internal combustion engine.

¹¹⁹ Expansion ratio is the ratio of maximum to minimum volume in the cylinder of an IC engine when the valves are closed (i.e., the piston is traveling from top to bottom to produce work).

¹¹⁰ 2015 NAS report, at 32.

¹¹¹ 2015 NAS report, at 34.

¹¹² 2015 NAS report, at 33.

¹¹³ Examples of this include but are not limited to changes in cylinder count, block geometry or combustion cycle changes.

¹¹⁴ 2015 NAS report, at 34.

dynamically swing between operating closer to an Otto cycle or an Atkinson cycle based on engine loads. During high loads the engine will use the lower-efficiency, power-dense Otto cycle mode, while at low loads the engine will use the higher-efficiency, lower power-dense Atkinson cycle mode. The hybrid combustion cycle operation is used to address the low power density issues that can limit the Atkinson-only engine and allow for a wider application of the technology.

The level of efficiency improvement experienced by a vehicle employing Atkinson cycle operation is directly related to how much of the engine's operation time is spent in Atkinson mode. Vehicles that can experience operation at a high load for long portions of their operating cycle will see little to no benefit from this technology. This limitation to performance results in manufacturers typically limiting the application of this technology to vehicles with a use profile that can take advantage of the technology's behavior.

Three HCR or Atkinson-enabled engines are available in the analysis: (1) The baseline Atkinson-enabled engine (HCR0), (2) the enhanced Atkinson enabled engine (HCR1), and finally, (3) the enhanced Atkinson enabled engine with cylinder deactivation (HCR1D).

In contrast, Atkinson engines in this analysis are defined as engines that operate full-time in the Atkinson cycle. The most common method of achieving Atkinson operation is the use of late intake valve closing. This method allows backflow from the combustion chamber into the intake manifold, reducing the dynamic compression ratio, and providing a higher expansion ratio. The higher expansion ratio improves thermal efficiency but reduces power density. The low power density generally relegates these engines to hybrid vehicle (SHEVPS) applications only in this analysis. Coupling the engines to electric motors and significantly reducing road loads can compensate for the lower power density and maintain desired performance levels for the vehicle.¹²⁰ The Toyota Prius is an example of a vehicle that uses an Atkinson engine. The 2017 Toyota Prius achieved a peak thermal efficiency of 40 percent.¹²¹

¹²⁰ Toyota. "Under the Hood of the All-new Toyota Prius." Oct. 13, 2015. Available at <https://global.toyota/en/detail/9827044>. Last accessed Nov. 22, 2019.

¹²¹ Matsuo, S., Ikeda, E., Ito, Y., and Nishiura, H., "The New Toyota Inline 4 Cylinder 1.8L ESTEC 2ZR-FXE Gasoline Engine for Hybrid Car," SAE Technical Paper 2016-01-0684, 2016, <https://doi.org/10.4271/2016-01-0684>.

NHTSA seeks comment on whether and how to consider "HCR2" in the analysis for the final rule.

VTG: The Miller cycle is another type of overexpansion combustion cycle, similar to the Atkinson cycle. The Miller cycle, however, operates in combination with a forced induction system that helps address the impacts of reduced power density during high load operating conditions. Miller cycle-enabled engines use a similar technology approach as seen in Atkinson-enabled engines to effectively create an expanded expansion stroke of the combustion cycle.

In the analysis, the baseline Miller cycle-enabled engine includes the application of a variable turbo geometry technology (VTG). The advanced Miller cycle enabled system includes the application of a 48V-based electronic boost system (VTGE). VTG technology allows the system to vary boost level based on engine operational needs. The use of a variable geometry turbocharger also supports the use of cooled exhaust gas recirculation.¹²² An electronic boost system has an electric motor added to assist a turbocharger at low engine speeds. The motor assist mitigates turbocharger lag and low boost pressure at low engine speeds. The electronic assist system can provide extra boost needed to overcome the torque deficits at low engine speeds.¹²³

VCR: Variable compression ratio (VCR) engines work by changing the length of the piston stroke of the engine to optimize the compression ratio and improve thermal efficiency over the full range of engine operating conditions. Engines using VCR technology are currently in production, but appear to be targeted primarily towards limited production, high performance applications. Nissan is the only manufacturer to use this technology in the MY 2020 baseline fleet. Few manufacturers and suppliers provided information about VCR technologies, and DOT reviewed several design concepts that could achieve a similar functional outcome. In addition to design concept differences, intellectual property ownership complicates the ability to define a VCR hardware system that could be widely adopted across the industry. Because of these issues, adoption of the VCR engine technology is limited to Nissan only.

ADSL: Diesel engines have several characteristics that result in superior fuel efficiency over traditional gasoline engines. These advantages include reduced pumping losses due to lack of

(or greatly reduced) throttling, high pressure direct injection of fuel, a more efficient combustion cycle,¹²⁴ and a very lean air/fuel mixture relative to an equivalent-performance gasoline engine.¹²⁵ However, diesel technologies require additional enablers, such as a NOx adsorption catalyst system or a urea/ammonia selective catalytic reduction system, for control of NOx emissions.

DOT considered three levels of diesel engine technology: the baseline diesel engine technology (ADSL) is based on a standard 2.2L turbocharged diesel engine; the more advanced diesel engine (DSL) starts with the ADSL system and incorporates a combination of low pressure and high pressure EGR, reduced parasitic loss, friction reduction, a highly-integrated exhaust catalyst with low temp light off temperatures, and closed loop combustion control; and finally the most advanced diesel system (DSLAD) is the DSL system with advanced cylinder deactivation technology added.

EFR: Engine friction reduction technology is a general engine improvement meant to represent future technologies that reduce the internal friction of an engine. EFR technology is not available for application until MY 2023. The future technologies do not significantly change the function or operation of the engine but reduce the energy loss due to the rotational or rubbing friction experienced in the bearings or cylinder during normal operation. These technologies can include improved surface coatings, lower-tension piston rings, roller cam followers, optimal thermal management and piston surface treatments, improved bearing design, reduced inertial loads, improved materials, or improved geometry.

(b) Engine Analysis Fleet Assignments

As a first step in assigning baseline levels of engine technologies in the analysis fleet, DOT used data for each manufacturer to determine which platforms shared engines. Within each manufacturer's fleet, DOT assigned unique identification designations (engine codes) based on configuration, technologies applied, displacement, compression ratio, and power output. DOT used power output to distinguish between engines that might have the same displacement and configuration

¹²⁴ Diesel cycle is also a four-stroke cycle like the Otto Cycle, except in the intake stroke no fuel is injected and fuel is injected late in the compression stroke at higher pressure and temperature.

¹²⁵ See the 2015 NAS report, Appendix D, for a short discussion on thermodynamic engine cycles.

¹²² 2015 NAS report, at 116.

¹²³ 2015 NAS report, at 62.

but significantly different horsepower ratings.

The CAFE Model identifies leaders and followers for a manufacturer’s vehicles that use the same engine, indicated by sharing the same engine code. The model automatically determines which engines are leaders by using the highest sales volume row of the highest sales volume nameplate that is assigned an engine code. This leader-follower relationship allows the CAFE Model simulation to maintain engine sharing as more technology is applied to engines.

DOT accurately represents each engine using engine technologies and engine technology classes. The first step is to assign engine technologies to each engine code. Technology assignment is based on the identified characteristics of the engine being modeled, and based on technologies assigned, the engine will be aligned with an engine map model that most closely corresponds.

The engine technology classes are a second identifier used to accurately account for engine costs. The engine technology class is formatted as number of cylinders followed by the letter C,

number of banks followed by the letter B, and an engine head configuration designator, which is _SOHC for single overhead cam, _ohv for overhead valve, or blank for dual overhead cam. As an example, one variant of the GMC Acadia has a naturally aspirated DOHC inline 4-cylinder engine, so DOT assigned the vehicle to the ‘4C1B’ engine technology class and assigned the technology VVT and SGDI. Table III–7 shows examples of observed engines with their corresponding assigned engine technologies as well as engine technology classes.

Table III-7 – Examples of Observed Engines and Their Corresponding Engine Technology Class and Technology Assignments

Vehicle	Engine Observed	Engine Technology Class Assigned	Engine Technology Assigned
GMC Acadia	Naturally Aspirated DOHC Inline 4 cylinder	4C1B	VVT, SGDI
VW Arteon	Turbocharged DOHC Inline 4 cylinder	6C2B	TURBO1
Bentley Bentayga	Turbocharged DOHC W12 w/ cylinder deactivation	16C4B	TURBOD
Honda Passport	Naturally Aspirated SOHC V6	6C2B_SOHC	VVT, VVL, SGDI, DEAC
Honda Civic	Turbocharged DOHC Inline 4 cylinder	4C1B	TURBO1
Cadillac CT5	Turbocharged DOHC V6 w/ cylinder deactivation	8C2B	TURBOD
Ford Escape	Turbocharged DOHC Inline 3 cylinder	4C1B_L	TURBO1
Chevrolet Silverado	Naturally Aspirated OHV V8 w/ skip fire	8C2B_ohv	ADEAC

The cost tables for a given engine class include downsizing (to an engine architecture with fewer cylinders) when turbocharging technology is applied, and therefore, the turbocharged engines observed in the 2020 fleet (that have already been downsized) often map to an engine class with more cylinders. For instance, an observed TURBO1 V6 engine would map to an 8C2B (V8) engine class, because the turbo costs on the 8C2B engine class worksheet assume a V6 (6C2B) engine architecture. Diesel engines map to engine technology classes that match the observed cylinder count since naturally aspirated diesel engines are not found in new light duty vehicles in the U.S. market. Similarly, as indicated above, the TURBO1 I3 in the Ford Escape maps to the 4C1B_L (I4) engine class, because the turbo costs on

the 4C1B_L engine class worksheet assume a I3 (3C1B) engine architecture. Some instances can be more complex, including low horsepower variants for 4-cylinder engines, and are shown in Table III–8.

For this analysis, we have allowed additional downsizing beyond what has been previously modeled. We allow enhanced downsizing because manufacturers have downsized low output naturally aspirated engines to turbo engines with smaller architectures than traditionally observed.^{126 127 128} To

capture this new level of turbo downsizing we created a new category of low output naturally aspirated engines, which is only applied to 4-cylinder engines in the MY 2020 fleet. These engines use the costing tabs in the Technologies file with the ‘L’ designation and are assumed to downsize to turbocharged 3-cylinder engines for costing purposes. We seek comment regarding the expected further application of this technology to larger cylinder count engines, such as 8-cylinder engines that may be turbo

¹²⁶ Richard Truett, “GM Brining 3-Cylinder back to North America.” Automotive News, December 01, 2019. <https://www.autonews.com/cars-concepts/gm-bringing-3-cylinder-back-na>.

¹²⁷ Stoklosa, Alexander, “2021 Mini Cooper Hardtop.” Car and Driver, December 2, 2014.

<https://www.caranddriver.com/reviews/a15109143/2014-mini-cooper-hardtop-manual-test-review/>.

¹²⁸ Leanse, Alex “2020 For Escape Options: Hybrid vs. 3-Cylinder EcoBoost vs. 4-Cylinder EcoBoost.” MotorTrend, Sept 24, 2019. <https://www.motortrend.com/news/2020-ford-escape-engine-options-pros-and-cons-comparison/>.

downsized to 4-cylinder engines. We would also like comment on how to define the characteristic of an engine

that may be targeted for enhanced downsizing.

Table III-8 – Examples of Engine Technology Class Assignment Logic

Observed Gasoline Engine Configuration	Observed Number of Cylinders	Horsepower	Naturally Aspirated or Turbo	Engine Technology Class Assigned
Inline	3	Any	NA	3C1B
Inline	3	Any	Turbo	4C1B_L
Inline	4	<=180	NA	4C1B_L
Inline	4	<=180	Turbo	4C1B
Boxer	4	<=180	NA	4C2B_L
Boxer	4	<=180	Turbo	4C2B
Inline	4	>180	NA	4C1B
Inline	4	>180	Turbo	6C2B
Boxer	4	>180	Turbo	6C2B
Inline	5	Any	Turbo	6C2B
W	16	Any	Turbo	16C4B

TSD Chapter 3.1.2 includes more details about baseline engine technology assignment logic, and details about the levels of engine technology penetration in the MY 2020 fleet.

(c) Engine Adoption Features

Engine adoption features are defined through a combination of (1) refresh and redesign cycles, (2) technology path logic, (3) phase-in capacity limits, and (4) SKIP logic. Figure III-7 above shows the technology paths available for engines in the CAFE Model. Engine technology development and application typically results in an engine design moving from the basic engine tree to one of the advanced engine trees. Once an engine design moves to the advanced engine tree it is not allowed to move to alternate advanced engine trees. Specific path logic, phase-in caps, and SKIP logic applied to each engine technology are discussed by engine technology, in turn.

Refresh and redesign cycles dictate when engine technology can be applied. Technologies applicable only during a platform redesign can be applied during a platform refresh if another vehicle platform that shares engine codes (uses the same engine) has already applied the technology during a redesign. For example, models of the GMC Acadia and the Cadillac XT4 use the same engine (assigned engine code 112011 in the Market Data file); if the XT4 adds a new engine technology during a redesign, then the Acadia may also add the same engine technology during the

next refresh or redesign. This allows the model to maintain engine sharing relationships while also maintaining refresh and redesign schedules.¹²⁹ For engine technologies, DOHC, OHV, VVT, and CNG engine technologies are baseline only, while all other engine technologies can only be applied at a vehicle redesign.

Basic engine technologies in the CAFE Model are represented by four technologies: VVT, VVL, SGDI, and DEAC. DOT assumes that 100% of basic engine platforms use VVT as a baseline, based on wide proliferation of the technology in the U.S. fleet. The remaining three technologies, VVL, SGDI, and DEAC, can all be applied individually or in any combination of the three. An engine can jump from the basic engines path to any other engine path except the Alternative Fuel Engine Path.

Turbo downsizing allows manufacturers to maintain vehicle performance characteristics while reducing engine displacement and cylinder count. Any basic engine can adopt one of the turbo engine technologies (TURBO1, TURBO2 and CEGR1). Vehicles that have turbocharged engines in the baseline fleet will stay on the turbo engine path to prevent unrealistic engine technology change in the short timeframe considered in the rulemaking analysis. Turbo technology is a mutually

¹²⁹ See Section III.C.2.a) for more discussion on platform refresh and redesign cycles.

exclusive technology in that it cannot be adopted for HCR, diesel, ADEAC, or CNG engines.

Non-HEV Atkinson mode engines are a collection of engines in the HCR engine pathway (HCR0, HCR1, HCR1D and HCR2). Atkinson engines excel in lower power applications for lower load conditions, such as driving around a city or steady state highway driving without large payloads, thus their adoption is more limited than some other technologies. DOT expanded the availability of HCR technology compared to the 2020 final rule because of new observed applications in the market.¹³⁰ However, there are three categories of adoption features specific to the HCR engine pathway:¹³¹

- DOT does not allow vehicles with 405 or more horsepower to adopt HCR engines due to their prescribed duty cycle being more demanding and likely not supported by the lower power density found in HCR-based engines.¹³²
- Pickup trucks and vehicles that share engines with pickup trucks are

¹³⁰ For example, the Hyundai Palisade and Kia Telluride have a 291 hp V6 HCR1 engine. The specification sheets for these vehicles are located in the docket for this action.

¹³¹ See Section III.D.1.d)(1) Engine Maps, for a discussion of why HCR2 and P2HCR2 were not used in the central analysis. "SKIP" logic was used to remove this engine technology from application, however as discussed below, we maintain HCR2 and P2HCR2 in the model architecture for sensitivity analysis and for future engine map model updates.

¹³² Heywood, John B. Internal Combustion Engine Fundamentals. McGraw-Hill Education, 2018. Chapter 5.

also excluded from receiving HCR engines; the duty cycle for these heavy vehicles, particularly when hauling cargo or towing, are likely unable to take full advantage of Atkinson cycle use, and would ultimately spend the majority of operation as an Otto cycle engine, negating the benefits of HCR technology.¹³³

- HCR engine application is also restricted for some manufacturers that are heavily performance-focused and have demonstrated a significant commitment to power dense technologies such as turbocharged downsizing.¹³⁴ NHTSA seeks comment on the appropriateness of these restrictions for the final rule.

Advanced cylinder deactivation technology (ADEAC), or dynamic cylinder deactivation (*e.g.*, Dynamic Skip Fire), can be applied to any engine with basic technology. This technology represents a naturally aspirated engine with ADEAC. Additional technology can be applied to these engines by moving to the Advanced Turbo Engine Path.

Miller cycle (VTG and VTGE) engines can be applied to any basic and turbocharged engine. VTGE technology is enabled by the use of a 48V system that presents an improvement from traditional turbocharged engines, and accordingly VTGE includes the application of a mild hybrid (BISG) system.

VCR engines can be applied to basic and turbocharged engines, but the technology is limited to Nissan and Mitsubishi.¹³⁵ VCR technology requires a complete redesign of the engine, and in the analysis fleet, only two of Nissan's models had incorporated this technology. The agency does not believe any other manufacturers will invest to develop and market this technology in their fleet in the rulemaking time frame.

Advanced turbo engines are becoming more prevalent as the technologies mature. TURBOD combines TURBO1 and DEAC technologies and represents the first advanced turbo. TURBOAD combines TURBO1 and ADEAC technologies and is the second and last level of advanced turbos. Engines from either the Turbo Engine Path or the

ADEAC Engine Path can adopt these technologies.

Any basic engine technologies (VVT, VVL, SGDI, and DEAC) can adopt ADSL and DSLI engine technologies. Any basic engine and diesel engine can adopt DSLIAD technology in this analysis; however, DOT applied a phase in cap and year for this technology at 34 percent and MY 2023, respectively. In DOT's engineering judgement, this is a rather complex and costly technology to adopt and it would take significant investment for a manufacturer to develop. For more than a decade, diesel engine technologies have been used in less than one percent of the total light-duty fleet production and have been found mostly on medium and heavy-duty vehicles.

Finally, DOT allows the CAFE Model to apply EFR to any engine technology except for DSLI and DSLIAD. DSLI and DSLIAD inherently have incorporated engine friction technologies from ADSL. In addition, friction reduction technologies that apply to gasoline engines cannot necessarily be applied to diesel engines due to the higher temperature and pressure operation in diesel engines.

(d) Engine Effectiveness Modeling

Effectiveness values used for engine technologies were simulated in two ways. The value was either calculated based on the difference in full vehicle simulation results created using the Autonomie modeling tool, or effectiveness values were determined using an alternate calculation method, including analogous improvement or fuel economy improvement factors.

(1) Engine Maps

Most effectiveness values used as inputs for the CAFE Model were determined by comparing results of full vehicle simulations using the Autonomie simulation tool. For a full discussion about how Autonomie was used, see Section III.C.4 and TSD Chapter 2.4, in addition to the Autonomie model documentation. Engine map models were the primary inputs used to simulate the effects of different engine technologies in the Autonomie full vehicle simulations.

Engine maps provide a three-dimensional representation of engine performance characteristics at each engine speed and load point across the operating range of the engine. Engine maps have the appearance of topographical maps, typically with engine speed on the horizontal axis and engine torque, power, or brake mean

effective pressure (BMEP)¹³⁶ on the vertical axis. A third engine characteristic, such as brake-specific fuel consumption (BSFC),¹³⁷ is displayed using contours overlaid across the speed and load map. The contours provide the values for the third characteristic in the regions of operation covered on the map. Other characteristics typically overlaid on an engine map include engine emissions, engine efficiency, and engine power. The engine maps developed to model the behavior of the engines used in this analysis are referred to as engine map models.

The engine map models used in this analysis are representative of technologies that are currently in production or are expected to be available in the rulemaking timeframe, MYs 2024–2026. The engine map models were developed to be representative of the performance achievable across industry for a given technology and are not intended to represent the performance of a single manufacturer's specific engine. The broadly representative performance level was targeted because the same combination of technologies produced by different manufacturers will have differences in performance, due to manufacturer-specific designs for engine hardware, control software, and emissions calibration.

Accordingly, DOT expects that the engine maps developed for this analysis will differ from engine maps for manufacturers' specific engines. However, DOT intends and expects that the incremental changes in performance modeled for this analysis, due to changes in technologies or technology combinations, will be similar to the incremental changes in performance observed in manufacturers' engines for the same changes in technologies or technology combinations.

The analysis never applies absolute BSFC levels from the engine maps to any vehicle model or configuration for the rulemaking analysis. The absolute fuel economy values from the full vehicle Autonomie simulations are used only to determine incremental effectiveness for switching from one technology to another technology. The incremental effectiveness is applied to the absolute fuel economy of vehicles in the analysis fleet, which are based on CAFE compliance data. For subsequent

¹³³ This is based on CBI conversation with manufacturers that currently employ HCR-based technology but saw no benefit when the technology was applied to truck platforms in their fleet.

¹³⁴ There are three manufacturers that met the criteria (near 100% turbo downsized fleet, and future hybrid systems are based on turbo-downsized engines) described and were excluded: BMW, Daimler, and Jaguar Land Rover.

¹³⁵ Nissan and Mitsubishi are strategic partners and members of the Renault-Nissan-Mitsubishi Alliance.

¹³⁶ Brake mean effective pressure is an engineering measure, independent of engine displacement, that indicates the actual work an engine performs.

¹³⁷ Brake-specific fuel consumption is the rate of fuel consumption divided by the power being produced.

technology changes, incremental effectiveness is applied to the absolute fuel economy level of the previous technology configuration. Therefore, for a technically sound analysis, it is most important that the differences in BSFC among the engine maps be accurate, and not the absolute values of the individual engine maps. However, achieving this can be challenging.

For this analysis, DOT used a small number of baseline engine configurations with well-defined BSFC maps, and then, in a very systematic and controlled process, added specific well-defined technologies to create a BSFC map for each unique technology combination. This could theoretically be done through engine or vehicle testing, but testing would need to be conducted on a single engine, and each configuration would require physical parts and associated engine calibrations to assess the impact of each technology configuration, which is impractical for the rulemaking analysis because of the extensive design, prototype part fabrication, development, and laboratory resources that are required to evaluate each unique configuration. Modeling is an approach used by industry to assess an array of technologies with more limited testing. Modeling offers the opportunity to isolate the effects of individual technologies by using a single or small number of baseline engine

configurations and incrementally adding technologies to those baseline configurations. This provides a consistent reference point for the BSFC maps for each technology and for combinations of technologies that enables the differences in effectiveness among technologies to be carefully identified and quantified.

The Autonomie model documentation provides a detailed discussion on how the engine map models were used as inputs to the full vehicle simulations performed using the Autonomie tool. The Autonomie model documentation contains the engine map model topographic figures, and additional engine map model data can be found in the Autonomie input files.¹³⁸

Most of the engine map models used in this analysis were developed by IAV GmbH (IAV) Engineering. IAV is one of the world's leading automotive industry engineering service partners with an over 35-year history of performing research and development for powertrain components, electronics, and vehicle design.¹³⁹ The primary outputs of IAV's work for this analysis are engine maps that model the operating characteristics of engines equipped with specific technologies.

¹³⁸ See additional Autonomie supporting materials in docket number NHTSA-2021-0053 for this proposal.

¹³⁹ IAV Automotive Engineering, <https://www.iav.com/en/>.

The generated engine maps were validated against IAV's global database of benchmarked data, engine test data, single cylinder test data, prior modeling studies, technical studies, and information presented at conferences.¹⁴⁰ The effectiveness values from the simulation results were also validated against detailed engine maps produced from the Argonne engine benchmarking programs, as well as published information from industry and academia, ensuring reasonable representation of simulated engine technologies.¹⁴¹ The engine map models used in this analysis and their specifications are shown in Table III-9.

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¹⁴⁰ Friedrich, I., Pucher, H., and Offer, T., "Automatic Model Calibration for Engine-Process Simulation with Heat-Release Prediction," SAE Technical Paper 2006-01-0655, 2006, <https://doi.org/10.4271/2006-01-0655>. Rezaei, R., Eckert, P., Seebode, J., and Behnk, K., "Zero-Dimensional Modeling of Combustion and Heat Release Rate in DI Diesel Engines," SAE Int. J. Engines 5(3):874-885, 2012, <https://doi.org/10.4271/2012-01-1065>. Multistage Supercharging for Downsizing with Reduced Compression Ratio (2015). MTZ Rene Berndt, Rene Pohlke, Christopher Severin and Matthias Diezemann IAV GmbH. Symbiosis of Energy Recovery and Downsizing (2014). September 2014 MTZ Publication Heiko Neukirchner, Torsten Semper, Daniel Luederitz and Oliver Dingel IAV GmbH.

¹⁴¹ Bottcher, L., Grigoriadis, P. "ANL—BSFC map prediction Engines 22–26." IAV (April 30, 2019). 20190430_ANL_Eng 22–26 Updated_Docket.pdf.

Table III-9 – Engine Map Models used in This Analysis

Engines	Technologies	Notes
Eng01	DOHC+VVT	Parent NA engine, Gasoline, 2.0L, 4 cyl, NA, PFI, DOHC, dual cam VVT, CR10.2
Eng02	DOHC+VVT+VVL	VVL added to Eng01
Eng03	DOHC+VVT+VVL+SGDI	SGDI added to Eng02, CR11
Eng04	DOHC+VVT+VVL+SGDI +DEAC	Cylinder deactivation added to Eng03
Eng5a	SOHC+VVT+PFI	Eng01 converted to SOHC (gasoline, 2.0L, 4cyl, NA, PFI, single cam VVT) For Reference Only
Eng5b	SOHC+VVT (level 1 Red. Friction)	Eng5a with valvetrain friction reduction (small friction reduction)
Eng6a	SOHC+VVT+VVL (level 1 Red. Friction)	Eng02 with valvetrain friction reduction (small friction reduction)
Eng7a	SOHC+VVT+VVL+SGDI (level 1 Red. Friction)	Eng03 with valvetrain friction reduction (small friction reduction), addition of VVL and SGDI
Eng8a	SOHC+VVT+VVL+SGDI +DEAC (level 1 Red. Friction)	Eng04 with valvetrain friction reduction (small friction reduction), addition of DEAC
Eng12	DOHC Turbo 1.6l 18bar	Parent Turbocharged Engine, Gasoline, 1.6L, 4 cyl, turbocharged, SGDI, DOHC, dual cam VVT, VVL Engine BMEP: 18 bar
Eng12 DEAC	DOHC Turbo 1.6l 18bar	Eng12 with DEAC applied, Engine BMEP 18bar
Eng13	DOHC Turbo 1.2l 24bar	Eng12 downsized to 1.2L, Engine BMEP 24 bar
Eng14	DOHC Turbo 1.2l 24bar + Cooled EGR	Cooled external EGR added to Eng13 Engine BMEP 24 bar
Eng17	Diesel	Diesel, 2.2L (measured on test bed)
Eng18	DOHC+VVT+SGDI	Gasoline, 2.0L, 4 cyl, NA, SGDI, DOHC, VVT
Eng19	DOHC+VVT+DEAC	Cylinder deactivation added to Eng01
Eng20	DOHC+VVT+VVL+DEAC	Cylinder deactivation added to Eng02
Eng21	DOHC+VVT+SGDI+DEAC	Cylinder deactivation added to Eng18
Eng22b	DOHC+VVT	Atkinson-enabled 2.5L DOHC, VVT, PFI, CR14
Eng24	Current SkyActiv 2.0l 93AKI	Non-HEV Atkinson mode, Gasoline, 2.0L, 4 cyl, DOHC, NA, SGDI, VVT, CR 13.1, 93 AKI
Eng25	Future SkyActiv 2.0l CEGR 93AKI+DEAC	Non-HEV Atkinson mode, Gasoline, 2.0L, 4 cyl, DOHC, NA, SGDI, VVT, cEGR, DEAC CR 14.1, 93 AKI For Reference Only
Eng26	Atkinson Cycle Engine	HEV and PHEV Atkinson Cycle Engine 1.8L
Eng23b	DOHC+VTG+VVT+VVL+SGDI I +cEGR	Miller Cycle, 2.0L DOHC, VTG, SGDI, cEGR, VVT, VVL, CR12
Eng23c	DOHC+VTG+VVT+SGDI +cEGR+Eboost	Eng23b with an 48V Electronic supercharger and battery pack
Eng26a	DOHC+VCR+VVT+SGDI +Turbo+cEGR	VVT, SGDI, Turbo, cEGR, VCR CR 9-12

analysis. The Eng24 and Eng25 engine maps are equivalent to the ATK and ATK2 models developed for the 2016 Draft Technical Assessment Report (TAR), EPA Proposed Determination, and Final Determination.¹⁴² The ATK1 engine model is based directly on the 2.0L 2014 Mazda SkyActiv-G (ATK) engine. The ATK2 represents an Atkinson engine concept based on the Mazda engine, adding cEGR, cylinder deactivation, and an increased compression ratio (14:1). In this analysis, Eng24 and Eng25 correspond to the HCR1 and HCR2 technologies.

The HCR2 engine map model application in this analysis follows the approach of the 2020 final rule.¹⁴³ The agency believes the use of HCR0, HCR1, and the new addition of HCR1D reasonably represents the application of Atkinson Cycle engine technologies within the current light-duty fleet and the anticipated applications of Atkinson Cycle technology in the MY 2024–2026 timeframe.

We are currently developing an updated family of HCR engine map models that will include cEGR, cylinder deactivation and a combination thereof. The new engine map models will closely align with the baseline assumptions used in the other IAV-based HCR engine map models used for the agency's analysis. The updated

engine map models will likely not be available for the final rule associated with this proposal because of engine map model testing and validation requirements but will be available for future CAFE analyses. We believe the timing for including the new engine map models is reasonable, because a manufacturer that could apply this technology in response to CAFE standards is likely not do so before MY 2026, as the application of this technology will require an engine redesign. We also believe this is reasonable given manufacturer's statements that there are diminishing returns to additional conventional engine technology improvements considering vehicle electrification commitments.

NHTSA seeks comment on whether and how to change our engine maps for HCR2 in the analysis for the final rule.

(2) Analogous Engine Effectiveness Improvements and Fuel Economy Improvement Factors

For some technologies, the effectiveness for applying an incremental engine technology was determined by using the effectiveness values for applying the same engine technology to a reasonably similar base engine. An example of this can be seen in the determination of the application

of SGDI to the baseline SOHC engine. Currently there is no engine map model for the SOHC+VVT+SGDI engine configuration. To create the effectiveness data required as an input to the CAFE Model, first, a pairwise comparison between technology configurations that included the DOHC+VVT engine (Eng1) and the DOHC+VVT+SGDI (Eng18) engine was conducted. Then, the results of that comparison were used to generate a data set of emulated performance values for adding the SGDI technology to the SOHC+VVT engine (Eng5b) systems.

The pairwise comparison is performed by finding the difference in fuel consumption performance between every technology configuration using the analogous base technology (*e.g.*, Eng1) and every technology configuration that only changes to the analogous technology (*e.g.*, Eng18). The individual changes in performance between all the technology configurations are then added to the same technology configurations that use the new base technology (*e.g.*, Eng5b) to create a new set of performance values for the new technology (*e.g.*, SOHC+VVT+SGDI). Table III–10 shows the engine technologies where analogous effectiveness values were used.

Table III-10 – Engine Technology Performance Values Determined by Analogous Effectiveness Values

Analogous Baseline	Analogous Technology	New Base Technology	New Technology
Eng1 DOHC+VVT	Eng18 DOHC+VVT+SGDI	Eng5b SOHC+VVT	SOHC+VVT+SGDI
Eng1 DOHC+VVT	Eng19 SOHC+VVT+DEAC	Eng5b SOHC+VVT	SOHC+VVT+DEAC
Eng1 DOHC+VVT	Eng20 DOHC+VVT+VVL+ DEAC	Eng5b SOHC+VVT	SOHC+VVT+VVL+ DEAC
Eng1 DOHC+VVT	Eng21 DOHC+VVT+SGDI+DE AC	Eng5b SOHC+VVT	SOHC+VVT+SGDI+ DEAC
Eng12 (TURBO1)	Eng12DEAC (TURBOD)	Eng24 (HCR1)	HCR1D

DOT also developed a static fuel efficiency improvement factor to simulate applying an engine technology for some technologies where there was

either no appropriate analogous technology or there were not enough data to create a full engine map model. The improvement factors were generally

developed based on literature review or confidential business information (CBI) provided by stakeholders. Table III–11 provides a summary of the technology

¹⁴²Ellies, B., Schenk, C., and Dekraker, P., "Benchmarking and Hardware-in-the-Loop Operation of a 2014 MAZDA SkyActiv 2.0L 13:1

Compression Ratio Engine," SAE Technical Paper 2016-01-1007, 2016, doi:10.4271/2016-01-1007.

¹⁴³85 FR 24425–27 (April 30, 2020).

effectiveness values simulated using improvement factors, and the value and rules for how the improvement factors were applied. Advanced cylinder deactivation (ADEAC, TURBOAD, DSLIAD), advanced diesel engines (DSLIA) and engine friction reduction (EFR) are the three technologies modeled using improvement factors.

The application of the advanced cylinder deactivation is responsible for three of the five technologies using an improvement factor in this analysis. The initial review of the advanced cylinder deactivation technology was based on a technical publication that used a MY 2010 SOHC VVT basic engine.¹⁴⁴ Additional information about the technology effectiveness came from a benchmarking analysis of pre-production 8-cylinder OHV prototype systems.¹⁴⁵ However, at the time of the analysis no studies of production versions of the technology were available, and the only available technology effectiveness came from existing studies, not operational information. Thus, only estimates of effect could be developed and not a full model of operation. No engine map model could be developed, and no other technology pairs were analogous.

To model the effects of advanced cylinder deactivation, an improvement factor was determined based on the

information referenced above and applied across the engine technologies. The effectiveness values for naturally aspirated engines were predicted by using full vehicle simulations of a basic engine with DEAC, SGDI, VVL, and VVT, and adding 3 percent or 6 percent improvement based on engine cylinder count: 3 percent for engines with 4 cylinders or less and 6 percent for all other engines. Effectiveness values for turbocharged engines were predicted using full vehicle simulations of the TURBOD engine and adding 1.5 percent or 3 percent improvement based on engine cylinder count: 1.5 percent for engines with 4 cylinders or less and 3 percent for all other engines. For diesel engines, effectiveness values were predicted by using the DSLI effectiveness values and adding 4.5 percent or 7.5 percent improvement based on vehicle technology class: 4.5 percent improvement was applied to small and medium non-performance cars, small performance cars, and small non-performance SUVs. 7.5 percent improvement was applied to all other vehicle technology classes.

The analysis modeled advanced engine technology application to the baseline diesel engine by applying an improvement factor to the ADSL engine technology combinations. A 12.8 percent improvement factor was applied to the ADSL technology combinations to create the DSLI technology combinations. The improvement in performance was based on the application of a combination of low pressure and high pressure EGR, reduced parasitic loss, advanced friction reduction, incorporation of highly-integrated exhaust catalyst with low temp light off temperatures, and closed loop combustion control.^{146 147 148 149}

As discussed above, the application of the EFR technology does not simulate the application of a specific technology, but the application of an array of potential improvements to an engine. All reciprocating and rotating components in the engine are potential candidates for friction reduction, and minute improvements in several components can add up to a measurable fuel economy improvement.^{150 151 152 153} Because of the incremental nature of this analysis, a range of 1–2 percent improvement was identified initially, and narrowed further to a specific 1.39 percent improvement. The final value is likely representative of a typical value industry may be able to achieve in future years.

1.6L 2-Stage Turbo Diesel Engine for HONDA CR-V.” 24th Aachen Colloquium—Automobile and Engine Technology 2015.

¹⁴⁸ Steinparzer, F., Nefischer, P., Hiemesch, D., Kaufmann, M., Steinmayr, T. “The New Six-Cylinder Diesel Engines from the BMW In-Line Engine Module.” 24th Aachen Colloquium—Automobile and Engine Technology 2015.

¹⁴⁹ Eder, T., Weller, R., Spengel, C., Böhm, J., Herwig, H., Sass, H., Tiessen, J., Knauel, P. “Launch of the New Engine Family at Mercedes-Benz.” 24th Aachen Colloquium—Automobile and Engine Technology 2015.

¹⁵⁰ “Polyalkylene Glycol (PAG) Based Lubricant for Light- & Medium-Duty Axles,” 2017 DOE Annual Merit Review. Ford Motor Company, Gangopadhyay, A., Ved, C., Jost, N. https://energy.gov/sites/prod/files/2017/06/f34/ft023_gangopadhyay_2017_o.pdf.

¹⁵¹ “Power-Cylinder Friction Reduction through Coatings, Surface Finish, and Design,” 2017 DOE Annual Merit Review. Ford Motor Company, Gangopadhyay, A., Erdemir, A. https://energy.gov/sites/prod/files/2017/06/f34/ft050_gangopadhyay_2017_o.pdf.

¹⁵² “Nissan licenses energy-efficient engine technology to HELLER,” <https://newsroom.nissan-global.com/releases/170914-01-e?lang=en-US&rss&la=1&downloadUrl=%2Freleases%2F170914-01-e%2Fdownload>. Last accessed April 2018.

¹⁵³ “Infiniti’s Brilliantly Downsized V-6 Turbo Shines,” <http://wardsauto.com/engines/infiniti-s-brilliantly-downsized-v-6-turbo-shines>. Last Accessed April 2018.

¹⁴⁴ Wilcutts, M., Switkes, J., Shost, M., and Tripathi, A., “Design and Benefits of Dynamic Skip Fire Strategies for Cylinder Deactivated Engines,” SAE Int. J. Engines 6(1):278–288, 2013, available at <https://doi.org/10.4271/2013-01-0359>. Eisazadeh-Far, K. and Younkins, M., “Fuel Economy Gains through Dynamic-Skip-Fire in Spark Ignition Engines,” SAE Technical Paper 2016-01-0672, 2016, available at <https://doi.org/10.4271/2016-01-0672>.

¹⁴⁵ EPA, 2018. “Benchmarking and Characterization of a Full Continuous Cylinder Deactivation System.” Presented at the SAE World Congress, April 10–12, 2018. Retrieved from <https://www.regulations.gov/document?D=EPA-HQ-OAR-2018-0283-0029>.

¹⁴⁶ 2015 NAS report, at 104.

¹⁴⁷ Hatano, J., Fukushima, H., Sasaki, Y., Nishimori, K., Tabuchi, T., Ishihara, Y. “The New

Table III-11 – Engine Technologies Modeled Using Efficiency Improvement Factors

Baseline Technology	Fuel Efficiency Improvement Factor	New Technology
DEAC	3% for ≤ 4 Cylinders 6% for > 4 Cylinders	ADEAC
TURBOD	1.5% for ≤ 4 Cylinders 3% for > 4 Cylinders	TURBOAD
ADSL	12.8%	DSL
DSL	4.5% for small and medium non-performance cars and SUVs, and small performance cars; 7.5% for all other technology classes	DSLAD
All Engine Technologies	1.39%	EFR

(3) Engine Effectiveness Values

The effectiveness values for the engine technologies, for all ten vehicle technology classes, are shown in Figure III-8. Each of the effectiveness values shown is representative of the improvements seen for upgrading only the listed engine technology for a given

combination of other technologies. In other words, the range of effectiveness values seen for each specific technology (e.g., TURBO1) represents the addition of the TURBO1 technology to every technology combination that could select the addition of TURBO1. See Table III-12 for several specific examples. It must be emphasized, the

change in fuel consumption values between entire technology keys is used,¹⁵⁴ and not the individual technology effectiveness values. Using the change between whole technology keys captures the complementary or non-complementary interactions among technologies.

Table III-12 – Example of Effectiveness Calculations Shown in Figure III-8*

Tech	Vehicle Tech Class	Initial Technology Key	Fuel Consumption		Effectiveness (%)
			Initial (gal/mile)	New (gal/mile)	
TURBO1	Medium Car	DOHC;VVT;;;;;AT8L2;SS12V; ROLL10;AERO5;MR2	0.0282	0.0248	12.15
TURBO1	Medium Car	DOHC;VVT;;;;;AT8L2;CONV; ROLL10;AERO5;MR2	0.0292	0.0254	13.13
TURBO1	Medium Car	DOHC;VVT;;;;;AT8L2;BISG; ROLL10;AERO5;MR2	0.0275	0.0237	13.80
TURBO1	Medium Car	DOHC;VVT;;;;;AT6;SS12V; ROLL10;AERO5;MR2	0.0312	0.0269	13.80

*The ‘Tech’ is added to the ‘Initial Technology Key’ replacing the existing engine technology, resulting in the new fuel consumption value. The percent effectiveness is found by determining the percent improved fuel consumption of the new value versus the initial value.¹⁵⁵

Some of the advanced engine technologies have values that indicate seemingly low effectiveness. Investigation of these values shows the low effectiveness was a result of applying the advanced engines to existing SHEVP2 architectures. This effect is expected and illustrates the importance of using the full vehicle

modeling to capture interactions between technologies and capture instances of both complimentary technologies and non-complimentary technologies. In this instance, the SHEVP2 powertrain improves fuel economy, in part, by allowing the engine to spend more time operating at efficient engine speed and load

conditions. This reduces the advantage of adding advanced engine technologies, which also improve fuel economy, by broadening the range of speed and load conditions for the engine to operate at high efficiency. This redundancy in fuel savings mechanism results in a lower effectiveness when the technologies are added to each other.

¹⁵⁴ Technology key is the unique collection of technologies that constitutes a specific vehicle, see Section III.C.4.c).

¹⁵⁵ The full data set we used to generate this example can be found in the FE_1 Improvements file.

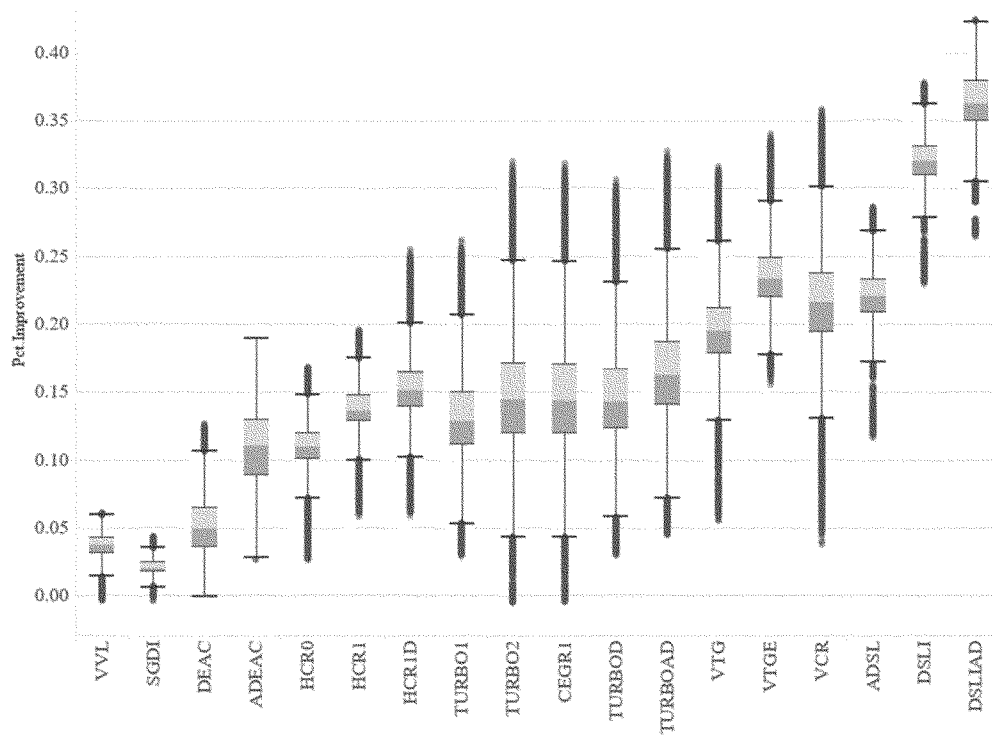


Figure III-8 – Engine Technologies Effectiveness Values for all Vehicle Technology Classes¹⁵⁶

(e) Engine Costs

The CAFE Model considers both cost and effectiveness in selecting any technology changes. We have allocated considerable resources to sponsoring research to determine direct manufacturing costs (DMCs) for fuel saving technologies. As discussed in detail in TSD Chapter 3.1.5, the engine costs used in this analysis build on estimates from the 2015 NAS report, agency-funded teardown studies, and work performed by non-government organizations.¹⁵⁷

Absolute costs of the engine technology are used in this analysis

instead of relative costs, which were used prior to the 2020 final rule. The absolute costs are used to ensure the full cost of the IC engine is removed when electrification technologies are applied specifically for the transition to BEVs. This analysis models the cost of adoption of BEV technology by first removing the costs associated with IC powertrain systems, then applying the BEV systems costs. Relative costs can still be determined through comparison of the absolute costs for the initial technology combination and the new technology combination.

As discussed in detail in TSD Chapter 3.1.5, engine costs are assigned based on

the number of cylinders in the engine and whether the engine is naturally aspirated or turbocharged and downsized. Table III-13 below shows an example of absolute costs for engine technologies in 2018\$. The example costs are shown for a straight 4-cylinder DOHC engine and V-6-cylinder DOHC engine. The table shows costs declining across successive years due to the learning rate applied to each engine technology. For a full list of all absolute engine costs used in the analysis across all model years, see the Technologies file.

¹⁵⁶ The box shows the inner quartile range (IQR) of the effectiveness values and whiskers extend out 1.5 × IQR. The dots outside this range show effectiveness values outside those thresholds. The

data used to create this figure can be found in the FE_1 Improvements file.

¹⁵⁷ FEV prepared several cost analysis studies for EPA on subjects ranging from advanced 8-speed transmissions to belt alternator starters or start/stop

systems. NHTSA contracted Electricore, EDAG, and Southwest Research for teardown studies evaluating mass reduction and transmissions. The 2015 NAS report also evaluated technology costs developed based on these teardown studies.

Table III-13 – Examples of Absolute Costs for Engine Technologies in 2018\$ for a Straight 4-Cylinder DOHC Engine and a V-6-Cylinder DOHC Engine for Select Model Years

Technology	4C1B Costs (2018\$)			6C2B Costs (2018\$)		
	MY 2020	MY 2025	MY 2030	MY 2020	MY 2025	MY 2030
EFR	66.61	63.97	57.83	99.92	95.96	86.74
VVT	5,205.13	5,201.71	5,199.02	6,059.15	6,052.31	6,046.93
VVL	5,402.62	5,393.28	5,385.95	6,298.29	6,284.28	6,273.28
SGDI	5,435.72	5,425.38	5,417.27	6,347.93	6,332.43	6,320.26
DEAC	5,268.59	5,263.27	5,259.08	6,040.39	6,034.11	6,029.18
TURBO1	6,228.96	6,179.91	6,152.15	7,073.58	7,020.02	6,989.71
TURBO2	6,807.16	6,644.50	6,538.33	7,673.21	7,498.58	7,384.60
CEGR1	7,221.06	7,019.17	6,887.39	8,087.11	7,873.26	7,733.67
ADEAC	6,292.36	6,217.71	6,174.57	7,633.14	7,521.16	7,456.45
HCR0	5,819.86	5,803.73	5,801.18	6,953.63	6,928.79	6,924.86
HCR1	5,863.02	5,833.12	5,825.45	6,996.80	6,958.18	6,949.13
HCR1D	6,040.68	6,005.45	5,993.60	7,206.43	7,161.53	7,147.55
VCR	7,370.02	7,208.71	7,124.07	8,214.65	8,048.82	7,961.63
VTG	7,592.44	7,380.16	7,241.61	8,457.91	8,234.25	8,088.26
VTGE	8,892.07	8,403.54	8,097.54	9,757.54	9,257.62	8,944.19
TURBOD	6,406.61	6,352.24	6,320.30	7,251.23	7,192.35	7,157.85
TURBOAD	6,971.41	6,861.47	6,801.38	7,816.03	7,701.57	7,638.93
ADSL	9,726.31	9,459.91	9,362.48	11,384.74	11,065.55	10,948.81
DSLI	10,226.67	9,931.51	9,823.56	12,036.41	11,679.77	11,549.33
DSLAD	10,791.47	10,440.74	10,304.64	12,883.61	12,443.61	12,270.94
CNG	11,822.52	11,612.31	11,471.76	12,676.54	12,462.91	12,319.67

2. Transmission Paths

For this analysis, DOT classified all light duty vehicle transmission technologies into discrete transmission technology paths. These paths are used to model the most representative characteristics, costs, and performance of the fuel-economy improving transmissions most likely available during the rulemaking time frame, MYs 2024–2026.

The following sections discuss how transmission technologies considered in this analysis are defined, the general technology categories used by the CAFE Model, and the transmission technologies' relative effectiveness and costs. The following sections also provide an overview of how the transmission technologies were assigned to the MY 2020 fleet, as well as the adoption features applicable to the transmission technologies.

(a) Transmission Modeling in the CAFE Model

DOT modeled two major categories of transmissions for this analysis: Automatic and manual. Automatic transmissions are characterized by automatically selecting and shifting between transmission gears for the driver during vehicle operation. Automatic transmissions are further subdivided into four subcategories: Traditional automatic transmissions (AT), dual clutch transmissions (DCT), continuously variable transmissions (CVT), and direct drive transmissions (DD).

ATs and CVTs also employ different levels of high efficiency gearbox (HEG) technology. HEG improvements for transmissions represent incremental advancement in technology that improve efficiency, such as reduced friction seals, bearings and clutches, super finishing of gearbox parts, and improved lubrication. These advancements are all aimed at reducing

frictional and other parasitic loads in transmissions to improve efficiency. DOT considered three levels of HEG improvements in this analysis, based on 2015 recommendations by the National Academy of Sciences and CBI data.¹⁵⁸ HEG efficiency improvements are applied to ATs and CVTs, as those transmissions inherently have higher friction and parasitic loads related to hydraulic control systems and greater component complexity, compared to MTs and DCTs. HEG technology improvements are noted in the transmission technology pathways by increasing “levels” of a transmission technology; for example, the baseline 8-speed automatic transmission is termed “AT8”, while an AT8 with level 2 HEG technology is “AT8L2” and an AT8 with level 3 HEG technology is “AT8L3.”

AT: Conventional planetary gear automatic transmissions are the most

¹⁵⁸ 2015 NAS report, at 191.

popular transmission.¹⁵⁹ ATs typically contain three or four planetary gear sets that provide the various gear ratios. Gear ratios are selected by activating solenoids which engage or release multiple clutches and brakes as needed. ATs are packaged with torque converters, which provide a fluid coupling between the engine and the driveline and provide a significant increase in launch torque. When transmitting torque through this fluid coupling, energy is lost due to the churning fluid. These losses can be eliminated by engaging the torque converter clutch to directly connect the engine and transmission (“lockup”). For the Draft TAR and 2020 final rule, EPA and DOT surveyed automatic transmissions in the market to assess trends in gear count and purported fuel economy improvements.¹⁶⁰ Based on that survey, and also EPA’s more recent 2019 and 2020 Automotive Trends Reports,¹⁶¹ DOT concluded that modeling ATs with a range of 5 to 10 gears, with three levels of HEG technology for this analysis was reasonable.

CVT: Conventional continuously variable transmissions consist of two cone-shaped pulleys, connected with a belt or chain. Moving the pulley halves allows the belt to ride inward or outward radially on each pulley, effectively changing the speed ratio between the pulleys. This ratio change is smooth and continuous, unlike the step changes of other transmission varieties.¹⁶² DOT modeled two types of CVT systems in the analysis, the baseline CVT and a CVT with HEG technology applied.

DCT: Dual clutch transmissions, like automatic transmissions, automate shift and launch functions. DCTs use separate clutches for even-numbered and odd-numbered gears, allowing the next gear needed to be pre-selected, resulting in faster shifting. The use of multiple clutches in place of a torque converter results in lower parasitic losses than ATs.¹⁶³ Because of a history of limited appeal,¹⁶⁴ DOT constrains application of additional DCT technology to vehicles already using DCT technology, and only models two types of DCTs in the analysis.

MT: Manual transmissions are transmissions that require direct control by the driver to operate the clutch and shift between gears. In a manual transmission, gear pairs along an output shaft and parallel layshaft are always engaged. Gears are selected via a shift lever, operated by the driver. The lever operates synchronizers, which speed match the output shaft and the selected gear before engaging the gear with the shaft. During shifting operations (and during idle), a clutch between the engine and transmission is disengaged to decouple engine output from the transmission. Automakers today offer a minimal selection of new vehicles with manual transmissions.¹⁶⁶ As a result of reduced market presence, DOT only included three variants of manual transmissions in the analysis.

The transmission model paths used in this analysis are shown in Figure III–9. Baseline-only technologies (MT5, AT5, AT7L2, AT9L2, and CVT) are grayed and can only be assigned as initial vehicle transmission configurations. Further details about transmission path modeling can be found in TSD Chapter 3.2.

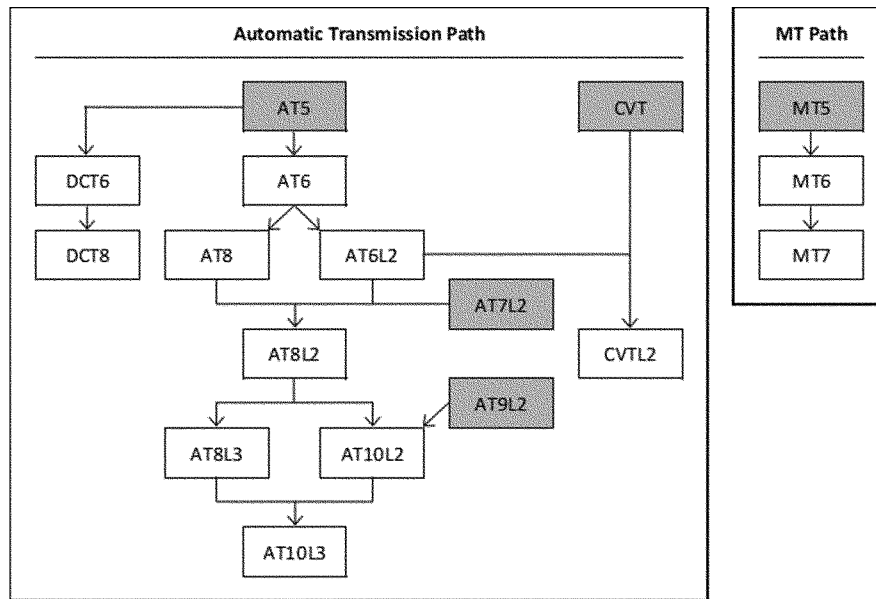


Figure III-9 – CAFE Model Pathways for Transmission Technologies

¹⁵⁹ 2020 EPA Automotive Trends Report, at 57–61.

¹⁶⁰ Draft TAR at 5–50, 5–51; Final Regulatory Impact Analysis accompanying the 2020 final rule, at 549.

¹⁶¹ The 2019 EPA Automotive Trends Report, EPA–420–R–20–006, at 59 (March 2020), <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100YVFS.pdf> [hereinafter 2019 EPA Automotive Trends Report], at 57.

¹⁶² 2015 NAS report, at 171.

¹⁶³ 2015 NAS report, at 170.

¹⁶⁴ 2020 EPA Automotive Trends Report, at 57.

¹⁶⁵ National Academies of Sciences, Engineering, and Medicine 2021. Assessment of Technologies for Improving Light-Duty Vehicle Fuel Economy 2025–2035. Washington, DC: The National Academies Press. <https://doi.org/10.17226/26092>, at 4–56 [hereinafter 2021 NAS report].

¹⁶⁶ 2020 EPA Automotive Trends Report, at 61.

(b) Transmission Analysis Fleet Assignments

The wide variety of transmissions on the market are classified into discrete transmission technology paths for this analysis. These paths are used to model the most representative characteristics, costs, and performance of the fuel economy-improving technologies most likely available during the rulemaking time frame.

For the 2020 analysis fleet, DOT gathered data on transmissions from manufacturer mid-model year CAFE compliance submissions and publicly available manufacturer specification sheets. These data were used to assign transmissions in the analysis fleet and determine which platforms shared transmissions.

Transmission type, number of gears, and high-efficiency gearbox (HEG) level are all specified for the baseline fleet assignment. The number of gears in the assignments for automatic and manual transmissions usually match the number of gears listed by the data sources, with some exceptions. Four-speed transmissions were not modeled in Autonomie for this analysis due to their rarity and low likelihood of being used in the future, so DOT assigned 2020 vehicles with an AT4 or MT4 to an AT5 or MT5 baseline, respectively. Some dual-clutch transmissions were also an exception; dual-clutch transmissions with seven gears were assigned to DCT6.

For automatic and continuously variable transmissions, the identification of the most appropriate transmission path required additional steps; this is because high-efficiency gearboxes are considered in the analysis but identifying HEG level from specification sheets alone was not always straightforward. DOT conducted a review of the age of the transmission design, relative performance versus previous designs, and technologies incorporated and used the information obtained to assign an HEG level. No automatic transmissions in the MY 2020 analysis fleet were determined to be at HEG Level 3. In addition, no six-speed automatic transmissions were assigned HEG Level 2. However, DOT found all 7-speed, all 9-speed, all 10-speed, and some 8-speed automatic transmissions to be advanced transmissions operating at HEG Level 2 equivalence. Eight-speed automatic transmissions developed after MY 2017 are assigned HEG Level 2. All other transmissions are assigned to their respective transmission's baseline level. The baseline (HEG level 1) technologies available include AT6, AT8, and CVT.

DOT assigned any vehicle in the analysis fleet with a hybrid or electric

powertrain a direct drive (DD) transmission. This designation is for informational purposes; if specified, the transmission will not be replaced or updated by the model.

In addition to technology type, gear count, and HEG level, transmissions are characterized in the analysis fleet by drive type and vehicle architecture. Drive types considered in the analysis include front-, rear-, all-, and four-wheel drive. The definition of drive types in the analysis does not always align with manufacturers' drive type designations; see the end of this subsection for further discussion. These characteristics, supplemented by information such as gear ratios and production locations, showed that manufacturers use transmissions that are the same or similar on multiple vehicle models. Manufacturers have told the agency they do this to control component complexity and associated costs for development, manufacturing, assembly, and service. If multiple vehicle models share technology type, gear count, drive configuration, internal gear ratios, and production location, the transmissions are treated as a single group for the analysis. Vehicles in the analysis fleet with the same transmission configuration adopt additional fuel-saving transmission technology together, as described in Section III.C.2.a).

Shared transmissions are designated and tracked in the CAFE Model input files using transmission codes. Transmission codes are six-digit numbers that are assigned to each transmission and encode information about them. This information includes the manufacturer, drive configuration, transmission type, and number of gears. TSD Chapter 3.2.2 includes more information on the transmission codes designated in the MY 2020 analysis fleet.

Different transmission codes are assigned to variants of a transmission that may have appeared to be similar based on the characteristics considered in the analysis but are not mechanically identical. DOT analysts distinguish among transmission variants by comparing their internal gear ratios and production locations. For example, several Ford nameplates carry a rear-wheel drive, 10-speed automatic transmission. These nameplates comprise a wide variety of body styles and use cases, and so DOT assigned different transmission codes to these different nameplates. Because they have different transmission codes, they are not treated as "shared" for the purposes of the analysis and have the opportunity

to adopt transmission technologies independently.

Note that when determining the drive type of a transmission, the assignment of all-wheel drive versus four-wheel drive is determined by vehicle architecture. This assignment does not necessarily match the drive type used by the manufacturer in specification sheets and marketing materials. Vehicles with a powertrain capable of providing power to all wheels and a transverse engine (front-wheel drive architecture) are assigned all-wheel drive. Vehicles with power to all four wheels and a longitudinal engine (rear-wheel drive architecture) are assigned four-wheel drive.

(c) Transmission Adoption Features

Transmission technology pathways are designed to prevent "branch hopping"—changes in transmission type that would correspond to significant changes in transmission architecture—for vehicles that are relatively advanced on a given pathway. For example, any automatic transmission with more than five gears cannot move to a dual-clutch transmission. For a more detailed discussion of path logic applied in the analysis, including technology supersession logic and technology mutual exclusivity logic, please see CAFE Model Documentation S4.5 Technology Constraints (Supersession and Mutual Exclusivity). Additionally, the CAFE Model prevents "branch hopping" to prevent stranded capital associated with moving from one transmission architecture to another. Stranded capital is discussed in Section III.C.6.

Some technologies that are modeled in the analysis are not yet in production, and therefore are not assigned in the baseline fleet. Nonetheless, these technologies, which are projected to be available in the analysis timeframe, are available for future adoption. For instance, an AT10L3 is not observed in the baseline fleet, but it is plausible that manufacturers that employ AT10L2 technology may improve the efficiency of those AT10L2s in the rulemaking timeframe.

The following sections discuss specific adoption features applied to each type of transmission technology.

When electrification technologies are adopted, the transmissions associated with those technologies will supersede the existing transmission on a vehicle. The transmission technology is superseded if P2 hybrids, plug-in hybrids, or battery electric vehicle technologies are applied. For more information, see Section III.D.3.c).

The automatic transmission path precludes adoption of other transmission types once a platform progresses past an AT6. This restriction is used to avoid the significant level of stranded capital loss that could result from adopting a completely different transmission type shortly after adopting an advanced transmission, which would occur if a different transmission type were adopted after AT6 in the rulemaking timeframe.

Vehicles that did not start out with AT7L2 or AT9L2 transmissions cannot adopt those technologies in the model. The agency observed that MY 2017 vehicles with those technologies were primarily luxury performance vehicles and concluded that other vehicles would likely not adopt those technologies. DOT concluded that this was also a reasonable assumption for the MY 2020 analysis fleet because vehicles that have moved to more advanced automatic transmissions have overwhelmingly moved to 8-speed and 10-speed transmissions.¹⁶⁷

CVT adoption is limited by technology path logic. CVTs cannot be adopted by vehicles that do not originate with a CVT or by vehicles with multispeed transmissions beyond AT6 in the baseline fleet. Vehicles with multispeed transmissions greater than AT6 demonstrate increased ability to operate the engine at a highly efficient speed and load. Once on the CVT path, the platform is only allowed to apply improved CVT technologies. The analysis restricts the application of CVT technology on larger vehicles because of the higher torque (load) demands of those vehicles and CVT torque limitations based on durability constraints. Additionally, this restriction is used to avoid the significant level of stranded capital.

The analysis allows vehicles in the baseline fleet that have DCTs to apply an improved DCT and allows vehicles with an AT5 to consider DCTs.

Drivability and durability issues with some DCTs have resulted in a low relative adoption rate over the last decade; this is also broadly consistent with manufacturers' technology choices.¹⁶⁸

Manual transmissions can only move to more advanced manual transmissions for this analysis, because other transmission types do not provide a similar driver experience (utility). Manual transmissions cannot adopt AT, CVT, or DCT technologies under any circumstance. Other transmissions cannot move to MT because manual transmissions lack automatic shifting associated with the other transmission types (utility) and in recognition of the low customer demand for manual transmissions.¹⁶⁹

(d) Transmission Effectiveness Modeling

For this analysis, DOT used the Autonomie full vehicle simulation tool to model the interaction between transmissions and the full vehicle system to improve fuel economy, and how changes to the transmission subsystem influence the performance of the full vehicle system. The full vehicle simulation approach clearly defines the contribution of individual transmission technologies and separates those contributions from other technologies in the full vehicle system. The modeling approach follows the recommendations of the National Academy of Sciences in its 2015 light duty vehicle fuel economy technology report to use full vehicle modeling supported by application of collected improvements at the sub-model level.¹⁷⁰ See TSD Chapter 3.2.4 for more details on transmission modeling inputs and results.

The only technology effectiveness results that were not directly calculated using the Autonomie simulation results were for the AT6L2. DOT determined that the model for this specific technology was inconsistent with the

other transmission models and overpredicted effectiveness results. Evaluation of the AT6L2 transmission model revealed an overestimated efficiency map was developed for the AT6L2 model. The high level of efficiency assigned to the transmission surpassed benchmarked advanced transmissions.¹⁷¹ To address the issue, DOT replaced the effectiveness values of the AT6L2 model. DOT replaced the effectiveness for the AT6L2 technology with analogous effectiveness values from the AT7L2 transmission model. For additional discussion on how analogous effectiveness values are determined please see Section III.D.1.d)(2).

The effectiveness values for the transmission technologies, for all ten vehicle technology classes, are shown in Figure III–10. Each of the effectiveness values shown is representative of the improvements seen for upgrading only the listed transmission technology for a given combination of other technologies. In other words, the range of effectiveness values seen for each specific technology, *e.g.*, AT10L3, represents the addition of the AT10L3 technology to every technology combination that could select the addition of AT10L3. It must be emphasized that the graph shows the change in fuel consumption values between entire technology keys,¹⁷² and not the individual technology effectiveness values. Using the change between whole technology keys captures the complementary or non-complementary interactions among technologies. In the graph, the box shows the inner quartile range (IQR) of the effectiveness values and whiskers extend out $1.5 \times \text{IQR}$. The dots outside of the whiskers show values for effectiveness that are outside these bounds.

¹⁷¹ Autonomie model documentation, Chapter 5.3.4. Transmission Performance Data.

¹⁷² Technology key is the unique collection of technologies that constitutes a specific vehicle, *see* Section III.C.4.c).

¹⁶⁷ 2020 EPA Automotive Trends Report, at 64, figure 4.18.

¹⁶⁸ *Ibid.*

¹⁶⁹ *Ibid.*

¹⁷⁰ 2015 NAS report, at 292.

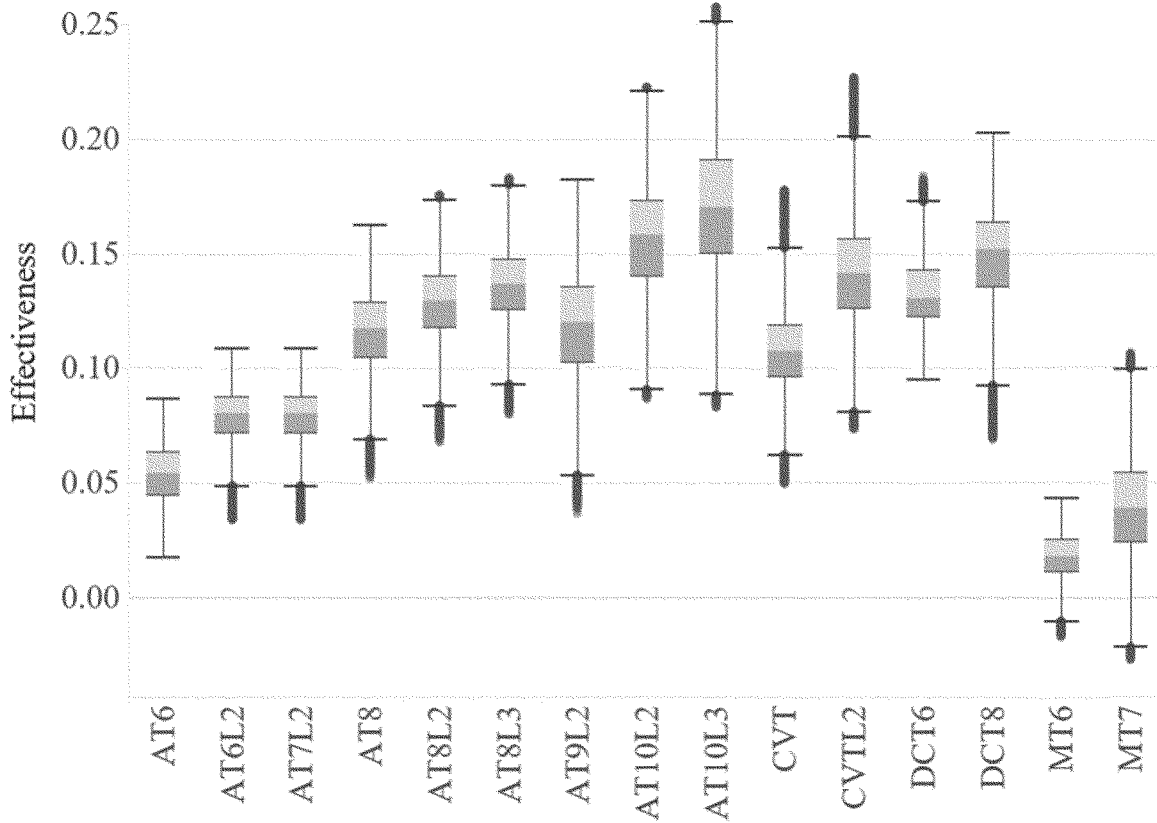


Figure III-10 – Transmission Technologies Effectiveness Values for all Vehicle Technology Classes¹⁷³

Note that the effectiveness for the MT5, AT5 and DD technologies are not shown. The DD transmission does not have a standalone effectiveness because it is only implemented as part of electrified powertrains. The MT5 and AT5 also have no effectiveness values because both technologies are baseline technologies against which all other technologies are compared.

(e) Transmission Costs

This analysis uses transmission costs drawn from several sources, including the 2015 NAS report and NAS-cited studies. TSD Chapter 3.2.5 provides a detailed description of the cost sources used for each transmission technology. Table III-14 shows an example of absolute costs for transmission technologies in 2018\$ across select

model years, which demonstrates how cost learning is applied to the transmission technologies over time. Note, because transmission hardware is often shared across vehicle classes, transmission costs are the same for all vehicle classes. For a full list of all absolute transmission costs used in the analysis across all model years, see the Technologies file.

¹⁷³ The data used to create this figure can be found in the FE_1 Improvements file.

Table III-14 – Examples of Absolute Costs for Transmission Technologies in 2018\$ for Select Model Years

Technology	MY 2020	MY 2025	MY 2030
MT5	1,563.97	1,563.97	1,563.97
MT6	1,928.41	1,917.08	1,910.70
MT7	2,226.75	2,100.64	2,034.88
AT5	2,085.30	2,085.30	2,085.30
AT6	2,063.19	2,063.19	2,063.19
AT6L2	2,331.44	2,303.65	2,293.25
AT7L2	2,298.63	2,276.53	2,268.26
AT8	2,195.36	2,195.18	2,195.15
AT8L2	2,442.32	2,405.33	2,391.49
AT8L3	2,649.15	2,590.74	2,568.89
AT9L2	2,546.03	2,498.29	2,480.43
AT10L2	2,546.03	2,498.29	2,480.43
AT10L3	2,753.44	2,684.21	2,658.31
DCT6	2,115.89	2,115.84	2,115.84
DCT8	2,653.91	2,653.15	2,653.02
CVT	2,332.83	2,322.63	2,315.25
CVTL2	2,518.80	2,500.94	2,488.02

3. Electrification Paths

The electric paths include a large set of technologies that share the common element of using electrical power for certain vehicle functions that were traditionally powered mechanically by engine power. Electrification technologies thus can range from electrification of specific accessories (for example, electric power steering to reduce engine loads by eliminating parasitic losses) to electrification of the entire powertrain (as in the case of a battery electric vehicle).

The following subsections discuss how each electrification technology is defined in the CAFE Model and the electrification pathways down which a vehicle can travel in the compliance simulation. The subsections also discuss how the agency assigned electrified vehicle technologies to vehicles in the MY 2020 analysis fleet, any limitations on electrification technology adoption, and the specific effectiveness and cost

assumptions used in the Autonomie and CAFE Model analysis.

(a) Electrification Modeling in the CAFE Model

The CAFE Model defines the technology pathway for each type of electrification grouping in a logical progression. Whenever the CAFE Model converts a vehicle model to one of the available electrified systems, both effectiveness and costs are updated according to the specific components' modeling algorithms. Additionally, all technologies on the different electrification paths are mutually exclusive and are evaluated in parallel. For example, the model may evaluate PHEV20 technology prior to having to apply 12-volt stop-start (SS12V) or strong hybrid technology. The specific set of algorithms and rules are discussed further in the sections below, and more detailed discussions are included in the CAFE Model Documentation. The

specifications for each electrification technology used in the analysis is discussed below.

The technologies that are included on the three vehicle-level paths pertaining to the electrification and electric improvements defined within the modeling system are illustrated in Figure III-11. As shown in the Electrification path, the baseline-only CONV technology is grayed out. This technology is used to denote whether a vehicle comes in with a conventional powertrain (*i.e.*, a vehicle that does not include any level of hybridization) and to allow the model to properly map to the Autonomie vehicle simulation database results. If multiple branches converge on a single technology, the subset of technologies that will be disabled from further adoption is extended only up the point of convergence.

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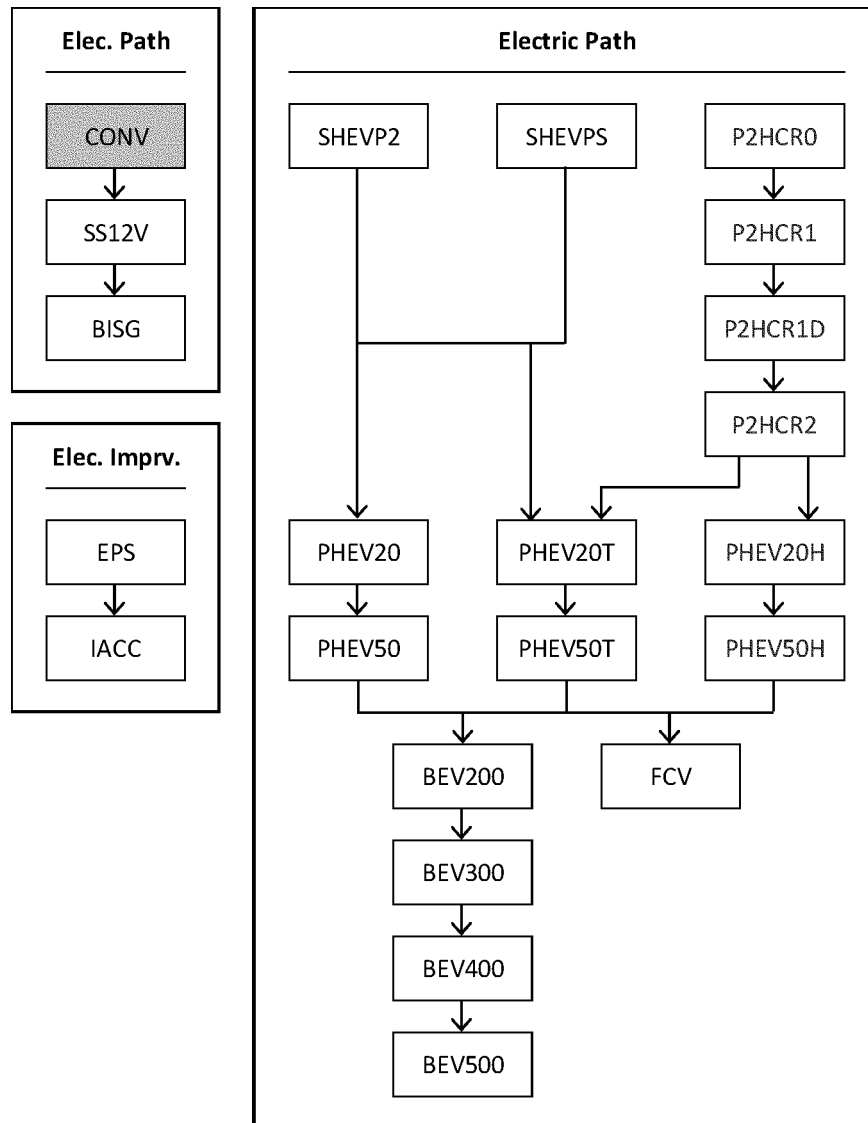


Figure III-11 – Electrification Paths in the CAFE Model

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SS12V: 12-volt stop-start (SS12V), sometimes referred to as start-stop, idle-stop, or a 12-volt micro hybrid system, is the most basic hybrid system that facilitates idle-stop capability. In this system, the integrated starter generator is coupled to the internal combustion (IC) engine. When the vehicle comes to an idle-stop the IC engine completely shuts off, and, with the help of the 12-volt battery, the engine cranks and starts again in response to throttle to move the vehicle, application or release of the brake pedal to move the vehicle. The 12-volt battery used for the start-stop system is an improved unit compared to a traditional 12-volt battery, and is capable of higher power, increased life cycle, and capable of minimizing voltage drop on restart. This technology is beneficial to reduce fuel consumption

and emissions when the vehicle frequently stops, such as in city driving conditions or in stop and go traffic. 12VSS can be applied to all vehicle technology classes.

BISG: The belt integrated starter generator, sometimes referred to as a mild hybrid system or P0 hybrid, provides idle-stop capability and uses a higher voltage battery with increased energy capacity over conventional automotive batteries. These higher voltages allow the use of a smaller, more powerful and efficient electric motor/generator which replaces the standard alternator. In BISG systems, the motor/generator is coupled to the engine via belt (similar to a standard alternator). In addition, these motor/generators can assist vehicle braking and recover braking energy while the vehicle slows down (regenerative braking) and in turn

can propel the vehicle at the beginning of launch, allowing the engine to be restarted later. Some limited electric assist is also provided during acceleration to improve engine efficiency. Like the micro hybrids, BISG can be applied to all vehicles in the analysis except for Engine 26a (VCR). We assume all mild hybrids are 48-volt systems with engine belt-driven motor/generators.

SHEVP2/SHEVPS: A strong hybrid vehicle is a vehicle that combines two or more propulsion systems, where one uses gasoline (or diesel), and the other captures energy from the vehicle during deceleration or braking, or from the engine and stores that energy for later used by the vehicle. This analysis evaluated the following strong hybrid systems: Hybrids with “P2” parallel

drivetrain architectures (SHEVP2),¹⁷⁴ and hybrids with power-split architectures (SHEVPS). Both types provide start-stop or idle-stop functionality, regenerative braking capability, and vehicle launch assist. A SHEVPS has a higher potential for fuel economy improvement than a SHEVP2, although its cost is also higher and engine power density is lower.¹⁷⁵

P2 parallel hybrids (SHEVP2) are a type of hybrid vehicle that use a transmission-integrated electric motor placed between the engine and a gearbox or CVT, with a clutch that allows decoupling of the motor/transmission from the engine. Although similar to the configuration of the crank mounted integrated starter generator (CISG) system discussed previously, a P2 hybrid is typically equipped with a larger electric motor and battery in comparison to the CISG. Disengaging the clutch allows all-electric operation and more efficient brake-energy recovery. Engaging the clutch allows coupling of the engine and electric motor and, when combined with a transmission, reduces gear-train losses relative to power-split or 2-mode hybrid systems. P2 hybrid systems typically rely on the internal combustion engine to deliver high, sustained power levels.

Electric-only mode is used when power demands are low or moderate.

An important feature of the SHEVP2 system is that it can be applied in conjunction with most engine technologies. Accordingly, once a vehicle is converted to a SHEVP2 powertrain in the compliance simulation, the CAFE Model allows the vehicle to adopt the conventional engine technology that is most cost effective, regardless of relative location of the existing engine on the engine technology path. For example, a vehicle in the MY 2020 analysis fleet that starts with a TURBO2 engine could adopt a TURBO1 engine with the SHEVP2 system, if that TURBO1 engine allows the vehicle to meet fuel economy standards more cost effectively.

The power-split hybrid (SHEVPS) is a hybrid electric drive system that replaces the traditional transmission with a single planetary gear set (the power-split device) and a motor/generator. This motor/generator uses the engine either to charge the battery or to supply additional power to the drive motor. A second, more powerful motor/generator is connected to the vehicle's final drive and always turns with the wheels. The planetary gear splits engine power between the first motor/generator and the drive motor either to charge the

battery or to supply power to the wheels. During vehicle launch, or when the battery state of charge (SOC) is high, the engine is turned off and the electric motor propels the vehicle.¹⁷⁶ During normal driving, the engine output is used both to propel the vehicle and to generate electricity. The electricity generated can be stored in the battery and/or used to drive the electric motor. During heavy acceleration, both the engine and electric motor (by consuming battery energy) work together to propel the vehicle. When braking, the electric motor acts as a generator to convert the kinetic energy of the vehicle into electricity to charge the battery.

Table III–15 below shows the configuration of conventional engines and transmissions used with strong hybrids for this analysis. The SHEVPS powertrain configuration was paired with a planetary transmission (eCVT) and Atkinson engine (Eng26). This configuration was designed to maximize efficiency at the cost of reduced towing capability and real-world acceleration performance.¹⁷⁷ In contrast, the SHEVP2 powertrains were paired with an advanced 8-speed automatic transmissions (AT8L2) and could be paired with most conventional engines.¹⁷⁸

Table III-15 – Configuration of Strong Hybrid Architectures with Transmissions and Engines

CAFE Model Technologies	Transmission Options	Engine Options (PC/SUV)	Engine Options (LT)
SHEVPS	Planetary - eCVT	Eng 26 - Atkinson	N/A
SHEVP2 ¹⁷⁹	AT8L2	All Engines except for VTGE and VCR	All Engines except for VTGE and VCR

PHEV: Plug-in hybrid electric vehicles are hybrid electric vehicles with the means to charge their battery packs from an outside source of electricity (usually the electric grid). These vehicles have larger battery packs with more energy storage and a greater capability to be discharged than other non-plug-in

hybrid electric vehicles. PHEVs also generally use a control system that allows the battery pack to be substantially depleted under electric-only or blended mechanical/electric operation and batteries that can be cycled in charge-sustaining operation at a lower state of charge than non-plug-in

hybrid electric vehicles. These vehicles generally have a greater all-electric range than typical strong HEVs. Depending on how these vehicles are operated, they can use electricity exclusively, operate like a conventional hybrid, or operate in some combination of these two modes.

¹⁷⁴ Depending on the location of electric machine (motor with or without inverter), the parallel hybrid technologies are classified as P0-motor located at the primary side of the engine, P1-motor located at the flywheel side of the engine, P2-motor located between engine and transmission, P3-motor located at the transmission output, and P4-motor located on the axle.

¹⁷⁵ Kapadia, J., Kok, D., Jennings, M., Kuang, M. et al., "Powersplit or Parallel—Selecting the Right Hybrid Architecture," SAE Int. J. Alt. Power. 6(1):2017, doi:10.4271/2017-01-1154.

¹⁷⁶ Autonomie model documentation, Chapter 4.13.2.

¹⁷⁷ Kapadia, J., D, Kok, M, Jennings, M, Kuang, B, Masterson, R, Isaacs, A, Dona. 2017. Powersplit or Parallel—Selecting the Right Hybrid Architecture.

SAE International Journal of Alternative Powertrains 6 (1): 68–76. <https://doi.org/10.4271/2017-01-1154>.

¹⁷⁸ We did not model SHEVP2s with VTGE (Eng23c) and VCR (Eng26a).

¹⁷⁹ Engine 01, 02, 03, 04, 5b, 6a, 7a, 8a, 12, 12-DEAC, 13, 14, 17, 18, 19, 20, 21, 22b, 23b, 24, 24-Deac. See Section III.D.1 for these engine specifications.

There are four PHEV architectures included in this analysis that reflect combinations of two levels of all-electric range (AER) and two engine types. DOT selected 20 miles AER and 50 miles AER to reasonably span the various AER in the market, and their effectiveness and cost. DOT selected an Atkinson engine and a turbocharged downsized engine to span the variety of engines in the market.

PHEV20/PHEV20H and PHEV50/PHEV50H are essentially a SHEVPS with a larger battery and the ability to drive with the engine turned off. In the CAFE Model, the designation for “H” in PHEVxH could represent another type of engine configuration, but for this analysis DOT used the same

effectiveness values as PHEV20 and PHEV50 to represent PHEV20H and PHEV50H, respectively. The PHEV20/PHEV20H represents a “blended-type” plug-in hybrid, which can operate in all-electric (engine off) mode only at light loads and low speeds, and must blend electric motor and engine power together to propel the vehicle at medium or high loads and speeds. The PHEV50/PHEV50H represents an extended range electric vehicle (EREV), which can travel in all-electric mode even at higher speeds and loads. Further discussion of engine sizing, batteries, and motors for these PHEVs is discussed in Section III.D.3.d).

PHEV20T and PHEV50T are 20 mile and 50 mile AER vehicles based on the

SHEVPS engine architecture. The PHEV versions of these architectures include larger batteries and motors to meet performance in charge sustaining mode at higher speeds and loads as well as similar performance and range in all electric mode in city driving, at higher speeds and loads. For this analysis, the CAFE Model considers these PHEVs to have an advanced 8-speed automatic transmission (AT8L2) and TURBO1 (Eng12) in the powertrain configuration. Further discussion of engine sizing, batteries, and motors for these PHEVs is discussed in Section III.D.3.d).

Table III–16 shows the different PHEV configurations used in this analysis.

Table III-16 – Configuration of Plug-in Hybrid Architectures with Transmissions and Engines

CAFE Model Technologies	Transmission Options	Engine Options (PC/SUV)	Engine Options (LT)
PHEV20/PHEV20H	Planetary - eCVT	Eng 26 – Atkinson Engine	N/A
PHEV20T	AT8L2	Eng 12 - TURBO1	Eng 12 - TURBO1
PHEV50/PHEV50H	Planetary - eCVT	Eng 26 - Atkinson	N/A
PHEV50T	AT8L2	Eng 12 - TURBO1	Eng 12 - TURBO1

BEV: Battery electric vehicles are equipped with all-electric drive systems powered by energy-optimized batteries charged primarily by electricity from the grid. BEVs do not have a combustion engine or traditional transmission. Instead, BEVs rely on all electric powertrains, with an advanced transmission packaged with the powertrain. The range of battery electric vehicles vary by vehicle and battery pack size.

DOT simulated BEVs with ranges of 200, 300, 400, and 500 miles in the CAFE Model. BEV range is measured pursuant to EPA test procedures and guidance.¹⁸⁰ The CAFE Model assumes that BEVs transmissions are unique to each vehicle (*i.e.*, the transmissions are not shared by any other vehicle) and

that no further improvements are available.

A key note about the BEVs offered in this analysis is that the CAFE Model does not account for vehicle range when considering additional BEV technology adoption. That is, the CAFE Model does not have an incentive to build BEV300, 400, and 500s, because the BEV200 is just as efficient as those vehicles and counts the same toward compliance, but at a significantly lower cost because of the smaller battery. While manufacturers have been building 200-mile range BEVs, those vehicles have generally been passenger cars. Manufacturers have told DOT that greater range is important for meeting the needs of broader range of consumers and to increase consumer demand. More recently, there has been a trend towards manufacturers building higher range BEVs in the market, and manufacturers building CUV/SUV and pickup truck BEVs. To simulate the potential relationship of BEV range to consumer demand, DOT has included several

adoption features for BEVs. These are discussed further in Section III.D.3.c).

Fuel cell electric vehicle (FCEV): Fuel cell electric vehicles are equipped with an all-electric drivetrain, but unlike BEVs, FCEVs do not solely rely on batteries; rather, electricity to run the FCEV electric motor is mainly generated by an onboard fuel cell system. FCEV architectures are similar to series hybrids,¹⁸¹ but with the engine and generator replaced by a fuel cell. Commercially available FCEVs consume hydrogen to generate electricity for the fuel cell system, with most automakers using high pressure gaseous hydrogen storage tanks. FCEVs are currently produced in limited numbers and are available in limited geographic areas where hydrogen refueling stations are accessible. For reference, in MY 2020, only four FCV models were offered for

¹⁸⁰ BEV electric ranges are determined per EPA guidance Document. “EPA Test Procedure for Electric Vehicles and Plug-in Hybrids.” <https://fuel-economy.gov/feg/pdfs/EPA%20test%20procedure%20for%20EVs-PHEVs-11-14-2017.pdf>. November 14, 2017. Last Accessed May 3, 2021.

¹⁸¹ Series hybrid architecture is a strong hybrid that has the engine, electric motor and transmission in series. The engine in a series hybrid drives a generator that charges the battery.

sale, and since 2014 only 9,975 FCVs have been sold.^{182 183}

For this analysis, the CAFE Model simulates a FCEV with a range of 320 miles. Any type of powertrain could adopt a FCEV powertrain; however, to account for limited market penetration and unlikely increased adoption in the rulemaking timeframe, technology phase in caps were used to control how many FCEVs a manufacturer could build. The details of this concept are further discussed in Section III.D.3.c).

(b) Electrification Analysis Fleet Assignments

DOT identified electrification technologies present in the baseline fleet and used these as the starting point for the regulatory analysis. These assignments were based on manufacturer-submitted CAFE compliance information, publicly available technical specifications, marketing brochures, articles from

reputable media outlets, and data from Wards Intelligence.¹⁸⁴

Table III–17 gives the baseline fleet penetration rates of electrification technologies eligible to be assigned in the baseline fleet. Over half the fleet had some level of electrification, with the vast majority of these being micro hybrids. BEVs represented less than 2% of MY 2020 baseline fleet; BEV300 was the most common BEV technology, while no BEV500s were observed.

Table III-17 – Penetration Rate of Electrification Technologies in the MY 2020 Fleet

Electrification Technology	Sales Volume with this Technology	Penetration Rate in 2020 Baseline Fleet
None	5,791,220	42.61%
SS12V	6,837,257	50.30%
BISG	258,629	1.90%
SHEVP2	6,409	0.05%
SHEVPS	378,523	2.78%
PHEV20	46,393	0.34%
PHEV20T	18,943	0.14%
PHEV50	2,392	0.02%
PHEV50T	18	0.0001%
BEV200	72,123	0.53%
BEV300	145,900	1.07%
BEV400	34,000	0.25%
BEV500	0	0%
FCV	744	0.005%

Micro and mild hybrids refer to the presence of SS12V and BISG, respectively. The data sources discussed above were used to identify the presence of these technologies on vehicles in the fleet. Vehicles were assigned one of these technologies only if its presence could be confirmed with manufacturer brochures or technical specifications.

Strong hybrid technologies included SHEVPS and SHEVP2. Note that P2HCR0, P2HCR1, P2HCR1D, and P2HCR2 are not assigned in the fleet and are only available to be applied by the model. When possible, manufacturer specifications were used to identify the strong hybrid architecture type. In the absence of more sophisticated information, hybrid architecture was

determined by number of motors. Hybrids with one electric motor were assigned P2, and those with two were assigned power-split (PS). DOT seeks comment on additional ways the agency could perform initial hybrid assignments based on publicly available information.

Plug-in hybrid technologies PHEV20/20T and PHEV50/50T are assigned in the baseline fleet. PHEV20H and PHEV50H are not assigned in the fleet and are only available to be applied by the model. Vehicles with an electric-only range of 40 miles or less were assigned PHEV20; those with a range above 40 miles were assigned PHEV50. They were respectively assigned PHEV20T/50T if the engine was turbocharged (*i.e.*, if it would qualify for

one of technologies on the turbo engine technology pathway). DOT also had to calculate baseline fuel economy values for PHEV technologies as part of the PHEV analysis fleet assignments; that process is described in detail in TSD Chapter 3.3.2.

Fuel cell and battery electric vehicle technologies included BEV200/300/400/500 and FCV. Vehicles with all-electric powertrains that used hydrogen fuel were assigned FCV. The BEV technologies were assigned to vehicles based on range thresholds that best account for vehicles' existing range capabilities while allowing room for the model to potentially apply more advanced electrification technologies.

¹⁸² Argonne National Laboratory, "Light Duty Electric Drive Vehicles Monthly Sales Update." Energy Systems Division, <https://www.anl.gov/es/light-duty-electric-drive-vehicles-monthly-sales-updates>. Last Accessed May 4, 2021.

¹⁸³ See the MY 2020 Market Data file. The four vehicles are the Honda Clarity, Hyundai Nexo and Nexo Blue, and Toyota Mirai.

¹⁸⁴ "U.S. Car and Light Truck Specifications and Prices, '20 Model Year." *Wards Intelligence*, 3 Aug. 2020, wardsintelligence.informa.com/WI964244/US-Car-and-Light-Truck-Specifications-and-Prices-20-Model-Year.

For more detail about the electrification analysis fleet assignment process, see TSD Chapter 3.3.2.

(c) Electrification Adoption Features

Multiple types of adoption features applied to the electrification technologies. The hybrid/electric technology path logic dictated how vehicles could adopt different levels of electrification technology. Broadly speaking, more advanced levels of hybridization or electrification superseded all prior levels, with certain technologies within each level being mutually exclusive. The analysis modeled (from least to most electrified) micro hybrids, mild hybrids, strong hybrids, plug-in hybrids, and fully electric vehicles.

As discussed further below, SKIP logic—restrictions on the adoption of certain technologies—applied to plug-in (PHEV) and strong hybrid vehicles (SHEV). Some technologies on these pathways were “skipped” if a vehicle was high performance, required high towing capabilities as a pickup truck, or belonged to certain manufacturers who have demonstrated that their future product plans will more than likely not include the technology. The specific criteria for SKIP logic for each applicable electrification technology will be expanded on later in this section.

This section also discusses the supersession of engines and transmissions on vehicles that adopt SHEV or PHEV powertrains. To manage the complexity of the analysis, these types of hybrid powertrains were modeled with several specific engines and transmissions, rather than in multiple configurations. Therefore, the cost and effectiveness values SHEV and PHEV technologies take into account these specific engines and transmissions.

Finally, phase-in caps limited the adoption rates of battery electric (BEV) and fuel cell vehicles (FCV). These phase-in caps were set by DOT, taking into account current market share, scalability, and reasonable consumer adoption rates of each technology. TSD Chapter 3.3.3 discusses the electrification phase-in caps and the reasoning behind them in detail.

The only adoption feature applicable to micro and mild hybrid technologies was path logic. The pathway consists of a linear progression starting with a conventional powertrain with no electrification at all, which is superseded by SS12V, which in turn is

superseded by BISG. Vehicles could only adopt micro and mild hybrid technology if the vehicle did not already have a more advanced level of electrification.

The adoption features applied to strong hybrid technologies included path logic, powertrain substitution, and vehicle class restrictions. Per the defined technology pathways, SHEVPS, SHEVP2, and the P2HCR technologies were considered mutually exclusive. In other words, when the model applies one of these technologies, the others are immediately disabled from future application. However, all vehicles on the strong hybrid pathways could still advance to one or more of the plug-in hybrid technologies.

When the model applied any strong hybrid technology to a vehicle, the transmission technology on the vehicle was superseded. Regardless of the transmission originally present, P2 hybrids adopt an 8-speed automatic transmission (AT8L2), and PS hybrids adopt a continuously variable transmission (eCVT).

When the model applies the SHEVP2 technology, the model can consider various engine options to pair with the SHEVP2 architecture according to existing engine path constraints, taking into account relative cost effectiveness. For SHEVPS technology, the existing engine was replaced with Eng26, a full Atkinson cycle engine.

SKIP logic was also used to constrain adoption for SHEVPS, P2HCR0, P2HCR1, and P2HCR1D. No SKIP logic applied to SHEVP2; P2HCR2 was restricted from all vehicles in the 2020 fleet, as discussed further in Section III.D.1.d)(1). These technologies were “skipped” for vehicles with engines¹⁸⁵ that met one of the following conditions:

- The engine belonged to an excluded manufacturer;¹⁸⁶
- The engine belonged to a pickup truck (*i.e.*, the engine was on a vehicle assigned the “pickup” body style);
- The engine’s peak horsepower was more than 405 HP; or if
- The engine was on a non-pickup vehicle but was shared with a pickup.

The reasons for these conditions are similar to those for the SKIP logic applied to HCR engine technologies, discussed in more detail above. In the real world, pickups and performance vehicles with certain powertrain configurations cannot adopt the technologies listed above and maintain vehicle performance without redesigning the entire powertrain. SKIP

logic was put in place to prevent the model from pursuing compliance pathways that are ultimately unrealistic.

PHEV technologies superseded the micro, mild, and strong hybrids, and could only be replaced by full electric technologies. Plug-in hybrid technology paths were also mutually exclusive, with the PHEV20 technologies able to progress to the PHEV50 technologies.

The engine and transmission technologies on a vehicle were superseded when PHEV technologies were applied to a vehicle. For all plug-in technologies, the model applied an AT8L2 transmission. For PHEV20/50 and PHEV20H/50H, the vehicle received a full Atkinson cycle engine, Eng26. For PHEV20T/50T, the vehicle received a TURBO1 engine, Eng12.

SKIP logic applied to PHEV20/20H and PHEV50/50H under the same four conditions listed for the strong hybrid technologies in the previous section, for the same reasons previously discussed.

For the analysis, the adoption of BEVs and FCEVs was limited by both path logic and phase in caps. BEV200/300/400/500 and FCEV were applied as end-of-path technologies that superseded previous levels of electrification.

The main adoption feature applicable to BEVs and FCEVs is phase-in caps, which are defined in the CAFE Model input files as percentages that represent the maximum rate of increase in penetration rate for a given technology. They are accompanied by a phase-in start year, which determines the first year the phase-in cap applies. Together, the phase-in cap and start year determine the maximum penetration rate for a given technology in a given year; the maximum penetration rate equals the phase-in cap times the number of years elapsed since the phase-in start year. Note that phase-in caps *do not* inherently dictate how much a technology is applied by the model. Rather, they represent how much of the fleet *could* have a given technology by a given year. Because BEV200 costs less and has higher effectiveness values than other advanced electrification technologies,¹⁸⁷ the model will have vehicles adopt it first, until it is restricted by the phase-in cap.

Table III–18 shows the phase-in caps, phase-in year, and maximum penetration rate through 2050 for BEV and FCEV technologies. For comparison, the actual penetration rate of each technology in the 2020 baseline fleet is also listed in the fourth column from the left.

¹⁸⁵ This refers to the engine assigned to the vehicle in the 2020 baseline fleet.

¹⁸⁶ Excluded manufacturers included BMW, Daimler, and Jaguar Land Rover.

¹⁸⁷ This is because BEV200 uses fewer batteries and weighs less than BEVs with greater ranges.

Table III-18 – Phase-In Caps for Fuel Cell and Battery Electric Vehicle Technologies

Technology Name	Phase-In Cap	Phase-In Start Year	Actual Penetration Rate in 2020 (Baseline Fleet)	Maximum Penetration Rate in 2020	Maximum Penetration Rate in 2025	Maximum Penetration Rate in 2030	Maximum Penetration Rate in 2035	Maximum Penetration Rate in 2040	Maximum Penetration Rate in 2045	Maximum Penetration Rate in 2050
BEV200	0.09%	1998	0.53%	1.98%	2.43%	2.88%	3.33%	3.78%	4.23%	4.68%
BEV300	0.70%	2009	1.07%	7.70%	11.20%	14.70%	18.20%	21.70%	25.20%	28.70%
BEV400	1.25%	2016	0.25%	5.00%	11.25%	17.50%	23.75%	30.00%	36.25%	42.50%
BEV500	4.25%	2021	-	-	17.00%	38.25%	59.50%	80.75%	102.00%	123.25%
FCV	0.018%	2016	0.005%	0.072%	0.162%	0.252%	0.342%	0.432%	0.522%	0.612%

The BEV200 phase-in cap was informed by manufacturers’ tendency to move away from low-range vehicle offerings, in part because of consumer hesitancy to adopt this technology. The advertised range on most electric vehicles does not reflect extreme cold and hot real-world driving conditions, affecting the utility of already low-range vehicles.¹⁸⁸ Many manufacturers have told DOT that the portion of consumers willing to accept a vehicle with less than 300 miles of electric range is extremely small, and many manufacturers do not plan to offer vehicles with less than 300 miles of electric range. For example, in February 2021, Tesla, the U.S.’ highest-selling BEV manufacturer, discontinued the Standard Range Model Y because its range did not meet the company’s “standard of excellence.”¹⁸⁹ Tesla does sell long-range versions of many of its vehicles.

Furthermore, the average BEV range has steadily increased over the past decade,¹⁹⁰ perhaps in part as batteries become more cost effective. EPA observed in its 2020 Automotive Trends Report that “the average range of new EVs has climbed substantially. In model year 2019 the average new EV is projected to have a 252-mile range, or

about three and a half times the range of an average EV in 2011. This difference is largely attributable to higher production of new EVs with much longer ranges.”¹⁹¹ The maximum growth rate for BEV200 in the model was set accordingly low to less than 0.1% per year. While this rate is significantly lower than that of the other BEV technologies, the BEV200 phase-in cap allows the penetration rate of low-range BEVs to grow by a multiple of what is currently observed in the market.

For BEV300, 400, and 500, phase-in caps are largely a reflection of the challenges facing the scalability of BEV manufacturing, and implementing BEV technology on many vehicle configurations, including larger vehicles. In the short term, the penetration of BEVs is largely limited by battery availability.¹⁹² For example, Tesla has struggled to scale production of new cells for its vehicles, and it remains a bottleneck in the company’s production capability.¹⁹³ The Director of Energy and Environmental Research at Toyota acknowledged in March 2021 that BEV adoption faces many challenges beyond battery availability, including “the cost of batteries, the need for national infrastructure, long recharging times, limited driving range

and the need for consumer behavioral change.”¹⁹⁴ Incorporating battery packs that provide greater amounts of electric range into vehicles also poses its own engineering challenges. Heavy batteries and large packs may be difficult to integrate for many vehicle configurations. Pickup trucks and large SUVs in particular require higher levels of energy as the number of passengers and/or payload increases, for towing and other high-torque applications. DOT selected the BEV400 and 500 phase-in caps to reflect these concerns.

The phase-in cap for FCEVs was assigned based on existing market share as well as historical trends in FCEV production. FCEV production share in the past five years has been extremely low, and DOT set the phase-in cap accordingly.¹⁹⁵ As with BEV200, however, the phase-in cap still allows for the market share of FCVs to grow several times over.

(d) Electrification Effectiveness Modeling

For this analysis, DOT considers a range of electrification technologies which, when modeled, result in varying levels of effectiveness at reducing fuel consumption. As discussed above, the modeled electrification technologies include micro hybrids, mild hybrids, two different strong hybrids, two different plug-in hybrids with two separate all electric ranges, full electric vehicles and FCEVs. Each electrification technology consists of many complex sub-systems with unique component

¹⁸⁸ AAA. “AAA Electric Vehicle Range Testing.” February 2019. <https://www.aaa.com/AAA/common/AAR/files/AAA-Electric-Vehicle-Range-Testing-Report.pdf>.

¹⁸⁹ Baldwin, Roberto. “Tesla Model Y Standard Range Discontinued; CEO Musk Tweets Explanation.” Car and Driver, 30 Apr. 2021, www.caranddriver.com/news/a35602581/elon-musk-model-y-discontinued-explanation/. Accessed May 20, 2020.

¹⁹⁰ 2020 EPA Automotive Trends Report, at 53, figure 4.14.

¹⁹¹ 2020 EPA Automotive Trends Report, at 53.

¹⁹² See, e.g., Cohen, Ariel. “Manufacturers Are Struggling To Supply Electric Vehicles With Batteries.” Forbes, Forbes Magazine, 25 March 2020, www.forbes.com/sites/arielcohen/2020/03/25/manufacturers-are-struggling-to-supply-electric-vehicles-with-batteries. Accessed May 20, 2021.

¹⁹³ Hyatt, Kyle. “Tesla Will Build an Electric Van Eventually, Elon Musk Says.” Roadshow, CNET, 28 Jan. 2021, www.cnet.com/roadshow/news/tesla-electric-van-elon-musk/. Accessed May 20, 2021.

¹⁹⁴ <https://www.energy.senate.gov/services/files/E2EA0E4F-BAD9-452D-99CC-35BC204DE6F0>.

¹⁹⁵ 2020 EPA Automotive Trends Report, at 52, figure 4.13.

characteristics and operational modes. As discussed further below, the systems that contribute to the effectiveness of an electrified powertrain in the analysis include the vehicle's battery, electric motors, power electronics, and accessory loads. Procedures for modeling each of these sub-systems are broadly discussed below, in Section III.C.4, and the Autonomie model documentation.

Argonne used data from their Advanced Mobility Technology Laboratory (AMTL) to develop Autonomie's electrified powertrain models. The modeled powertrains are not intended to represent any specific manufacturer's architecture but are intended to act as surrogates predicting representative levels of effectiveness for each electrification technology.

Autonomie determines the effectiveness of each electrified powertrain type by modeling the basic components, or building blocks, for each powertrain, and then combining the components modularly to determine the overall efficiency of the entire powertrain. The basic building blocks that comprise an electrified powertrain in the analysis include the battery, electric motors, power electronics, and accessory loads. Autonomie identifies components for each electrified powertrain type, and then interlinks those components to create a powertrain architecture. Autonomie then models each electrified powertrain architecture and provides an effectiveness value for each architecture. For example, Autonomie determines a BEV's overall efficiency by considering the efficiencies of the battery, the electric traction drive system (the electric machine and power electronics) and

mechanical power transmission devices. Or, for a SHEVP2, Autonomie combines a very similar set of components to model the electric portion of the hybrid powertrain, and then also includes the combustion engine and related power for transmission components. See TSD Chapter 3.3.4 for a complete discussion of electrification component modeling.

As discussed earlier in Section III.C.4, Autonomie applies different powertrain sizing algorithms depending on the type of vehicle considered because different types of vehicles not only contain different powertrain components to be optimized, but they must also operate in different driving modes. While the conventional powertrain sizing algorithm must consider only the power of the engine, the more complex algorithm for electrified powertrains must simultaneously consider multiple factors, which could include the engine power, electric machine power, battery power, and battery capacity. Also, while the resizing algorithm for all vehicles must satisfy the same performance criteria, the algorithm for some electric powertrains must also allow those electrified vehicles to operate in certain driving cycles, like the US06 cycle, without assistance of the combustion engine, and ensure the electric motor/generator and battery can handle the vehicle's regenerative braking power, all-electric mode operation, and intended range of travel.

To establish the effectiveness of the technology packages, Autonomie simulates the vehicles' performance on compliance test cycles, as discussed in Section III.C.4.¹⁹⁶¹⁹⁷¹⁹⁸ The range of

¹⁹⁶ See U.S. EPA, "How Vehicles are Tested." https://www.fueleconomy.gov/feg/how_tested.shtml. Last accessed May 6, 2021.

effectiveness for the electrification technologies in this analysis is a result of the interactions between the components listed above and how the modeled vehicle operates on its respective test cycle. This range of values will result in some modeled effectiveness values being close to real-world measured values, and some modeled values that will depart from measured values, depending on the level of similarity between the modeled hardware configuration and the real-world hardware and software configurations. This modeling approach comports with the National Academy of Science 2015 recommendation to use full vehicle modeling supported by application of lumped improvements at the sub-model level.¹⁹⁹ The approach allows the isolation of technology effects in the analysis supporting an accurate assessment.

The range of effectiveness values for the electrification technologies, for all ten vehicle technology classes, is shown in Figure III-12. In the graph, the box shows the inner quartile range (IQR) of the effectiveness values and whiskers extend out 1.5 x IQR. The dots outside of the whiskers show values outside these bounds.

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¹⁹⁷ See Autonomie model documentation, Chapter 6: Test Procedures and Energy Consumption Calculations.

¹⁹⁸ EPA Guidance Letter. "EPA Test Procedures for Electric Vehicles and Plug-in Hybrids." Nov. 14, 2017. <https://www.fueleconomy.gov/feg/pdfs/EPA%20test%20procedure%20for%20EVs-PHEVs-11-14-2017.pdf>. Last accessed May 6, 2021.

¹⁹⁹ 2015 NAS report, at 292.

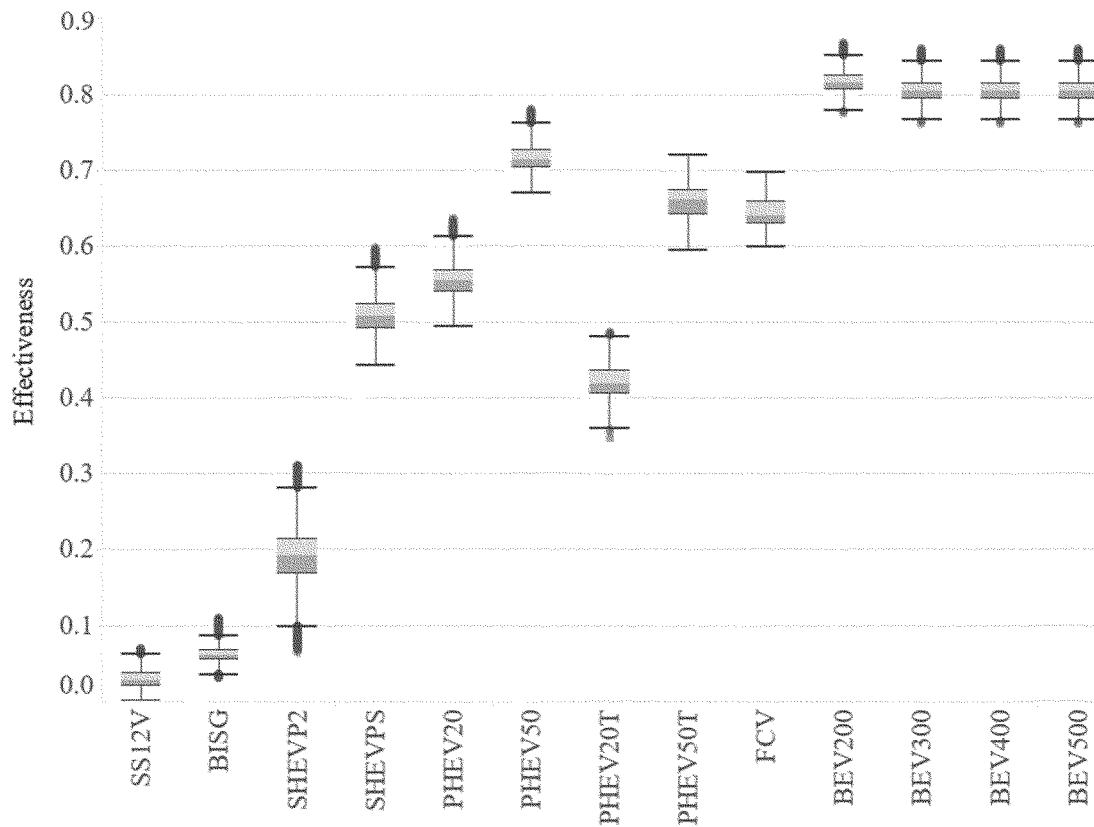


Figure III-12 – Electrification Technology Effectiveness Values for All the Vehicle Technology Classes²⁰⁰

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(e) Electrification Costs

The total cost to electrify a vehicle in this analysis is based on the battery the vehicle requires, the non-battery electrification component costs the vehicle requires, and the traditional powertrain components that must be added or removed from the vehicle to build the electrified powertrain.

We worked collaboratively with the experts at Argonne National Laboratory to generate battery costs using BatPaC, which is a model designed to calculate the cost of a vehicle battery for a specified battery power, energy, and type. Argonne used BatPaC v4.0 (October 2020 release) to create lookup tables for battery cost and mass that the Autonomie simulations referenced when a vehicle received an electrified powertrain. The BatPaC battery cost estimates are generated for a base year, in this case for MY 2020. Accordingly, our BatPaC inputs characterized the state of the market in MY 2020 and employed a widely utilized cell

chemistry (NMC622),²⁰¹ average estimated battery pack production volume per plant (25,000), and a plant efficiency or plant cell yield value of 95%.

For two specific electrified vehicle applications, BEV400 and BEV500, we did not use BatPaC to generate battery pack costs. Rather, we scaled the BatPaC-generated BEV300 costs to match the range of BEV400 and BEV500 vehicles to compute a direct manufacturing cost for those vehicles' batteries. We initially examined using BatPaC to model the cost and weight of BEV400 and BEV500 packs, however, initial values from the model could not

be validated and were based on assumptions for smaller sized battery packs. The initial results provided cost and weight estimates for BEV400 battery packs out of alignment with current examples of BEV400s in the market, and there are currently no examples of BEV500 battery packs in the market against which to validate the pack results.

Finally, to reflect how we expect batteries could fall in cost over the timeframe considered in the analysis, we applied a learning rate to the direct manufacturing cost. Broadly, the learning rate applied in this analysis reflects middle-of-the-road year-over-year improvements until MY 2032, and then the learning rates incrementally become shallower as battery technology is expected to mature in MY 2033 and beyond. Applying learning curves to the battery pack DMC in subsequent analysis years lowers the cost such that the cost of a battery pack in any future model year could be representative of the cost to manufacture a battery pack, regardless of potentially diverse parameters such as cell chemistry, cell format, or production volume.

²⁰⁰ The data used to create this figure can be found in the FE_1 Adjustments file.

²⁰¹ Autonomie model documentation, Chapter 5.9. Argonne surveyed A2Mac1 and TBS teardown reports for electrified vehicle batteries and of the five fully electrified vehicles surveyed, four of those vehicles used NMC622 and one used NMC532. See also Georg Bieker, A Global Comparison of the Life-Cycle Greenhouse Gas Emissions of Combustion Engine and Electric Passenger Cars, International Council on Clean Transportation (July 2021), https://theicct.org/sites/default/files/publications/Global-LCA-passenger-cars-jul2021_0.pdf ("For cars registered in 2021, the GHG emission factors of the battery production are based on the most common battery chemistry, NMC622-graphite batteries. . . ."); 2021 NAS report, at 5-92 (" . . . NMC622 is the most common cathode chemistry in 2019. . . .").

TSD Chapter 3.3.5.1 includes more detail about the process we used to develop battery costs for this analysis. In addition, all BatPaC-generated direct manufacturing costs for all technology keys can be found in the CAFE Model's Battery Costs file, and the Argonne BatPaC Assumptions file includes the assumptions used to generate the costs,

and pack costs, pack mass, cell capacity, \$/kW at the pack level, and W/kg at the pack level for all vehicle classes.

Table III-19 and Table III-20 show an example of our battery pack direct manufacturing costs per kilowatt hour for BEV300s for all vehicle classes for the base year, MY 2020. The tables shown here demonstrate how the cost

per kWh varies with the size of the battery pack. While the overall cost of a battery pack will go up for larger kWh battery packs, the cost per kWh goes down. The amortization of costs for components required in all battery packs across a larger number of cells results in this reduced cost per kWh.

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Table III-19 – BEV300 Battery Pack Direct Manufacturing Costs per Kilowatt/Hour for Compact - Medium Car Classes in MY 2020

BEV300		Energy, kWh					
		30.0	50.0	70.0	90.0	120.0	
\$/kWh at Pack Level (Total Energy)	Power, kW	20.0	\$244	\$186	\$160	\$145	\$131
		40.0	\$245	\$187	\$161	\$145	\$132
		60.0	\$246	\$188	\$161	\$146	\$132
		80.0	\$248	\$188	\$162	\$146	\$132
		100.0	\$249	\$189	\$162	\$146	\$132
		120.0	\$250	\$190	\$163	\$147	\$133
		140.0	\$251	\$190	\$163	\$147	\$133
		160.0	\$252	\$191	\$164	\$147	\$133
		180.0	\$254	\$192	\$164	\$148	\$134
		200.0	\$255	\$193	\$165	\$148	\$134
		240.0	\$258	\$194	\$166	\$149	\$134
		280.0	\$261	\$196	\$167	\$150	\$135
		320.0	\$267	\$197	\$168	\$151	\$136
		400.0	\$280	\$201	\$170	\$152	\$137

Table III-20 – BEV300 Battery Pack Direct Manufacturing Costs per Kilowatt/Hour for SUV and Pickup Classes in MY 2020

BEV300		Energy, kWh							
		30.0	50.0	70.0	90.0	120.0	140.0	160.0	
\$/kWh at Pack Level (Total Energy)	Power, kW	20.0	\$252	\$191	\$164	\$148	\$133	\$127	\$122
		40.0	\$253	\$192	\$164	\$148	\$133	\$127	\$122
		60.0	\$254	\$193	\$165	\$148	\$134	\$127	\$122
		80.0	\$255	\$193	\$165	\$149	\$134	\$127	\$122
		100.0	\$257	\$194	\$166	\$149	\$134	\$128	\$122
		120.0	\$258	\$194	\$166	\$149	\$134	\$128	\$123
		140.0	\$259	\$195	\$167	\$150	\$135	\$128	\$123
		160.0	\$260	\$196	\$167	\$150	\$135	\$128	\$123
		180.0	\$261	\$196	\$167	\$151	\$135	\$129	\$123
		200.0	\$262	\$197	\$168	\$151	\$135	\$129	\$123
		240.0	\$265	\$198	\$169	\$152	\$136	\$129	\$124
		280.0	\$268	\$200	\$170	\$152	\$136	\$130	\$124
		320.0	\$273	\$201	\$171	\$153	\$137	\$130	\$125
		400.0	\$286	\$204	\$173	\$155	\$138	\$131	\$125

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A range of parameters can ultimately influence battery pack manufacturing costs, including other vehicle improvements (e.g., mass reduction technology, aerodynamic improvements, or tire rolling resistance improvements all affect the size and energy of a battery required to propel a vehicle where all else is equal), and the availability of materials required to manufacture the battery.²⁰² Or, if manufacturers adopt more electrification technology than projected in this analysis, increases in battery pack production volume will likely lower actual battery pack costs.

Like the 2020 final rule, we compared our battery pack costs in future years to battery pack costs from other sources that may or may not account for some of these additional parameters, including varying potential future battery chemistry and learning rates. As

discussed in TSD Chapter 3.3.5.1.4, our battery pack costs in 2025 and 2030 fell fairly well in the middle of other sources' cost projections, with Bloomberg New Energy Finance (BNEF) projections presenting the highest year-over-year cost reductions,²⁰⁴ and MIT's Insights into Future Mobility report providing an upper bound of potential future costs.²⁰⁵ ICCT presented a similar comparison of costs from several sources in its 2019 working paper, Update on Electric Vehicle Costs in the United States through 2030, and predicted battery pack costs in 2025 and 2030 would drop to approximately \$104/kWh and \$72/kWh, respectively,²⁰⁶ which put their projections slightly higher than BNEF's 2019 projections. BNEF's more recent 2020 Electric Vehicle Outlook projected average pack cost to fall below \$100/kWh by 2024,²⁰⁷ while the 2021 NAS

report projected that pack costs are projected to reach \$90–115 kWh by 2025.²⁰⁸

That our projected costs seem to fall between several projections gives us some confidence that the costs in this NPRM could reasonably represent future battery pack costs across the industry during the rulemaking time frame. That said, we recognize that battery technology is currently under intensive development, and that characteristics such as cost and capability are rapidly changing. These advances are reflected in recent aggressive projections, like those from ICCT, BNEF, and the 2021 NAS report. As a result, we would like to seek comments, supported by data elements as outlined below, on these characteristics.

We seek comment on the input assumptions used to generate battery pack costs in BatPaC and the BatPaC-generated direct manufacturing costs for the base year (MY 2020). If commenters believe that different input assumptions should be used for battery chemistry,²⁰⁹

²⁰² The cost of raw material also has a meaningful influence on the future cost of the battery pack. As the production volume goes up, the demand for battery critical raw materials also goes up, which has an offsetting impact on the efficiency gains achieved through economies of scale, improved plant efficiency, and advanced battery cell chemistries. We do not consider future battery raw material price fluctuations for this analysis, however that may be an area for further exploration in future analyses.

²⁰³ See, e.g., Jacky Wong, EV Batteries: The Next Victim of High Commodity Prices?, The Wall Street Journal (July 22, 2021), <https://www.wsj.com/articles/ev-batteries-the-next-victim-of-high-commodity-prices-11626950276>.

²⁰⁴ See Logan Goldie-Scott, A Behind the Scenes Take on Lithium-ion Battery Prices, Bloomberg New Energy Finance (March 5, 2019), <https://about.bnef.com/blog/behind-scenes-take-lithium-ion-battery-prices/>.

²⁰⁵ MIT Energy Initiative. 2019. *Insights into Future Mobility*. Cambridge, MA: MIT Energy Initiative. Available at <http://energy.mit.edu/insightsintofuturemobility>.

²⁰⁶ Nic Lutsey and Michael Nicholas, Update on electric vehicle costs in the United States through 2030, ICCT (April 2, 2019), available at <https://theicct.org/publications/update-US-2030-electric-vehicle-cost>.

²⁰⁷ Bloomberg New Energy Finance (BNEF), "Electric Vehicle Outlook 2020," <https://>

about.bnef.com/electric-vehicle-outlook/, last accessed July 29, 2021.

²⁰⁸ 2021 NAS report, at 5–121. The 2021 NAS report assumed a 7 percent cost reduction per year from 2018 through 2030.

²⁰⁹ Note that stakeholders had commented to the 2020 final rule that batteries using NMC811 chemistry had either recently come into the market or was imminently coming into the market, and therefore DOT should have selected NMC811 as the

plant manufacturing volume, or plant efficiency in MY 2020, they should provide data or other information validating such assumptions. In addition, commenters should explain how these assumptions reasonably represent applications across the industry in MY 2020. This is important to align with our guiding principles to ensure that the CAFE Model's simulation of manufacturer compliance pathways results in impacts that we would reasonably expect to see in the real world. As discussed above, each technology model employed in the analysis is designed to be representative of a wide range of specific technology applications used in industry. Some vehicle manufacturer's systems may perform better and cost less than our modeled systems and some may perform worse and cost more. However, employing this approach will ensure that, on balance, the analysis captures a reasonable level of costs and benefits that would result from any manufacturer applying the technology. In this case, vehicle and battery manufacturers use different chemistries, cell types, and production processes to manufacture electric vehicle battery packs. Any proposed alternative costs for base year direct manufacturing costs should be able to represent the range of costs across the industry in MY 2020 based on different manufacturers using different approaches.

We also seek comment on the scaling used to generate direct manufacturing costs for BEV400 and BEV500 technologies. If commenters have additional data or information on the relationship between cost and weight for heavier battery packs used for these higher-range BEV applications, particularly in light truck vehicle segments, that would be helpful as well.

In addition, we seek comment on the learning rates applied to the battery pack costs and on the battery pack costs in future years. Recognizing that any battery pack cost projections for future

appropriate chemistry for modeling battery pack costs. Similar to the other technologies considered in this analysis, DOT endeavors to use technology that is a reasonable representation of what the industry could achieve in the model year or years under consideration, in this case the base DMC year of 2020, as discussed above. At the time of this current analysis, the referenced A2Mac1 teardown reports and other reports provided the best available information about the range of battery chemistry actually employed in the industry. At the time of writing, DOT still has not found examples of NMC811 in commercial application across the industry in a way that DOT believes selecting NMC811 would have represented industry average performance in MY 2020. As discussed in TSD Chapter 3.3.5.1.4, DOT did analyze the potential future cost of NMC811 in the composite learning curve generated to ensure the battery learning curve projections are reasonable.

years from our analysis or external analyses will involve assumptions that may or may not come to pass, it would be most helpful if commenters thoroughly explained the basis for any recommended learning rates, including references to publicly available data or models (and if such models are peer reviewed) where appropriate. Similarly, it would be helpful for commenters to note where external analyses may or may not take into account certain parameters in their battery pack cost projections, and whether we should attempt to incorporate those parameters in our analysis. For example, as discussed above, our analysis does not consider raw material price fluctuations; however, the price of battery pack raw materials will put a lower bound on NMC-based battery prices.²¹⁰

It would also be helpful if commenters explained how learning rates or future cost projections could represent the state of battery technology across the industry. Like other technologies considered in this analysis, some battery and vehicle manufacturers have more experience manufacturing electric vehicle battery packs, and some have less, meaning that different manufacturers will be at different places along the learning curve in future years. Note also that comments should specify whether their referenced costs, either for MY 2020 or for future years, are for the battery cell or the battery pack.

Ensuring our learning rates encompass these diverse parameters will ensure that the analysis best predicts the costs and benefits associated with future standards. We will incorporate any new information received to the extent possible for the final rule and future analyses.

Recognizing again that battery technology is a rapidly evolving field and there are a range of external analyses that project battery pack costs declining at different rates across the next decade, as discussed above and further in the TSD, we performed four sensitivity studies around battery pack costs that are described in PRIA Chapter 7.2.2.5. The sensitivity studies examined the impacts of increasing and decreasing the direct cost of batteries and battery learning costs by 20 percent from central analysis levels, based on our survey of external analyses' battery pack cost projections that fell generally within +/- 20% of our central analysis costs. We found that changing the battery direct manufacturing costs in

²¹⁰ See, e.g., MIT Energy Initiative. 2019. *Insights into Future Mobility*. Cambridge, MA: MIT Energy Initiative. Available at <http://energy.mit.edu/insightsintofuturemobility>, at 78–9.

MY 2020 without changing the learning rate did not produce meaningfully different outcomes for electric vehicle technology penetration in later years, although it resulted in the lowest technology costs. Keeping the same direct manufacturing costs and using a steeper battery learning rate produced slightly higher technology costs, compared to the sensitivity results that changed battery pack direct manufacturing cost and kept learning rate the same.

We seek comment on these conclusions, their implications for any potential updates to battery pack costs for the final rule, and any other external analyses that the agency should consider when validating future battery pack cost projections.

Next, each vehicle powertrain type also receives different non-battery electrification components. When researching costs for different non-battery electrification components, DOT found that different reports vary in components considered and cost breakdown. This is not surprising, as vehicle manufacturers use different non-battery electrification components in different vehicle's systems, or even in the same vehicle type, depending the application.²¹¹ DOT developed costs for the major non-battery electrification components on a dollar per kilowatt hour basis using the costs presented in two reports. DOT used a \$/kW cost metric for non-battery components to align with the normalized costs for a system's peak power rating as presented in U.S. DRIVE's Electrical and Electronics Technical Team (EETT) Roadmap report.²¹² This approach captures components in some manufacturer's systems, but not all systems; however, DOT believes this is a reasonable metric and approach to use for this analysis given the differences in non-battery electrification component systems. This approach allows us to scale the cost of non-battery electrification components based on the requirements of the system. We also relied on a teardown study of a MY 2016 Chevrolet Bolt for non-battery component costs that were not explicitly estimated in the EETT Roadmap report.²¹³

²¹¹ For example, the MY 2020 Nissan Leaf does not have an active cooling system whereas Chevy Bolt uses an active cooling system.

²¹² U.S. DRIVE, Electrical and Electronics Technical Team Roadmap (Oct. 2017), available at <https://www.energy.gov/sites/prod/files/2017/11/f39/EETT%20Roadmap%2010-27-17.pdf>.

²¹³ Hummel et al., UBS Evidence Lab Electric Car Teardown—Disruption Ahead?, UBS (May 18, 2017), <https://neo.ubs.com/shared/d1wkuDIIEYpJf/>.

To develop the learning curves for non-battery electrification components, DOT used cost information from Argonne’s 2016 Assessment of Vehicle Sizing, Energy Consumption, and Cost through Large-Scale Simulation of Advanced Vehicle Technologies report.²¹⁴ The report provided estimated cost projections from the 2010 lab year to the 2045 lab year for individual vehicle components.²¹⁵ DOT considered the component costs used in electrified vehicles, and determined the learning curve by evaluating the year

over year cost change for those components. Argonne recently published a 2020 version of the same report that included high and low cost estimates for many of the same components, that also included a learning rate.²¹⁷ DOT’s learning estimates generated using the 2016 report fall fairly well in the middle of these two ranges, and therefore staff decided that continuing to apply the learning curve estimates based on the 2016 report was reasonable. There are many sources that DOT staff could have

picked to develop learning curves for non-battery electrification component costs, however given the uncertainty surrounding extrapolating costs out to MY 2050, DOT believes these learning curves provide a reasonable estimate.

Table III–21 shows an example of how the non-battery electrification component costs are computed for the Medium Car and Medium SUV non-performance vehicle classes.

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Table III-21 – Example Non-Battery Components for Medium Car and SUV Non-Performance Classes

Electric Powertrain	Traction Motor calculated using Peak Power (kW)	Motor-Generator calculated using Continuous Power (kW)	Total Cost of ETDS (Motor and Inverter)	DC to DC Converter	On-board Charger	Power Distribution Cables	Total DMC of Electrical Components	Total Electrification RPE	DMC of CVT or AT8L2	RPE Cost of CVT or AT8L2	Total Electrification Cost (DMC)	Total Electrification Cost (RPE) - from Technologies file
Medium Car – Non-Performance												
SHEVP2	28.01	0	\$516	\$184	\$0	\$460	\$1,160	\$1,566.37	\$1,655	\$2,473	\$2,815	\$4,006
PHEV20T	38.95	0	\$717	\$184	\$174	\$460	\$1,536	\$2,027.04	\$1,655	\$2,473	\$3,191	\$4,457
PHEV50T	95.21	0	\$1,753	\$184	\$174	\$460	\$2,572	\$3,394.53	\$1,655	\$2,473	\$4,227	\$5,817
SHEVPS	72.62	37.61	\$2,030	\$184	\$0	\$460	\$2,674	\$3,570.16	\$1,686	\$2,518	\$4,360	\$6,088
PHEV20	74.66	38.92	\$2,091	\$184	\$174	\$460	\$2,910	\$3,841.04	\$1,686	\$2,518	\$4,596	\$6,345
Medium SUV – Non-Performance												
SHEVP2	29.14	0	\$537	\$184	\$0	\$460	\$1,181	\$1,594.46	\$1,655	\$2,473	\$2,836	\$4,034
PHEV20T	43.32	0	\$798	\$184	\$174	\$460	\$1,616	\$2,133.26	\$1,655	\$2,473	\$3,271	\$4,563
PHEV50T	110.72	0	\$2,039	\$184	\$174	\$460	\$2,857	\$3,771.52	\$1,655	\$2,473	\$4,512	\$6,194
SHEVPS	79.32	41.74	\$2,229	\$184	\$0	\$460	\$2,874	\$3,836.40	\$1,686	\$2,518	\$4,559	\$6,355
PHEV20	81.81	43.01	\$2,298	\$184	\$174	\$460	\$3,117	\$4,114.25	\$1,686	\$2,518	\$4,803	\$6,618

²¹⁴ Moawad, Ayman, Kim, Namdoo, Shidore, Neeraj, and Rousseau, Aymeric. Assessment of Vehicle Sizing, Energy Consumption and Cost Through Large Scale Simulation of Advanced Vehicle Technologies (ANL/ESD–15/28). United States (2016). Available at <https://www.autonomie.net/pdfs/Report%20ANL%20ESD-1528%20-%20Assessment%20of%20Vehicle%20Sizing,%20Energy%20Consumption%20and%20Cost%20through%20Large%20Scale%20Simulation%20of%20>

[Advanced%20Vehicle%20Technologies%20-%201603.pdf](https://www.autonomie.net/pdfs/Report%20ANL%20ESD-1528%20-%20Assessment%20of%20Vehicle%20Sizing,%20Energy%20Consumption%20and%20Cost%20through%20Large%20Scale%20Simulation%20of%20).

²¹⁵ ANL/ESD–15/28 at 116.
²¹⁶ DOE’s lab year equates to five years after a model year, e.g., DOE’s 2010 lab year equates to MY 2015.

²¹⁷ Islam, E., Kim, N., Moawad, A., Rousseau, A. “Energy Consumption and Cost Reduction of Future Light-Duty Vehicles through Advanced Vehicle Technologies: A Modeling Simulation Study

Through 2050”, Report to the U.S. Department of Energy, Contract ANL/ESD–19/10, June 2020 <https://www.autonomie.net/pdfs/ANL%20-%20Islam%20-%202020%20-%20Energy%20Consumption%20and%20Cost%20Reduction%20of%20Future%20Light-Duty%20Vehicles%20through%20Advanced%20Vehicle%20Technologies%20A%20Modeling%20Simulation%20Study%20Through%202050.pdf>.

TSD Chapter 3.3.5.2 contains more information about the non-battery electrification components relevant to each specific electrification technology and the sources used to develop these costs. We seek comment on these costs, the appropriateness of the sources used to develop these costs, and the \$/kW

metric used to size specific non-battery electrification components. In addition, we seek comment on the learning rate applied to non-battery electrification components.

Finally, the cost of electrifying a vehicle depends on the other powertrain components that must be added or

removed from a vehicle with the addition of the electrification technology. Table III–22 below provides a breakdown of each electrification component included for each electrification technology type, as well as where to find the costs in each CAFE Model input file.

Table III–22 – Breakdown of the Electrification Costs by Electrification Technology Type

Electrification Technology Type	Technologies File Vehicle Tabs	Technologies File Engine Tabs	Battery Cost File
Micro Hybrid	Motor/generator	-N/A	Battery Pack
Mild Hybrid	Motor/generator, DC/DC converter, other components	-N/A	Battery Pack
P2 Strong Hybrid	DC/DC converter, on-board charger, high voltage cables, e-motor, AT8L2 transmission, and power electronics	IC engine*	Battery Pack
PS Strong Hybrid	DC/DC converter, on-board charger, high voltage cables, e-motor, CVTL2 transmission, and power electronics	IC engine	Battery Pack
Plug-in Hybrid (PHEV 20T/50T)	DC/DC converter, on-board charger, high voltage cables, e-motor, AT8L2 transmission, and power electronics	IC engine	Battery Pack
Plug-in Hybrid (PHEV 20/50 and 20H/50H)	DC/DC converter, on-board charger, high voltage cables, e-motor, CVTL2 transmission, and power electronics	IC engine	Battery Pack
BEVs	DC/DC converter, on-board charger, high voltage cables, e-motor	ETD System	Battery Pack
FCEVs	Fuel cell system, e-motor, H ₂ Tank, transmission, and power electronics	-N/A	N/A

*The engine cost for a P2 Hybrid is based on engine technology that is used in the conventional powertrain.

As shown in Table III–22, DOT used the cost of the CVTL2 as a proxy for the cost of an eCVT used in PS hybrid vehicles. In its recent 2021 report, the NAS estimated the cost of eCVTs to be lower than DOT's cost estimate for CVTL2.²¹⁸ DOT is investigating the cost assumptions used for the PS hybrid transmission and may update those costs for the final rule depending on

information submitted by stakeholders or other research. DOT seeks comment on the appropriateness of the cost estimate for eCVTs in the 2021 NAS report, or any other data that could be made public on the costs of eCVTs.

The following example in Table III–23 shows how the costs are computed for a vehicle that progresses from a lower level to a higher level of electrified powertrain. The table shows the

components that are removed and the components that are added as a GMC Acadia progresses from a MY 2024 vehicle with only SS12V electrification technology to a BEV300 in MY 2025. The total cost in MY 2025 is a net cost addition to the vehicle. The same methodology could be used for any other technology advancement in the electric technology tree path.²¹⁹

²¹⁸ A detailed cost comparison between our costs and the 2021 NAS report costs is discussed in TSD Chapter 3.3.5.3.3.

²¹⁹ Please note that in this calculation the CAFE Model accounts for the air conditioning and off-cycle technologies (g/mile) applied to each vehicle model. The cost for the AC/OC adjustments are

located in the CAFE Model Scenarios file. The air conditioning and off-cycle cost values are discussed further in TSD Chapter 3.8.

Table III-23 – Technology Cost Change for GMC Acadia Example

	Technology Removed	Technology Added	MY 2025 Cost of Technology (2018\$)	MY 2025 Overall Technology Cost (2018\$)
MY 2024				888.7
Removed Technologies	Engine (DOHC)		(5830.76)	(5482.2)
	VVT		(221.54)	(5703.74)
	SGDI		(501.67)	(6205.41)
	DEAC		(203.35)	(6408.76)
	Transmission (AT9L2)		(2498.29)	(8907.05)
	EPS		(117.28)	(9024.33)
	SS12V		(247.43)	(9271.76)
	SS12V battery		(308.44)	(9580.2)
	AERO0		(0)	(9580.2)
Added Technologies		BEV300 - ETDS	3581.65	(5998.55)
		IACC	146.68	(5851.87)
		Non-battery components	1137.67	(4714.2)
		Battery Pack Cost	17955.29	13241.09
		AERO20	248.9	13489.99
	Total Air Conditioning/Off-Cycle (AC/OC) Adjustments ²¹⁹	72.71	13562.7	
MY 2025				13562.7

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TSD Chapter 3.3.5.3 includes more details about how the costs associated with the internal combustion engine, transmission, electric machine(s), non-battery electrification components, and battery pack for each electrified technology type are combined to create a full electrification system cost.

4. Mass Reduction

Mass reduction is a relatively cost-effective means of improving fuel economy, and vehicle manufacturers are expected to apply various mass reduction technologies to meet fuel economy standards. Reducing vehicle mass can be accomplished through several different techniques, such as modifying and optimizing vehicle component and system designs, part consolidation, and adopting lighter weight materials (advanced high strength steel, aluminum, magnesium, and plastics including carbon fiber reinforced plastics).

The cost for mass reduction depends on the type and amount of materials used, the manufacturing and assembly processes required, and the degree to which changes to plants and new manufacturing and assembly equipment

is needed. In addition, manufacturers may develop expertise and invest in certain mass reduction strategies that may affect the approaches for mass reduction they consider and the associated costs. Manufacturers may also consider vehicle attributes like noise-vibration-harshness (NVH), ride quality, handling, crash safety and various acceleration metrics when considering how to implement any mass reduction strategy. These are considered to be aspects of performance, and for this analysis any identified pathways to compliance are intended to maintain performance neutrality. Therefore, mass reduction via elimination of, for example, luxury items such as climate control, or interior vanity mirrors, leather padding, etc., is not considered in the mass reduction pathways for this analysis.

The automotive industry uses different metrics to measure vehicle weight. Some commonly used measurements are vehicle curb weight,²²⁰ gross vehicle weight

²²⁰ This is the weight of the vehicle with all fluids and components but without the drivers, passengers, and cargo.

(GVW),²²¹ gross vehicle weight rating (GVWR),²²² gross combined weight (GCVW),²²³ and equivalent test weight (ETW),²²⁴ among others. The vehicle curb weight is the most commonly used measurement when comparing vehicles. A vehicle’s curb weight is the weight of the vehicle including fluids, but without a driver, passengers, and cargo. A vehicle’s glider weight, which is vehicle curb weight minus the powertrain weight, is used to track the potential opportunities for weight reduction not including the powertrain. A glider’s subsystems may consist of the vehicle body, chassis, interior, steering,

²²¹ This weight includes all cargo, extra added equipment, and passengers aboard.

²²² This is the maximum total weight of the vehicle, passengers, and cargo to avoid damaging the vehicle or compromising safety.

²²³ This weight includes the vehicle and a trailer attached to the vehicle, if used.

²²⁴ For the EPA two-cycle regulatory test on a dynamometer, an additional weight of 300 lbs is added to the vehicle curb weight. This additional 300 lbs represents the weight of the driver, passenger, and luggage. Depending on the final test weight of the vehicle (vehicle curb weight plus 300 lbs), a test weight category is identified using the table published by EPA according to 40 CFR 1066.805. This test weight category is called “Equivalent Test Weight” (ETW).

electrical accessory, brake, and wheels systems. The percentage of weight assigned to the glider will remain constant for any given rule but may change overall. For example, as electric powertrains including motors, batteries, inverters, etc. become a greater percent of the fleet, glider weight percentage will change compared to earlier fleets with higher dominance of internal combustion engine (ICE) powertrains.

For this analysis, DOT considered six levels of mass reduction technology that include increasing amounts of advanced materials and mass reduction techniques applied to the glider. The mass change associated with powertrain changes is accounted for separately. The following sections discuss the assumptions for the six mass reduction technology levels, the process used to assign initial analysis fleet mass reduction assignments, the effectiveness

for applying mass reduction technology, and mass reduction costs.

(a) Mass Reduction in the CAFE Model

The CAFE Model considers six levels of mass reduction technologies that manufacturers could use to comply with CAFE standards. The magnitude of mass reduction in percent for each of these levels is shown in Table III–24 for mass reductions for light trucks, passenger cars and for gliders.

Table III-24 – Mass Reduction Technology Level and Associated Glider and Curb Mass Reduction

MR Level	Percent Glider Weight	Percent Vehicle Curb Weight (Passenger Cars)	Percent Vehicle Curb Weight (Light Trucks)
MR0	0%	0.00%	0.00%
MR1	5%	3.55%	3.55%
MR2	7.5%	5.33%	5.33%
MR3	10%	7.10%	7.10%
MR4	15%	10.65%	10.65%
MR5	20%	14.20%	14.20%
MR6	28%	20.00%	20.00%

For this analysis, DOT considers mass reduction opportunities from the glider subsystems of a vehicle first, and then consider associated opportunities to downsize the powertrain, which are accounted for separately.²²⁵ As explained below, in the Autonomie simulations, the glider system includes both primary and secondary systems from which a percentage of mass is reduced for different glider weight reduction levels; specifically, the glider includes the body, chassis, interior, electrical accessories, steering, brakes and wheels. In this analysis, DOT assumed the glider share is 71% of vehicle curb weight. The Autonomie model sizes the powertrain based on the glider weight and the mass of some of the powertrain components in an iterative process. The mass of the powertrain depends on the powertrain size. Therefore, the weight of the glider impacts the weight of the powertrain.²²⁶

²²⁵ When the mass of the vehicle is reduced by an appropriate amount, the engine may be downsized to maintain performance. See Section III.C.4 for more details.

²²⁶ Since powertrains are sized based on the glider weight for the analysis, glider weight reduction beyond a threshold amount during a redesign will lead to re-sizing of the powertrain. For the analysis, the glider was used as a base for the application of any type of powertrain. A conventional powertrain consists of an engine, transmission, exhaust system, fuel tank, radiator and associated components. A hybrid powertrain also includes a battery pack, electric motor(s),

generator, high voltage wiring harness, high voltage connectors, inverter, battery management system(s), battery pack thermal system, and electric motor thermal system.

DOT uses glider weight to apply non-powertrain mass reduction technology in the CAFE Model and use Autonomie simulations to determine the size of the powertrain and corresponding powertrain weight for the respective glider weight. The combination of glider weight (after mass reduction) and re-sized powertrain weight equal the vehicle curb weight. While there are a range of specific mass reduction technologies that may be applied to vehicles to achieve each of the six mass reduction levels, there are some general trends that are helpful to illustrate some of the more widely used approaches. Typically, MR0 reflects vehicles with widespread use of mild steel structures and body panels, and very little or no use of high strength steel or aluminum. MR0 reflects materials applied to average vehicles in the MY 2008 timeframe. MR1–MR3 can be achieved with a steel body structure. In going from MR1 to MR3, expect that mild steel to be replaced by high strength and then advanced high strength steels. In going from MR3 to MR4 aluminum is required. This will start at using aluminum closure panels and then to get to MR4 the vehicle's primary structure will need to be mostly

made from aluminum. In the vast majority of cases, carbon fiber technology is necessary to reach MR5, perhaps with a mix of some aluminum. MR6 can really only be attained in anything resembling a passenger car by make nearly every structural component from carbon fiber. This means the body structure and closure panels like hoods and door skins are wholly made from carbon fiber. There may be some use of aluminum in the suspension. TSD Chapter 3.4 includes more discussion of the challenges involved with adopting large amounts of carbon fiber in the vehicle fleet in the coming years.

As discussed further below, the cost studies used to generate the cost curves assume mass can be reduced in levels that require different materials and different components to be utilized, in a specific order. DOT's mass reduction levels are loosely based on what materials and components that would be required to be used for each percent of mass reduction, based on the conclusions of those studies.

(b) Mass Reduction Analysis Fleet Assignments

To assign baseline mass reduction levels (MR0 through MR6) for vehicles in the MY 2020 analysis fleet, DOT used previously developed regression models to estimate curb weight for each vehicle based on observable vehicle attributes.

DOT used these models to establish a baseline (MR0) curb weight for each vehicle, and then determined the existing mass reduction technology level by finding the difference between the vehicles actual curb weight to the estimated regression-based value, and comparing the difference to the values in Table III–24. DOT originally developed the mass reduction regression models using MY 2015 fleet data; for this analysis, DOT used MY 2016 and 2017 analysis fleet data to update the models.

DOT believes the regression methodology is a technically sound approach for estimating mass reduction levels in the analysis fleet. For a detailed discussion about the regression development and use please see TSD Chapter 3.4.2.

Manufacturers generally apply mass reduction technology at a vehicle platform level (*i.e.*, using the same components across multiple vehicle models that share a common platform) to leverage economies of scale and to manage component and manufacturing complexity, so conducting the regression analysis at the platform level leads to more accurate estimates for the real-world vehicle platform mass reduction levels. The platform approach also addresses the impact of potential weight variations that might exist for specific vehicle models, as all the individual vehicle models are aggregated into the platform group, and are effectively averaged using sales weighting, which minimizes the impact of any outlier vehicle configurations.

(c) Mass Reduction Adoption Features

Given the degree of commonality among the vehicle models built on a single platform, manufacturers do not have complete freedom to apply unique technologies to each vehicle that shares the platform. While some technologies (*e.g.*, low rolling resistance tires) are very nearly “bolt-on” technologies, others involve substantial changes to the structure and design of the vehicle, and therefore affect all vehicle models that share a platform. In most cases, mass reduction technologies are applied to platform level components and therefore the same design and components are used on all vehicle models that share the platform.

Each vehicle in the analysis fleet is associated with a specific platform. Similar to the application of engine and transmission technologies, the CAFE Model defines a platform “leader” as the vehicle variant of a given platform that has the highest level of observed mass reduction present in the analysis fleet. If there is a tie, the CAFE Model

begins mass reduction technology on the vehicle with the highest sales volume in model year 2020. If there remains a tie, the model begins by choosing the vehicle with the highest manufacturer suggested retail price (MSRP) in MY 2020. As the model applies technologies, it effectively levels up all variants on a platform to the highest level of mass reduction technology on the platform. For example, if the platform leader model is already at MR3 in MY 2020, and a “follower” platform model starts at MR0 in MY 2020, the follower platform model will get MR3 at its next redesign, assuming no further mass reduction technology is applied to the leader model before the follower models next redesign.

In addition to the platform-sharing logic employed in the model, DOT applied phase-in caps for MR5 and MR6 (15 percent and 20 percent reduction of a vehicle’s curb weight, respectively), based on the current state of mass reduction technology. As discussed above, for nearly every type of vehicle, with the exception of the smallest sports cars, a manufacturer’s strategy to achieve mass reduction consistent with MR5 and MR6 will require extensive use of carbon fiber technologies in the vehicles’ primary structures. For example, one way of using carbon fiber technology to achieve MR6 is to develop a carbon fiber monocoque structure. A monocoque structure is one where the outer most skins support the primary loads of the vehicle. For example, they do not have separate non-load bearing aero surfaces. All of the vehicle’s primary loads are supported by the monocoque. In the most structurally efficient automotive versions, the monocoque is made from multiple well-consolidated plies of carbon fiber infused with resin. Such structures can require low hundreds of pounds of carbon fiber for most passenger vehicles. Add to this another roughly equivalent mass of petroleum-derived resins and even at aspirational prices for dry carbon fiber of \$10–20 per pound it is easy to see how direct materials alone can easily climb into the five-figure dollar range per vehicle.

High CAFE stringency levels will push the CAFE Model to select compliance pathways that include these higher levels of mass reduction for vehicles produced in the mid and high hundreds of thousands of vehicles per year. DOT assumes, based on material costs and availability, that achieving MR6 levels of mass reduction will cost tens of thousands of dollars per car. Therefore, application of such technology to high volume vehicles is

unrealistic today and will, with certainty, remain so for the next several years.

The CAFE Model applies technologies to vehicles that provide a cost-effective pathway to compliance. In some cases, the direct manufacturing cost, indirect costs, and applied learning factor do not capture all the considerations that make a technology more or less costly for manufacturers to apply in the real world. For example, there are direct labor, R&D overhead, manufacturing overhead, and amortized tooling costs that will likely be higher for carbon fiber production than current automotive steel production, due to fiber handling complexities. In addition, R&D overhead will also increase because of the knowledge base for composite materials in automotive applications is simply not as deep as it is for steel and aluminum. Indeed, the intrinsic anisotropic mechanical properties of composite materials compared to the isotropic properties of metals complicates the design process. Added testing of these novel anisotropic structures and their associated costs will be necessary for decades. Adding up all these contributing costs, the price tag for a passenger car or truck monocoque would likely be multiple tens of thousands of dollars per vehicle. This would be significantly more expensive than transitioning to hybrid or fully electric powertrains and potentially less effective at achieving CAFE compliance.

In addition, the CAFE Model does not currently enable direct accounting for the stranded capital associated with a transition away from stamped sheet metal construction to molded composite materials construction. For decades, or in some cases half-centuries, car manufacturers have invested billions of dollars in capital for equipment that supports the industry’s sheet metal forming paradigm. A paradigm change to tooling and equipment developed to support molding carbon fiber panels and monocoque chassis structures would leave that capital stranded in equipment that would be rendered obsolete. Doing this is possible, but the financial ramifications are not currently reflected in the CAFE Model for MR5 and MR6 compliance pathways.

Financial matters aside, carbon fiber technology and how it is best used to produce lightweight primary automotive structures is far from mature. In fact, no car company knows for sure the best way to use carbon fiber to make a passenger car’s primary structure. Using this technology in passenger cars is far more complex than using it in racing cars where passenger egress, longevity, corrosion protection, crash protection,

etc. are lower on the list of priorities for the design team. BMW may be the manufacturer most able accurately opine on the viability of carbon fiber technology for primary structure on high-volume passenger cars, and even it decided to use a mixed materials solution for their next generation of EVs (the iX and i4) after the i3, thus eschewing a wholly carbon fiber monocoque structure.

Another factor limiting the application of carbon fiber technology to mass volume passenger vehicles is indeed the availability of dry carbon fibers. There is high global demand from a variety of industries for a limited supply of carbon fibers. Aerospace, military/defense, and industrial applications demand most of the carbon fiber currently produced. Today, only roughly 10% of the global dry fiber supply goes to the automotive industry, which translates to the global supply base only being able to support approximately 70k cars.²²⁷

To account for these cost and production considerations, including the limited global supply of dry carbon fiber, DOT applied phase-in caps that limited the number of vehicles that can achieve MR5 and M6 levels of mass reduction in the CAFE Model. DOT applied a phase-in cap for MR5 level technology so that 75 percent of the vehicle fleet starting in 2020 could employ the technology, and the technology could be applied to 100 percent of the fleet by MY 2022. DOT also applied a phase-in cap for MR6 technology so that five percent of the vehicle fleet starting in MY 2020 could employ the technology, and the technology could be applied to 10 percent of the fleet by MY 2025.

To develop these phase-in caps, DOT chose a 40,000 unit thresholds for both MR5 and MR6 technology (80,000 units total), because it roughly reflects the number of BMW i3 cars produced per year worldwide.²²⁸ As discussed above, the BMW i3 is the only high-volume vehicle currently produced with a primary structure mostly made from carbon fiber (except the skateboard, which is aluminum). Because mass

reduction is applied at the platform level (meaning that every car of a given platform would receive the technology, not just special low volume versions of that platform), only platforms representing 40,000 vehicles or less are eligible to apply MR5 and MR6 toward CAFE compliance. Platforms representing high volume sales, like a Chevrolet Traverse, for example, where hundreds of thousands are sold per year, are therefore blocked from access to MR5 and MR6 technology. There are no phase in caps for mass reduction levels MR1, MR2, MR3, or MR4.

In addition to determining that the caps were reasonable based on current global carbon fiber production, DOT determined that the MR5 phase-in cap is consistent with the DOT lightweighting study that found that a 15 percent curb weight reduction for the fleet is possible within the rulemaking timeframe.²²⁹

These phase-in caps appropriately function as a proxy for the cost and complexity currently required (and that likely will continue to be required until manufacturing processes evolve) to produce carbon fiber components. Again, MR6 technology in this analysis reflects the use of a significant share of carbon fiber content, as seen through the BMW i3 and Alfa Romeo 4c as discussed above.

Given the uncertainty and fluid nature of knowledge around higher levels of mass reduction technology, DOT welcomes comments on how to most cost effectively use carbon fiber technology in high-volume passenger cars. Financial implementation estimates for this technology are equally as welcome.

(d) Mass Reduction Effectiveness Modeling

As discussed in Section III.C.4, Argonne developed a database of vehicle attributes and characteristics for each vehicle technology class that included over 100 different attributes. Some examples from these 100 attributes include frontal area, drag coefficient, fuel tank weight, transmission housing weight, transmission clutch weight, hybrid vehicle components, and weights for components that comprise engines and electric machines, tire rolling resistance, transmission gear ratios, and final drive ratio. Argonne used these attributes to “build” each vehicle that it used for the effectiveness modeling and simulation.

Important for precisely estimating the effectiveness of different levels of mass reduction is an accurate list of initial component weights that make up each vehicle subsystem, from which Autonomie considered potential mass reduction opportunities.

As stated above, glider weight, or the vehicle curb weight minus the powertrain weight, is used to determine the potential opportunities for weight reduction irrespective of the type of powertrain.²³⁰ This is because weight reduction can vary depending on the type of powertrain. For example, an 8-speed transmission may weigh more than a 6-speed transmission, and a basic engine without variable valve timing may weigh more than an advanced engine with variable valve timing. Autonomie simulations account for the weight of the powertrain system inherently as part of the analysis, and the powertrain mass accounting is separate from the application and accounting for mass reduction technology levels that are applied to the glider in the simulations. Similarly, Autonomie also accounts for battery and motor mass used in hybrid and electric vehicles separately. This secondary mass reduction is discussed further below.

Accordingly, in the Autonomie simulations, mass reduction technology is simulated as a percentage of mass removed from the specific subsystems that make up the glider, as defined for that set of simulations (including the non-powertrain secondary mass systems such as the brake system). For the purposes of determining a reasonable percentage for the glider, DOT in consultation with Argonne examined glider weight data available in the A2Mac1 database,²³¹ in addition to the NHTSA MY 2014 Chevrolet Silverado lightweighting study (discussed further below). Based on these studies, DOT assumed that the glider weight comprised 71 percent of the vehicle curb weight. TSD Chapter 3.4.4 includes a detailed breakdown of the components that DOT considered to arrive at the conclusion that a glider, on average, represents 71% of a vehicle’s curb weight.

Any mass reduction due to powertrain improvements is accounted for separately from glider mass reduction. Autonomie considers several components for powertrain mass reduction, including engine downsizing,

²²⁷ J. Sloan, “Carbon Fiber Suppliers Gear up for Next Generation Growth,” *compositesworld.com*, February 11, 2020.

²²⁸ However, even this number is optimistic because only a small fraction of i3 cars are sold in the U.S. market, and combining MR5 and MR6 allocations equates to 80k vehicles, not 40k. Regardless, if the auto industry ever seriously committed to using carbon fiber in mainstream high-volume vehicles, competition with the other industries would rapidly result in a dramatic increase in price for dry fiber. This would further stymie the deployment of this technology in the automotive industry.

²²⁹ Singh, Harry. (2012, August). Mass Reduction for Light-Duty Vehicles for Model Years 2017–2025. (Report No. DOT HS 811 666). Program Reference: DOT Contract DTNH22–11–C–00193. Contract Prime: Electricore, Inc, at 356, Figure 397.

²³⁰ Depending on the powertrain combination, the total curb weight of the vehicle includes glider, engine, transmission and/or battery pack and motor(s).

²³¹ A2Mac1: Automotive Benchmarking, <https://a2mac1.com>.

and transmission, fuel tank, exhaust systems, and cooling system lightweighting.

The 2015 NAS report suggested an engine downsizing opportunity exists when the glider mass is lightweighted by at least 10%. The 2015 NAS report also suggested that 10% lightweighting of the glider mass alone would boost fuel economy by 3% and any engine downsizing following the 10% glider mass reduction would provide an additional 3% increase in fuel economy.²³² The 2011 Honda Accord and 2014 Chevrolet Silverado lightweighting studies applied engine downsizing (for some vehicle types but not all) when the glider weight was reduced by 10 percent. Accordingly, this analysis limited engine resizing to several specific incremental technology steps as in the 2018 CAFE NPRM (83 FR 42986, Aug. 24, 2018) and 2020 final rule; important for this discussion, engines in the analysis were only resized when mass reduction of 10% or greater was applied to the glider mass, or when one powertrain architecture was replaced with another architecture.

Specifically, we allow engine resizing upon adoption of 7.1%, 10.7%, 14.2%, and 20% curb weight reduction, but not at 3.6% and 5.3%.²³³ Resizing is also allowed upon changes in powertrain type or the inheritance of a powertrain from another vehicle in the same platform. The increments of these higher levels of mass reduction, or complete powertrain changes, more appropriately match the typical engine displacement increments that are available in a manufacturer's engine portfolio.

Argonne performed a regression analysis of engine peak power versus weight for a previous analysis based on attribute data taken from the A2Mac1 benchmarking database, to account for the difference in weight for different engine types. For example, to account for weight of different engine sizes like

4-cylinder versus 8-cylinder, Argonne developed a relationship curve between peak power and engine weight based on the A2Mac1 benchmarking data. We use this relationship to estimate mass for all engine types regardless of technology type (e.g., variable valve lift and direct injection). DOT applied weight associated with changes in engine technology by using this linear relationship between engine power and engine weight from the A2Mac1 benchmarking database. When a vehicle in the analysis fleet with an 8-cylinder engine adopted a more fuel-efficient 6-cylinder engine, the total vehicle weight would reflect the updated engine weight with two less cylinders based on the peak power versus engine weight relationship.

When Autonomie selects a powertrain combination for a lightweighted glider, the engine and transmission are selected such that there is no degradation in the performance of the vehicle relative to the baseline vehicle. The resulting curb weight is a combination of the lightweighted glider with the resized and potentially new engine and transmission. This methodology also helps in accurately accounting for the cost of the glider and cost of the engine and transmission in the CAFE Model.

Secondary mass reduction is possible from some of the components in the glider after mass reduction has been incorporated in primary subsystems (body, chassis, and interior). Similarly, engine downsizing and powertrain secondary mass reduction is possible after certain level of mass reduction is incorporated in the glider. For the analysis, the agencies include both primary mass reduction, and when there is sufficient primary mass reduction, additional secondary mass reduction. The Autonomie simulations account for the aggregate of both primary and secondary glider mass reduction, and separately for powertrain mass.

Note that secondary mass reduction is integrated into the mass reduction cost curves. Specifically, the NHTSA studies, upon which the cost curves depend, first generated costs for lightweighting the vehicle body, chassis, interior, and other primary components, and then calculated costs for lightweighting secondary components. Accordingly, the cost curves reflect that, for example, secondary mass reduction

for the brake system is only applied after there has been sufficient primary mass reduction to allow the smaller brake system to provide safe braking performance and to maintain mechanical functionality.

DOT enhanced the accuracy of estimated engine weights by creating two curves to represent separately naturally aspirated engine designs and turbocharged engine designs.²³⁴ This achieves two benefits. First, small naturally aspirated 4-cylinder engines that adopted turbocharging technology reflected the increased weight of associated components like ducting, clamps, the turbocharger itself, a charged air cooler, wiring, fasteners, and a modified exhaust manifold. Second, larger cylinder count engines like naturally aspirated 8-cylinder and 6-cylinder engines that adopted turbocharging and downsized technologies would have lower weight due to having fewer engine cylinders. For this analysis, a naturally aspirated 8-cylinder engine that adopts turbocharging technology and is downsized to a 6-cylinder turbocharged engine appropriately reflects the added weight of the turbocharging components, and the lower weight of fewer cylinders.

The range of effectiveness values for the mass reduction technologies, for all ten vehicle technology classes are shown in Figure III–13. In the graph, the box shows the inner quartile range (IQR) of the effectiveness values and whiskers extend out $1.5 \times$ IQR. The dots outside of the whiskers show a few values outside these ranges. As discussed earlier, Autonomie simulates all possible combinations of technologies for fuel consumption improvements. For a few technology combinations mass reduction has minimal impact on effectiveness on the regulatory 2-cycle test. For example, if an engine is operating in an efficient region of the fuel map on the 2-cycle test further reduction of mass may have smaller improvement on the regulatory cycles. Figure III–13 shows the range improvements based on the full range of other technology combinations considered in the analysis.

²³² National Research Council. 2015. Cost, Effectiveness, and Deployment of Fuel Economy Technologies for Light-Duty Vehicles. Washington, DC—The National Academies Press. <https://doi.org/10.17226/21744>.

²³³ These curb weight reductions equate to the following levels of mass reduction as defined in the analysis: MR3, MR4, MR5 and MR6, but not MR1 and MR2; additional discussion of engine resizing for mass reduction can be found in Section III.C.4 and TSD Chapter 2.4.

²³⁴ See Autonomie model documentation, Chapter 5.2.9. Engine Weight Determination.

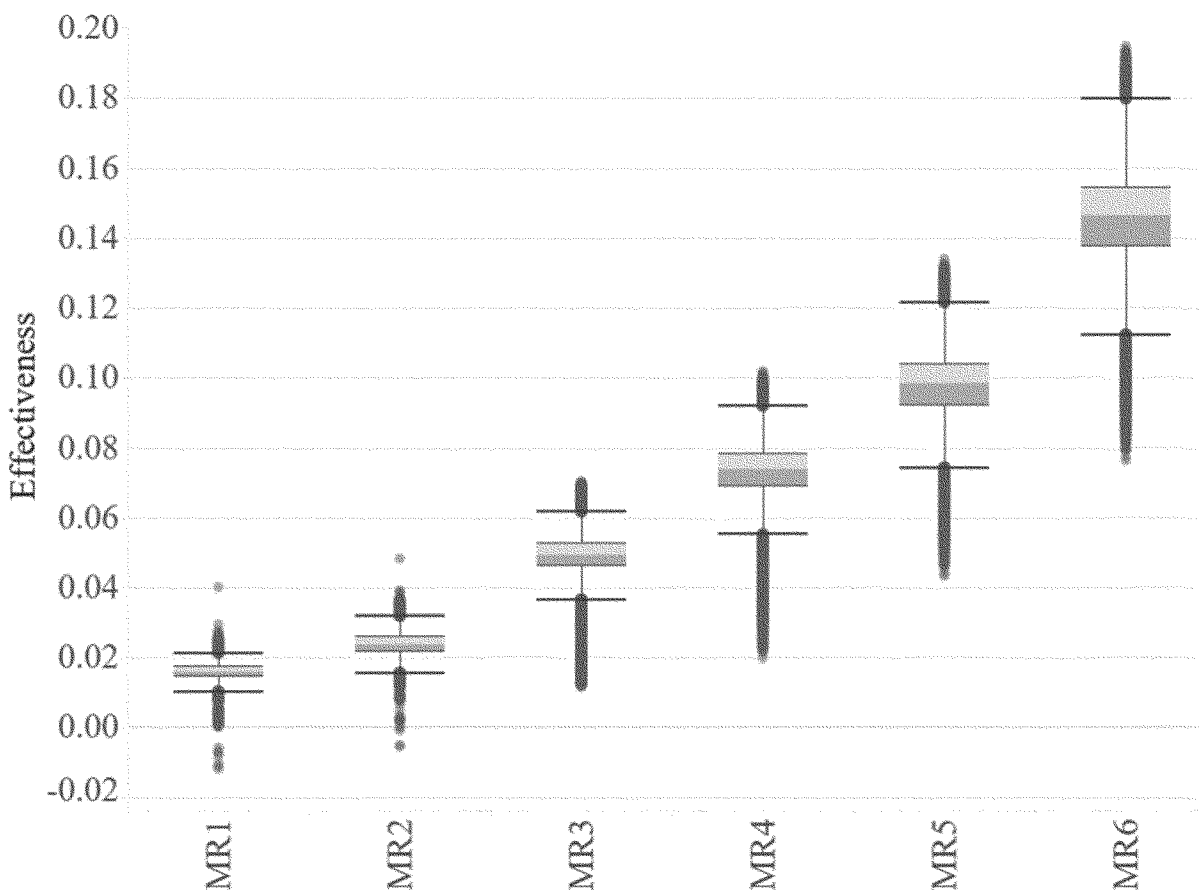


Figure III-13 – Mass Reduction Technologies Effectiveness Values for all the Vehicle Technology Classes

(e) Mass Reduction Costs

The CAFE Model analysis handles mass reduction technology costs differently than all other technology costs. Mass reduction costs are calculated as an average cost per pound over the baseline (MR0) for a vehicle's glider weight. While the definitions of glider may vary, DOT referenced the same dollar per pound of curb weight to develop costs for different glider definitions. In translating these values, DOT took care to track units (\$/kg vs. \$/lb) and the reference for percentage improvements (glider vs. curb weight).

DOT calculated the cost of mass reduction on a glider weight basis so that the weight of each powertrain configuration could be directly and separately accounted for. This approach provides the true cost of mass reduction without conflating the mass change and costs associated with downsizing a powertrain or adding additional advanced powertrain technologies. Hence, the mass reduction costs in this proposal reflect the cost of mass reduction in the glider and do not

include the mass reduction associated with engine downsizing. The mass reduction and costs associated with engine downsizing are accounted for separately.

A second reason for using glider share instead of curb weight is that it affects the absolute amount of curb weight reduction applied, and therefore cost per pound for the mass reduction changes with the change in the glider share. The cost for removing 20 percent of the glider weight when the glider represents 75 percent of a vehicle's curb weight is not the same as the cost for removing 20 percent of the glider weight when the glider represents 50 percent of the vehicle's curb weight. For example, the glider share of 79 percent of a 3,000-pound curb weight vehicle is 2,370 lbs, while the glider share of 50 percent of a 3,000-pound curb weight vehicle is 1,500 lbs, and the glider share of 71 percent of a 3,000-pound curb weight vehicle is 2,130 lbs. The mass change associated with 20 percent mass reduction is 474 lbs for 79 percent glider share ($= [3,000 \text{ lbs} \times 79\% \times 20\%]$), 300 lbs for 50 percent glider share ($= [3,000$

lbs $\times 50\% \times 20\%]$, and 426 lbs for 71 percent glider share ($= [3,000 \text{ lbs} \times 71\% \times 20\%]$). The mass reduction cost studies that DOT relied on to develop mass reduction costs for this analysis show that the cost for mass reduction varies with the amount of mass reduction. Therefore, for a fixed glider mass reduction percentage, different glider share assumptions will have different costs.

DOT considered several sources to develop the mass reduction technology cost curves. Several mass reduction studies have used either a mid-size passenger car or a full-size pickup truck as an exemplar vehicle to demonstrate the technical and cost feasibility of mass reduction. While the findings of these studies may not apply directly to different vehicle classes, the cost estimates derived for the mass reduction technologies identified in these studies can be useful for formulating general estimates of costs. As discussed further below, the mass reduction cost curves developed for this analysis are based on two lightweighting studies, and DOT also updated the curves based on more

recent studies to better account for the cost of carbon fiber needed for the highest levels of mass reduction technology. The two studies used for MR1 through MR4 costs included the teardown of a MY 2011 Honda Accord and a MY 2014 Chevrolet Silverado pickup truck, and the carbon fiber costs required for MR5 and MR6 were updated based on the 2021 NAS report.²³⁵

Both teardown studies are structured to derive the estimated cost for each of the mass reduction technology levels. DOT relied on the results of those studies because they considered an extensive range of material types, material gauge, and component redesign while taking into account real world constraints such as manufacturing and assembly methods and complexity, platform-sharing, and maintaining vehicle utility, functionality and attributes, including safety, performance, payload capacity, towing capacity, handling, NVH, and other characteristics. In addition, DOT determined that the baseline vehicles and mass reduction technologies assessed in the studies are still reasonably representative of the technologies that may be applied to vehicles in the MY 2020 analysis fleet to achieve up to MR4 level mass reduction in the rulemaking timeframe. DOT adjusted the cost estimates derived from the two studies to reflect the assumption that a vehicle’s glider

weight consisted of 71% of the vehicle’s curb weight, and mass reduction as it pertains to achieving MR0–MR6 levels would only come from the glider.

As discussed above, achieving the highest levels of mass reduction often necessitates extensive use of advanced materials like higher grades of aluminum, magnesium, or carbon fiber. For the 2020 final rule, DOT provided a survey of information available regarding carbon fiber costs compared to the costs DOT presented in the final rule based on the Honda Accord and Chevrolet Silverado teardown studies. In the Honda Accord study, the estimated cost of carbon fiber was \$5.37/kg, and the cost of carbon fiber used in the Chevy Silverado study was \$15.50/kg. The \$15.50 estimate closely matched the cost estimates from a BMW i3 teardown analysis,²³⁶ the cost figures provided by Oak Ridge National Laboratory for a study from the IACMI Composites Institute,²³⁷ and from a Ducker Worldwide presentation at the CAR Management Briefing Seminar.²³⁸

For this analysis, DOT relied on the cost estimates for carbon fiber construction that the National Academies detailed in the 2021 Assessment of Technologies for Improving Fuel Economy of Light-Duty Vehicles—Phase 3 recently completed by the National Academies.²³⁹ The study indicates that the sum of direct materials costs plus manufacturing costs for carbon fiber composite automotive

components is \$25.97 per pound in high volume production. In order to use this cost in the CAFE Model it must be put in terms of dollars per pound saved. Using an average vehicle curb weight of 4000 lbs, a 71% glider share and the percent mass savings associated with MR5 and MR6, it is possible to calculate the number of pounds to be removed to attain MR5 and MR6. Also taken from the NAS study is the assertion that carbon fiber substitution for steel in an automotive component results in a 50% mass reduction. Combining all this together, carbon fiber technology offers weight savings at \$24.60 per pound saved. This dollar per pound savings figure must also be converted to a retail price equivalent (RPE) to account for various commercial costs associated with all automotive components. This is accomplished by multiplying \$24.60 by the factor 1.5. This brings the cost per pound saved for using carbon fiber to \$36.90 per pound saved.²⁴⁰ The analysis uses this cost for achieving MR5 and MR6.

Table III–25 and Table III–26 show the cost values (in dollars per pound) used in the CAFE Model with MR1–4 costs based on the cost curves developed from the MY 2011 Honda Accord and MY 2014 Chevrolet Silverado studies, and the updated MR5 and MR6 values that account for the updated carbon fiber costs from the 2021 NAS report. Both tables assume a 71% glider share.

Table III-25 – Mass Reduction Costs for MY 2020 in CAFE Model for Small Car, Small Car Performance, Medium Car, Medium Car Performance, Small SUV, Small SUV Performance

	Percentage Reduction in Glider Weight	Percentage Reduction in Curb Weight	Cost of Mass Reduction (\$/lbs)
MR0	0.00%	0.00%	0.00
MR1	5.00%	3.55%	0.46
MR2	7.50%	5.33%	0.86
MR3	10.00%	7.10%	1.22
MR4	15.00%	10.65%	1.59
MR5	20.00%	14.20%	36.90
MR6	28.00%	20%	36.90

²³⁵ This analysis applied the cost estimates per pound derived from passenger cars to all passenger car segments, and the cost estimates per pound derived from full-size pickup trucks to all light-duty truck and SUV segments. The cost estimates per pound for carbon fiber (MR5 and MR6) were the same for all segments.

²³⁶ Singh, Harry, FSV Body Structure Comparison with 2014 BMW i3, Munro and Associates for World Auto Steel (June 3, 2015).

²³⁷ IACMI Baseline Cost and Energy Metrics (March 2017), available at <https://iacmi.org/wp-content/uploads/2017/12/IACMI-Baseline-Cost-and-Energy-Metrics-March-2017.pdf>.

²³⁸ Ducker Worldwide, The Road Ahead—Automotive Materials (2016), <https://societyofautomotiveanalysts.wildapricot.org/resources/Pictures/SAA%20Sumit%20slides%20for%20Abey%20Abraham%20of%20Ducker.pdf>.

²³⁹ 2021 NAS report, at 7–242–3.

²⁴⁰ See MR5 and MR6 CFRP Cost Increase Calculator.xlsx in the docket for this action.

There is a dramatic increase in cost going from MR4 to MR5 and MR6 for all classes of vehicles. However, while the increase in cost going from MR4 to MR5 and MR6 is dramatic, the MY 2011 Honda Accord study, the MY 2014 Chevrolet Silverado study, and the 2021 NAS report all included a steep increase to achieve the highest levels of mass

reduction technology. As noted above, DOT seeks comment on any additional information about the costs of achieving the highest levels of mass reduction technology, including from publicly available sources or data that could be made publicly available.

Table III–27 provides an example of mass reduction costs in 2018\$ over

select model years for the medium car and pickup truck technology classes as a dollar per pound value. The table shows how the \$/lb value for each mass reduction level decreases over time because of cost learning. For a full list of the \$/lb mass reduction costs used in the analysis across all model years, see the Technologies file.

Table III-27 – Examples of the \$/lb Mass Reduction Costs in 2018\$ for Medium Car and Pickup Truck Vehicle Classes

Technology	Medium Car Costs (2018\$)/lbs			Pickup Costs (2018\$)/lbs		
	MY 2020	MY 2025	MY 2030	MY 2020	MY 2025	MY 2030
MR0	0.00	0.00	0.00	0.00	0.00	0.00
MR1	0.46	0.42	0.39	0.30	0.27	0.25
MR2	0.86	0.78	0.73	0.70	0.63	0.59
MR3	1.22	1.11	1.03	1.25	1.13	1.06
MR4	1.59	1.34	1.21	1.70	1.44	1.30
MR5	36.90	31.44	26.93	36.90	31.44	26.93
MR6	36.90	31.44	26.93	36.90	31.44	26.93

5. Aerodynamics

The energy required to overcome aerodynamic drag accounts for a significant portion of the energy consumed by a vehicle and can become the dominant factor for a vehicle's energy consumption at high speeds. Reducing aerodynamic drag can, therefore, be an effective way to reduce fuel consumption and emissions.

Aerodynamic drag is proportional to the frontal area (A) of the vehicle and coefficient of drag (C_d), such that aerodynamic performance is often expressed as the product of the two values, C_dA , which is also known as the drag area of a vehicle. The coefficient of drag (C_d) is a dimensionless value that essentially represents the aerodynamic efficiency of the vehicle shape. The frontal area (A) is the cross-sectional area of the vehicle as viewed from the front. It acts with the coefficient of drag as a sort of scaling factor, representing the relative size of the vehicle shape that the coefficient of drag describes. The force imposed by aerodynamic drag increases with the square of vehicle velocity, accounting for the largest contribution to road loads at higher speeds.

Aerodynamic drag reduction can be achieved via two approaches, either by reducing the drag coefficient or

reducing vehicle frontal area, with two different categories of technologies, passive and active aerodynamic technologies. Passive aerodynamics refers to aerodynamic attributes that are inherent to the shape and size of the vehicle, including any components of a fixed nature. Active aerodynamics refers to technologies that variably deploy in response to driving conditions. These include technologies such as active grille shutters, active air dams, and active ride height adjustment. It is important to note that manufacturers may employ both passive and active aerodynamic technologies to achieve aerodynamic drag values.

The greatest opportunity for improving aerodynamic performance is during a vehicle redesign cycle when significant changes to the shape and size of the vehicle can be made. Incremental improvements may also be achieved during mid-cycle vehicle refresh using restyled exterior components and add-on devices. Some examples of potential technologies applied during mid-cycle refresh are restyled front and rear fascia, modified front air dams and rear valances, addition of rear deck lips and underbody panels, and low-drag exterior mirrors. While manufacturers may nudge the frontal area of the vehicle during redesigns, large changes in frontal area are typically not possible

without impacting the utility and interior space of the vehicle. Similarly, manufacturers may improve C_d by changing the frontal shape of the vehicle or lowering the height of the vehicle, among other approaches, but the form drag of certain body styles and airflow needs for engine cooling often limit how much C_d may be improved.

The following sections discuss the four levels of aerodynamic improvements considered in the CAFE Model, how the agency assigned baseline aerodynamic technology levels to vehicles in the MY 2020 fleet, the effectiveness improvements for the addition of aerodynamic technologies to vehicles, and the costs for adding that aerodynamic technology.

(a) Aerodynamic Technologies in the CAFE Model

DOT bins aerodynamic improvements into four levels—5%, 10%, 15% and 20% aerodynamic drag improvement values over a baseline computed for each vehicle body style—which correspond to AERO5, AERO10, AERO15, and AERO20, respectively.

The aerodynamic improvements technology pathway consists of a linear progression, with each level superseding all previous levels, as seen in Figure III–14.

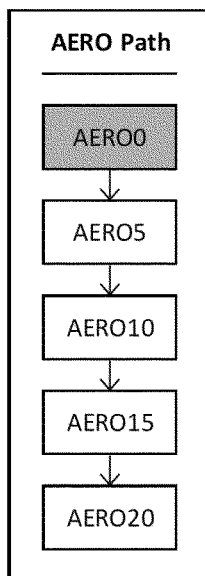


Figure III-14 – Technology Pathway for Levels of Aerodynamic Drag Reduction

While the four levels of aerodynamic improvements are technology-agnostic, DOT built a pathway to compliance for each level based on aerodynamic data from a National Research Council (NRC) of Canada-sponsored wind tunnel testing program. The program included an extensive review of production vehicles utilizing these technologies, and industry comments.^{241 242} Again, these technology combinations are intended to show a *potential* way for a manufacturer to achieve each aerodynamic improvement level; however, in the real world,

manufacturers may implement different combinations of aerodynamic technologies to achieve a percentage improvement over their baseline vehicles.

Table III-28 and Table III-29 show the aerodynamic technologies that could be used to achieve 5%, 10%, 15% and 20% improvements in passenger cars, SUVs, and pickup trucks. As discussed further in Section III.D.5.c, AERO20 cannot be applied to pickup trucks in the model, which is why there is no pathway to AERO20 shown in Table III-29. While some aerodynamic

improvement technologies can be applied across vehicle classes, like active grille shutters (used in the 2015 Chevrolet Colorado),²⁴³ DOT determined that there are limitations that make it infeasible for vehicles with some body styles to achieve a 20% reduction in the coefficient of drag from their baseline. This technology path is an example of how a manufacturer *could* reach each AERO level, but they would not necessarily be *required* to use the technologies.

²⁴¹ Larose, G., Belluz, L., Whittal, I., Belzile, M. et al., "Evaluation of the Aerodynamics of Drag Reduction Technologies for Light-duty Vehicles—a Comprehensive Wind Tunnel Study," SAE Int. J. Passeng. Cars—Mech. Syst. 9(2):772–784, 2016, <https://doi.org/10.4271/2016-01-1613>.

²⁴² Larose, Guy & Belluz, Leanna & Whittal, Ian & Belzile, Marc & Klomp, Ryan & Schmitt, Andreas. (2016). Evaluation of the Aerodynamics of Drag Reduction Technologies for Light-duty Vehicles—a Comprehensive Wind Tunnel Study. SAE International Journal of Passenger Cars—Mechanical Systems. 9. 10.4271/2016-01-1613.

²⁴³ Chevrolet Product Information, available at https://media.chevrolet.com/content/media/us/en/chevrolet/vehicles/colorado/2015/_jcr_content/iconrow/textfile/file.res/15-PG-Chevrolet-Colorado-082218.pdf.

Table III-28 – Combinations of Technologies That Could Achieve Aerodynamic Improvements Used in the Current Analyses for Passenger Cars and SUVs

Aero Improvement Level	Components	Effectiveness (%)
AERO5	Front Styling	2.0%
	Roof Line raised at forward of B-pillar	0.5%
	Faster A pillar rake angle	0.5%
	Shorter C pillar	1.0%
	Low drag wheels	1.0%
AERO10	Rear Spoiler	1.0%
	Wheel Deflector / Air outlet inside wheel housing	1.0%
	Bumper Lip	1.0%
	Rear Diffuser	2.0%
AERO15	Underbody Cover Incl. Rear axle cladding)	3.0%
	Lowering ride height by 10mm	2.0%
AERO20	Active Grill Shutters	3.0%
	Extend Air dam	2.0%

Table III-29 – Combinations of Technologies That Could Achieve Aerodynamic Improvements Used in the Current Analyses for Pickup Trucks

Aero Improvement Level	Components	Effectiveness (%)
AERO5	Whole Body Styling (Shape Optimization)	1.5%
	Faster A pillar rake angle	0.5%
	Rear Spoiler	1.0%
	Wheel Deflector / Air outlet inside wheel housing	1.0%
	Bumper Lip	1.0%
AERO10	Rear Diffuser	2.0%
	Underbody Cover Incl. Rear axle cladding)	3.0%
AERO15	Active Grill Shutters	3.0%
	Extend Air dam	2.0%

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As discussed further in Section III.D.8, this analysis assumes manufacturers apply off-cycle technology at rates defined in the Market Data file. While the AERO levels in the analysis are technology-agnostic, achieving AERO20 improvements does assume the use of active grille shutters, which is an off-cycle technology.

(b) Aerodynamics Analysis Fleet Assignments

DOT uses a relative performance approach to assign an initial level of aerodynamic drag reduction technology

to each vehicle. Each AERO level represents a percent reduction in a vehicle's aerodynamic drag coefficient (C_d) from a baseline value for its body style. For a vehicle to achieve AERO5, the C_d must be at least 5% below the baseline for the body style; for AERO10, 10% below the baseline, and so on. Baseline aerodynamic assignment is therefore a three step process: Each vehicle in the fleet is assigned a body style, the average drag coefficient is calculated for each body style, and the drag coefficient for each vehicle model

is compared to the average for the body style.

Every vehicle in the fleet is assigned a body style; available body styles included convertible, coupe, sedan, hatchback, wagon, SUV, pickup, minivan, and van. These assignments do not necessarily match the body styles used by manufacturers for marketing purposes. Instead, they are assigned based on analyst judgement, taking into account how a vehicle's AERO and vehicle technology class assignments are affected. Different body styles offer different utility and have varying levels

of baseline form drag. In addition, frontal area is a major factor in aerodynamic forces, and the frontal area varies by vehicle. This analysis considers both frontal area and body style as utility factors affecting aerodynamic forces; therefore, the analysis assumes all reduction in aerodynamic drag forces come from improvement in the drag coefficient.

Average drag coefficients for each body style were computed using the MY 2015 drag coefficients published by manufacturers, which were used as the baseline values in the analysis. DOT harmonizes the Autonomie simulation baselines with the analysis fleet assignment baselines to the fullest extent possible.²⁴⁴

The drag coefficients used for each vehicle in the MY 2020 analysis fleet are sourced from manufacturer specification sheets, when possible. However, drag coefficients for the MY 2020 vehicles were not consistently reported publicly. If no drag coefficient was reported, analyst judgment is sometimes used to assign an AERO level. If no level was manually assigned, the drag coefficient obtained from manufacturers to build the MY 2016 fleet,²⁴⁵ was used, if available. The MY 2016 drag coefficient values may not accurately reflect the current technology content of newer vehicles but are, in many cases, the most recent data available.

(c) Aerodynamics Adoption Features

As already discussed, DOT engineers use a relative performance approach to assign current aerodynamic technology (AERO) level to a vehicle. For some body styles with different utility, such as pickup trucks, SUVs and minivans, frontal area can vary, and this can affect the overall aerodynamic drag forces. In order to maintain vehicle utility and functionality related to passenger space and cargo space, we assume all technologies that improve aerodynamic drag forces do so by reducing C_d while maintaining frontal area.

Technology pathway logic for levels of aerodynamic improvement consists of a linear progression, with each level superseding all previous ones. Technology paths for AERO are illustrated in Figure III–14.

The highest levels of AERO are not considered for certain body styles. In

these cases, this means that AERO20, and sometimes AERO15, can neither be assigned in the baseline fleet nor adopted by the model. For these body styles, there are no commercial examples of drag coefficients that demonstrate the required AERO15 or AERO20 improvement over baseline levels. DOT also deemed the most advanced levels of aerodynamic drag simulated as not technically practicable given the form drag of the body style and costed technology, especially given the need to maintain vehicle functionality and utility, such as interior volume, cargo area, and ground clearance. In short, DOT ‘skipped’ AERO15 for minivan body styles, and ‘skipped’ AERO20 for convertible, minivan, pickup, and wagon body styles.

DOT also does not allow application of AERO15 and AERO20 technology to vehicles with more than 780 horsepower. There are two main types of vehicles that informed this threshold: performance internal combustion engine (ICE) vehicles and high-power battery electric vehicles (BEVs). In the case of the former, the agency recognizes that manufacturers tune aerodynamic features on these vehicles to provide desirable downforce at high speeds and to provide sufficient cooling for the powertrain, rather than reducing drag, resulting in middling drag coefficients despite advanced aerodynamic features. Therefore, manufacturers may have limited ability to improve aerodynamic drag coefficients for high performance vehicles with internal combustion engines without reducing horsepower. The baseline fleet includes 1,655 units of sales volume with limited application of aerodynamic technologies because of ICE vehicle performance.²⁴⁶

In the case of high-power battery electric vehicles, the 780-horsepower threshold is set above the highest peak system horsepower present on a BEV in the 2020 fleet. BEVs have different aerodynamic behavior and considerations than ICE vehicles, allowing for features such as flat underbodies that significantly reduce drag.²⁴⁷ BEVs are therefore more likely to achieve higher AERO levels, so the horsepower threshold is set high enough that it does not restrict AERO15 and AERO20 application. Note that the

CAFE Model does not force high levels of AERO adoption; rather, higher AERO levels are usually adopted organically by BEVs because significant drag reduction allows for smaller batteries and, by extension, cost savings. BEVs represent 252,023 units of sales volume in the baseline fleet.²⁴⁸

(d) Aerodynamics Effectiveness Modeling

To determine aerodynamic effectiveness, the CAFE Model and Autonomie used individually assigned road load technologies for each vehicle to appropriately assign initial road load levels and appropriately capture benefits of subsequent individual road load improving technologies.

The current analysis included four levels of aerodynamic improvements, AERO5, AERO10, AERO15, and AERO20, representing 5, 10, 15, and 20 percent reduction in drag coefficient (C_d), respectively. DOT assumed that aerodynamic drag reduction could only come from reduction in C_d and not from reduction of frontal area, to maintain vehicle functionality and utility, such as passenger space, ingress/egress ergonomics, and cargo space.

The effectiveness values for the aerodynamic improvement levels relative to AERO0, for all ten vehicle technology classes, are shown in Figure III–15. Each of the effectiveness values shown is representative of the improvements seen for upgrading only the listed aerodynamic technology level for a given combination of other technologies. In other words, the range of effectiveness values seen for each specific technology (*e.g.*, AERO 15) represents the addition of AERO15 technology (relative to AERO0 level) for every technology combination that could select the addition of AERO15. It must be emphasized that the change in fuel consumption values between entire technology keys is used,²⁴⁹ and not the individual technology effectiveness values. Using the change between whole technology keys captures the complementary or non-complementary interactions among technologies. The box shows the inner quartile range (IQR) of the effectiveness values and whiskers extend out 1.5 x IQR. The dots outside the whiskers show effectiveness values outside those thresholds.

²⁴⁴ See TSD Chapter 2.4.1 for a table of vehicle attributes used to build the Autonomie baseline vehicle models. That table includes a drag coefficient for each vehicle class.

²⁴⁵ See 83 FR 42986 (Aug. 24, 2018). The MY 2016 fleet was built to support the 2018 NPRM.

²⁴⁶ Market Data file.

²⁴⁷ 2020 EPA Automotive Trends Report, at 227.

²⁴⁸ Market Data file.

²⁴⁹ Technology key is the unique collection of technologies that constitutes a specific vehicle, see TSD Chapter 2.4.7 for more detail.

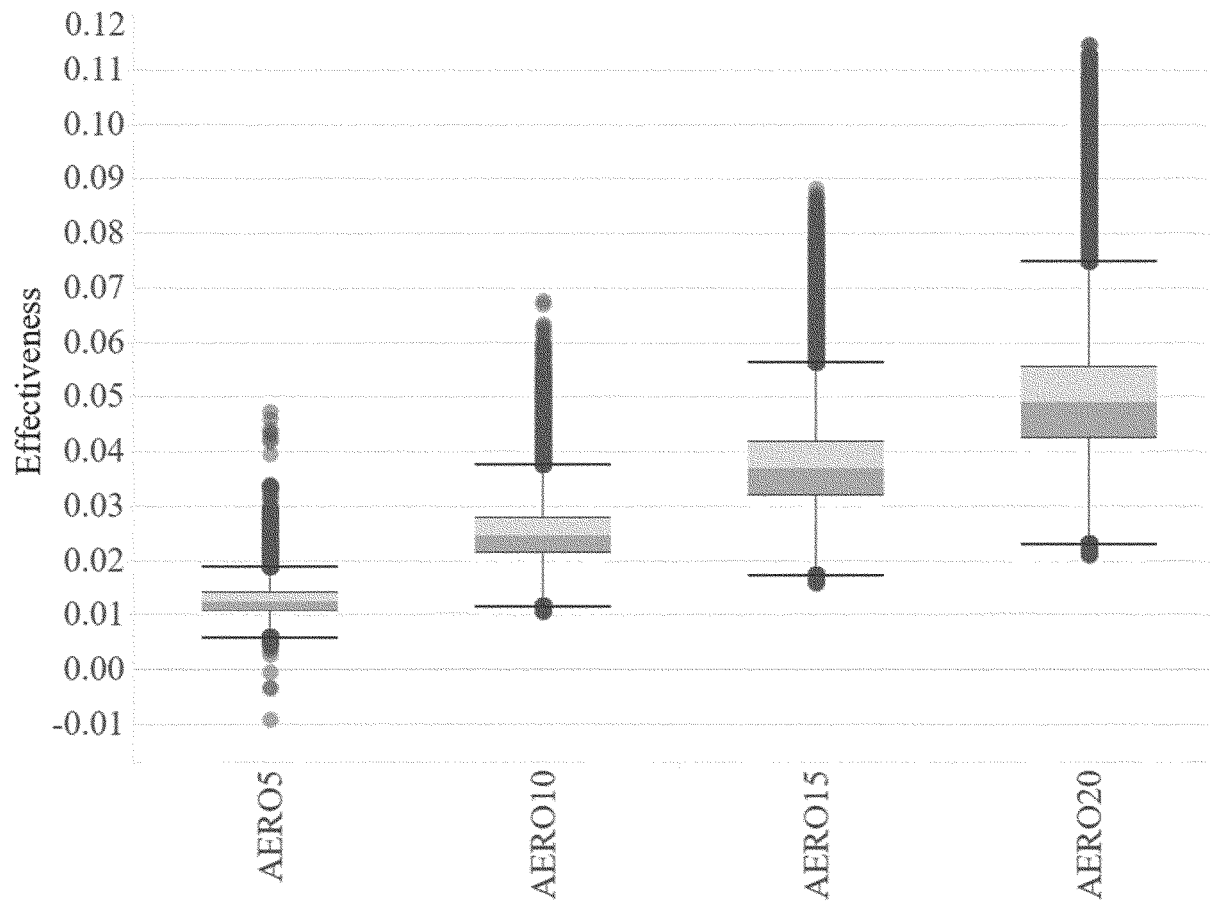


Figure III-15 – AERO Technology Effectiveness²⁵⁰

(e) Aerodynamics Costs

This analysis uses the AERO technology costs established in the 2020 final rule that are based on confidential business information submitted by the automotive industry in advance of the 2018 NPRM,²⁵¹ and on DOT's assessment of manufacturing costs for specific aerodynamic technologies.²⁵² DOT received no additional comments

from stakeholders regarding the costs established in the 2018 NPRM, and continued to use the established costs for the 2020 final rule and this analysis.

Table III-30 shows examples of costs for AERO technologies as applied to the medium car and pickup truck vehicle classes in select model years. The cost to achieve AERO5 is relatively low, as most of the improvements can be made through body styling changes. The cost

to achieve AERO10 is higher than AERO5, due to the addition of several passive aerodynamic technologies, and the cost to achieve AERO15 and AERO20 is higher than AERO10 due to use of both passive and active aerodynamic technologies. For a full list of all absolute aerodynamic technology costs used in the analysis across all model years see the Technologies file.

²⁵⁰ The data used to create this figure can be found in the FE_1 Improvements file.

²⁵¹ See the PRIA accompanying the 2018 NPRM, Chapter 6.3.10.1.2.1.2 for a discussion of these cost estimates.

²⁵² See the FRIA accompanying the 2020 final rule, Chapter VI.C.5.e.

Table III-30 – Examples of Costs for Aerodynamic Reduction Technologies in 2018\$ for Medium Cars and Pickup Trucks for Select Model Years

Technology	Medium Car Costs (2018\$)			Pickup Costs (2018\$)		
	MY 2020	MY 2025	MY 2030	MY 2020	MY 2025	MY 2030
AERO0	0.00	0.00	0.00	0.00	0.00	0.00
AERO5	53.96	48.70	45.73	53.96	48.70	45.73
AERO10	110.32	99.56	93.49	110.32	99.56	93.49
AERO15	155.88	140.68	132.10	275.80	248.90	233.72
AERO20	275.80	248.90	233.72	-	-	-

6. Tire Rolling Resistance

Tire rolling resistance is a road load force that arises primarily from the energy dissipated by elastic deformation of the tires as they roll. Tire design characteristics (for example, materials, construction, and tread design) have a strong influence on the amount and type of deformation and the energy it dissipates. Designers can select these characteristics to minimize rolling resistance. However, these characteristics may also influence other performance attributes, such as durability, wet and dry traction, handling, and ride comfort.

Lower-rolling-resistance tires have characteristics that reduce frictional losses associated with the energy dissipated mainly in the deformation of the tires under load, thereby improving fuel economy. Low rolling resistance tires are increasingly specified by OEMs in new vehicles and are also increasingly available from aftermarket tire vendors. They commonly include attributes such as higher inflation pressure, material changes, tire construction optimized for lower hysteresis, geometry changes (e.g.,

reduced aspect ratios), and reduced sidewall and tread deflection. These changes are commonly accompanied by additional changes to vehicle suspension tuning and/or suspension design to mitigate any potential impact on other performance attributes of the vehicle.

DOT continues to assess the potential impact of tire rolling resistance changes on vehicle safety. DOT has been following the industry developments and trends in application of rolling resistance technologies to light duty vehicles. As stated in the National Academies Press (NAP) special report on Tires and Passenger Vehicle Fuel Economy,²⁵³ national crash data does not provide data about tire structural failures specifically related to tire rolling resistance, because the rolling resistance of a tire at a crash scene cannot be determined. However, other metrics like brake performance compliance test data are helpful to show trends like that stopping distance has

²⁵³ Tires and Passenger Vehicle Fuel Economy: Informing Consumers, Improving Performance—Special Report 286 (2006), available at <https://www.nap.edu/read/11620/chapter/6>.

not changed in the last ten years,²⁵⁴ during which time many manufacturers have installed low rolling resistance tires in their fleet—meaning that manufacturers were successful in improving rolling resistance while maintaining stopping distances through tire design, tire materials, and/or braking system improvements. In addition, NHTSA has addressed other tire-related issues through rulemaking,²⁵⁵ and continues to research tire problems such as blowouts, flat tires, tire or wheel deficiency, tire or wheel failure, and tire degradation.²⁵⁶ However, there are currently no data connecting low rolling resistance tires to accident or fatality rates.

²⁵⁴ See, e.g., NHTSA Office of Vehicle Safety Compliance, Compliance Database, <https://one.nhtsa.gov/cars/problems/comply/index.cfm>.

²⁵⁵ 49 CFR 571.138, Tire pressure monitoring systems.

²⁵⁶ Tire-Related Factors in the Pre-Crash Phase, DOT HS 811 617 (April 2012), available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/811617>.

NHTSA conducted tire rolling resistance tests and wet grip index tests on original equipment tires installed on new vehicles. The tests showed that there is no degradation in wet grip index values (no degradation in traction) for tires with improved rolling resistance technology. With better tire design, tire compound formulations and improved tread design, tire manufacturers have tools to balance stopping distance and reduced rolling resistance. Tire manufacturers can use “higher performance materials in the tread compound, more silica as reinforcing fillers and advanced tread design features” to mitigate issues related to stopping distance.²⁵⁷

The following sections discuss levels of tire rolling resistance technology considered in the CAFE Model, how the technology was assigned in the analysis fleet, adoption features specified to maintain performance, effectiveness, and cost.

(a) Tire Rolling Resistance in the CAFE Model

DOT continues to consider two levels of improvement for low rolling resistance tires in the analysis: The first level of low rolling resistance tires considered reduced rolling resistance 10 percent from an industry-average baseline rolling resistance coefficient (RRC) value, while the second level reduced rolling resistance 20 percent from the baseline.²⁵⁸

DOT selected the industry-average RRC baseline of 0.009 based on a CONTROLTEC study prepared for the California Air Resources Board,²⁵⁹ in addition to confidential business information submitted by manufacturers prior to the 2018 NPRM analysis. The average RRC from the CONTROLTEC study, which surveyed 1,358 vehicle models, was 0.009.²⁶⁰ CONTROLTEC also compared the findings of their survey with values provided by Rubber Manufacturers Association (renamed as USTMA–U.S. Tire Manufacturers Association) for original equipment

²⁵⁷ Jesse Snyder, A big fuel saver: Easy-rolling tires (but watch braking) (July 21, 2008), <https://www.autonews.com/article/20080721/OEM01/307219960/a-big-fuel-saver-easy-rolling-tires-but-watch-braking>. Last visited December 3, 2019.

²⁵⁸ To achieve ROLL10, the tire rolling resistance must be at least 10 percent better than baseline (.0081 or better). To achieve ROLL20, the tire rolling resistance must be at least 20 percent better than baseline (.0072 or better).

²⁵⁹ Technical Analysis of Vehicle Load Reduction by CONTROLTEC for California Air Resources Board (April 29, 2015).

²⁶⁰ The RRC values used in this study were a combination of manufacturer information, estimates from coast down tests for some vehicles, and application of tire RRC values across other vehicles on the same platform.

tires. The average RRC from the data provided by RMA was 0.0092,²⁶¹ compared to average of 0.009 from CONTROLTEC.

In past agency actions, commenters have argued that based on available data on current vehicle models and the likely possibility that there would be additional tire improvements over the next decade, DOT should consider ROLL30 technology, or a 30 percent reduction of tire rolling resistance over the baseline.²⁶²

As stated in the Joint TSD for the MY 2017–2025 final rule (77 FR 62624, Oct. 15, 2012) and 2020 final rule, tire technologies that enable rolling resistance improvements of 10 and 20 percent have been in existence for many years.²⁶³ Achieving improvements of up to 20 percent involves optimizing and integrating multiple technologies, with a primary contributor being the adoption of a silica tread technology. Tire suppliers have indicated that additional innovations are necessary to achieve the next level of low rolling resistance technology on a commercial basis, such as improvements in material to retain tire pressure, tread design to manage both stopping distance and wet traction, and development of carbon black material for low rolling resistance without the use of silica to reduce cost and weight.²⁶⁴

The agency believes that the tire industry is in the process of moving automotive manufacturers towards higher levels of rolling resistance technology in the vehicle fleet. Importantly, as shown below, the MY 2020 fleet does include a higher percentage of vehicles with ROLL20 technology than the MY 2017 fleet. However, DOT believes that at this time, the emerging tire technologies that would achieve 30 percent improvement in rolling resistance, like changing tire profile, stiffening tire walls, or adopting improved tires along with active chassis control,²⁶⁵ among other technologies, will not be available for widespread commercial adoption in the fleet during the rulemaking timeframe. As a result, the agency continues to not to incorporate 30 percent reduction in rolling resistance technology. DOT will consider adding an advanced level of

²⁶¹ Technical Analysis of Vehicle Load Reduction by CONTROLTEC for California Air Resources Board (April 29, 2015) at page 40.

²⁶² NHTSA–2018–0067–11985.

²⁶³ EPA–420–R–12–901, at page 3–210.

²⁶⁴ 2011 NAS report, at 103.

²⁶⁵ Mohammad Mehdi Davari, Rolling resistance and energy loss in tyres (May 20, 2015), available at https://www.sveafordon.com/media/42060/SVEA-Presentation_Davari_public.pdf. Last visited December 30, 2019.

tire rolling resistance technology to future analyses, and invites comment on any updated information on manufacturers’ capabilities to add tires with higher levels of rolling resistance to their vehicles, and consumers’ willingness to accept these tires on their vehicles.

(b) Tire Rolling Resistance Analysis Fleet Assignments

Tire rolling resistance is not a part of tire manufacturers’ publicly released specifications and thus it is difficult to assign this technology to the analysis fleet. Manufacturers also often offer multiple wheel and tire packages for the same nameplates, further increasing the complexity of this assignment. DOT employed an approach consistent with previous rulemaking in assigning this technology. DOT relied on previously submitted rolling resistance values that were supplied by manufacturers in the process of building older fleets and bolstered it with agency-sponsored tire rolling testing by Smithers.²⁶⁶

DOT carried over rolling resistance assignments for nameplates where manufacturers had submitted data on the vehicles’ rolling resistance values, even if the vehicle was redesigned. If Smithers data was available, DOT replaced any older or missing values with that updated data. Those vehicles for which no information was available from either previous manufacturer submission or Smithers data were assigned to ROLL0. All vehicles under the same nameplate were assigned the same rolling resistance technology level even if manufacturers do outfit different trim levels with different wheels and tires.

The MY 2020 analysis fleet includes the following breakdown of rolling resistance technology: 44% at ROLL0, 20% at ROLL10, and 36% at ROLL20, which shows that the majority of the fleet has now adopted some form of improved rolling resistance technology. The majority of the change from the MY 2017 analysis fleet has been in implementing ROLL20 technology. There is likely more proliferation of rolling resistance technology, but we would need further information from manufacturers in order to account for it. DOT invites comment from manufacturers on whether these rolling

²⁶⁶ See memo to Docket No. NHTSA–2021–0053, Evaluation of Rolling Resistance and Wet Grip Performance of OEM Stock Tires Obtained from NCAP Crash Tested Vehicles Phase One and Two. NHTSA used tire rolling resistance coefficient values from this project to assign baseline tire rolling resistance technology in the MY 2020 analysis fleet and is therefore providing the draft project appendices for public review and comment.

resistance values are still applicable, or any updated rolling resistance values that could be incorporated in a publicly available analysis fleet. If manufacturers submit updated information on baseline rolling resistance assignments DOT may update those assignments for the final rule.

(c) Tire Rolling Resistance Adoption Features

Rolling resistance technology can be adopted with either a vehicle refresh or redesign. In some cases, low rolling resistance tires can affect traction, which may adversely impact acceleration, braking, and handling characteristics for some high-performance vehicles. Similar to past rulemakings, the agency recognizes that to maintain performance, braking, and handling functionality, some high-performance vehicles would not adopt low rolling resistance tire technology. For cars and SUVs with more than 405 horsepower (hp), the agency restricted the application of ROLL20. For cars and SUVs with more than 500 hp, the agency restricted the application of any additional rolling resistance technology (ROLL10 or ROLL20). The agency developed these cutoffs based on a review of confidential business

information and the distribution of rolling resistance values in the fleet.

(d) Tire Rolling Resistance Effectiveness Modeling

As discussed above, the baseline rolling resistance value from which rolling resistance improvements are measured is 0.009, based on a thorough review of confidential business information submitted by industry, and a review of other literature. To achieve ROLL10, the tire rolling resistance must be at least 10 percent better than baseline (.0081 or better). To achieve ROLL20, the tire rolling resistance must be at least 20 percent better than baseline (.0072 or better).

DOT determined effectiveness values for rolling resistance technology adoption using Autonomie modeling. Figure III-16 below shows the range of effectiveness values used for adding tire rolling resistance technology to a vehicle in this analysis. The graph shows the change in fuel consumption values between entire technology keys,²⁶⁷ and not the individual technology effectiveness values. Using the change between whole technology

²⁶⁷ Technology key is the unique collection of technologies that constitutes a specific vehicle, *see* TSD Chapter 2.4.7 for more information.

keys captures the complementary or non-complementary interactions among technologies. In the graph, the box shows the interquartile range (IQR) of the effectiveness values and whiskers extend out 1.5 x IQR. The dots outside of the whiskers show values for effectiveness that are outside these bounds.

The data points with the highest effectiveness values are almost all exclusively BEV and FCV technology combinations for medium sized nonperformance cars. The effectiveness for these vehicles, when the low rolling resistance technology is applied, is amplified by a complementary effect, where the lower rolling resistance reduces road load and allows a smaller battery pack to be used (and still meet range requirements). The smaller battery pack reduces the overall weight of the vehicle, further reducing road load, and improving fuel efficiency. This complimentary effect is experience by all the vehicle technology classes, but the strongest effect is on the midsized vehicle non-performance classes and is only captured in the analysis through the use of full vehicle simulations, demonstrating the full interactions of the technologies.

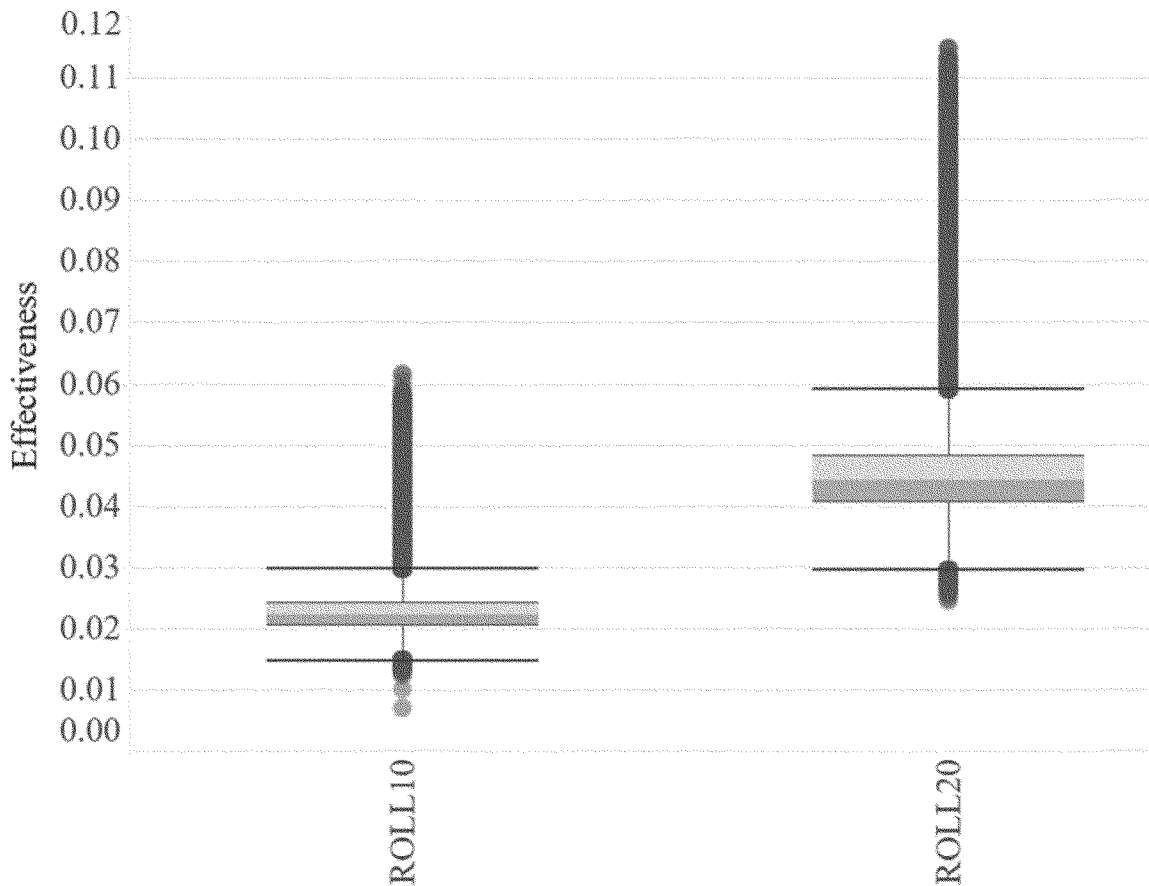


Figure III-16 – ROLL Technology Effectiveness

(e) Tire Rolling Resistance Costs

DOT continues to use the same DMC values for ROLL technology that were used for the 2020 final rule which are based on NHTSA’s MY 2011 CAFE final

rule (74 FR 14196, March 30, 2009) and the 2006 NAS/NRC report.²⁶⁸ Table III-31 shows the different levels of tire rolling resistance technology cost for all vehicle classes across select model

years, which shows how the learning rate for ROLL technologies impacts the cost. For all ROLL absolute technology costs used in the analysis across all model years see the Technologies file.

Table III-31 – Examples of Costs for Rolling Resistance Reduction Technologies in 2018\$ for Select Model Years

Technology	MY 2020	MY 2025	MY 2030
ROLL0	0.00	0.00	0.00
ROLL10	7.13	6.52	6.16
ROLL20	51.18	44.04	40.70

7. Other Vehicle Technologies

Four other vehicle technologies were included in the analysis—electric power steering (EPS), improved accessory devices (IACC), low drag brakes (LDB), and secondary axle disconnect (SAX). The effectiveness of these technologies was applied directly in the CAFE Model with unique effectiveness values for

each technology and for each technology class, rather than using Autonomie effectiveness estimates. This methodology was used in these four cases because the effectiveness of these technologies varies little with combinations of other technologies. Also, applying these technologies directly in the CAFE Model significantly

reduces the number of Autonomie simulations that are needed.

(a) Electric Power Steering

Electric power steering reduces fuel consumption by reducing load on the engine. Specifically, it reduces or eliminates the parasitic losses associated with engine-driven power

²⁶⁸ “Tires and Passenger Vehicle Fuel Economy,” Transportation Research Board Special Report 286,

National Research Council of the National

Academies, 2006, Docket No. EPA-HQ-OAR-2009-0472-0146.

steering pumps, which pump hydraulic fluid continuously through the steering actuation system even when no steering input is present. By selectively powering the electric assist only when steering input is applied, the power consumption of the system is reduced in comparison to the traditional “always-on” hydraulic steering system. Power steering may be electrified on light duty vehicles with standard 12V electrical systems and is also an enabler for vehicle electrification because it provides power steering when the engine is off (or when no combustion engine is present).

Power steering systems can be electrified in two ways. Manufacturers may choose to eliminate the hydraulic portion of the steering system and provide electric-only power steering (EPS) driven by an independent electric motor, or they may choose to move the

hydraulic pump from a belt-driven configuration to a stand-alone electrically driven hydraulic pump. The latter system is commonly referred to as electro-hydraulic power steering (EHPS). As discussed in the rulemakings, manufacturers have informed DOT that full EPS systems are being developed for all types of light-duty vehicles, including large trucks.

DOT described in past rulemakings that, like low drag brakes, EPS can be difficult to observe and assign to the analysis fleet, however, it is found more frequently in publicly available information than low drag brakes. Based on comments received during the 2020 rulemaking, the agency increased EPS application rate to nearly 90 percent for the 2020 final rule. The agency is maintaining this level of EPS fleet penetration for this analysis, recognizing that some specialized,

unique vehicle types or configurations still implement hydraulically actuated power steering systems for the baseline fleet model year.

The effectiveness of both EPS and EHPS is derived from the decoupling of the pump from the crankshaft and is considered to be practically the same for both. Thus, a single effectiveness value is used for both EPS and EHPS. As indicated in the following table, the effectiveness of EPS and EHPS varies based on the vehicle technology class it is being applied to. This variance is a direct result of vehicle size and the amount of energy required to turn the vehicle’s two front wheels about their vertical axis. More simply put, more energy is required for vehicles that weigh more and, typically, have larger tire contact patches.

Table III-32 – Fuel Consumption Improvement Values for Electric Power Steering

Tech Class	EPS
SmallCar	1.50%
SmallCarPerf	
MedCar	1.30%
MedCarPerf	
SmallSUV	1.20%
SmallSUVPerf	
MedSUV	1.00%
MedSUVPerf	
Pickup	0.80%
PickupHT	

(b) Improved Accessories

Engine accessories typically include the alternator, coolant pump, cooling fan, and oil pump, and are traditionally mechanically driven via belts, gears, or directly by other rotating engine components such as camshafts or the crankshaft. These can be replaced with improved accessories (IACC), which may include high efficiency alternators, electrically driven (*i.e.*, on-demand) coolant pumps, electric cooling fans, variable geometry oil pumps, and a mild regeneration strategy. Replacing lower-efficiency and/or mechanically-driven components with these improved accessories results in a reduction in fuel consumption, as the improved accessories can conserve energy by being turned on/off “on demand” in some cases, driven at partial load as needed, or by operating more efficiently.

For example, electric coolant pumps and electric powertrain cooling fans

provide better control of engine cooling. Flow from an electric coolant pump can be varied, and the cooling fan can be shut off during engine warm-up or cold ambient temperature conditions, reducing warm-up time, fuel enrichment requirements, and, ultimately reducing parasitic losses.

IACC technology is difficult to observe and therefore there is uncertainty in assigning it to the analysis fleet. As in the past, DOT relies on industry-provided information and comments to assess the level of IACC technology applied in the fleet. DOT believes there continues to be opportunity for further implementation of IACC. The MY 2020 analysis fleet has an IACC fleet penetration of approximately eight percent compared to the six percent value in the MY 2017 analysis fleet used for the 2020 final rule analysis.

The agency believes improved accessories may be incorporated in coordination with powertrain related changes occurring at either a vehicle refresh or vehicle redesign. This coordination with powertrain changes enables related design and tooling changes to be implemented and systems development, functionality and durability testing to be conducted in a single product change program to efficiently manage resources and costs.

This analysis carries forward work on the effectiveness of IACC systems conducted in the Draft TAR and EPA Proposed Determination that is originally founded in the 2002 NAS Report²⁶⁹ and confidential manufacturer data. This work involved gathering information by monitoring

²⁶⁹ National Research Council 2002. *Effectiveness and Impact of Corporate Average Fuel Economy (CAFE) Standards*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/10172>.

press reports, holding meetings with suppliers and OEMs, and attending industry technical conferences. The resulting effectiveness estimates we use are shown below. As indicated in the following table, the effectiveness of IACC is simulated with differing values

based on the vehicle technology class it is being applied to. This variance, like EPS, is a direct result of vehicle size and the amount of energy required perform the work necessary for the vehicle to operate as expected. This variance is related to the amount energy generated

by the alternator, the size of the coolant pump to the cool the necessary systems, the size of the cooling fan required, among other characteristics and it directed related to a vehicle size and mass.

Table III-33 – Fuel Consumption Improvement Values for Improved Accessories

Tech Class	IACC
SmallCar	1.85%
SmallCarPerf	
MedCar	2.36%
MedCarPerf	
SmallSUV	1.74%
SmallSUVPerf	
MedSUV	2.34%
MedSUVPerf	
Pickup	2.15%
PickupHT	

(c) Low Drag Brakes

Since 2009, for the MY 2011 CAFE final rule, DOT has defined low drag brakes (LDB) as brakes that reduce the sliding friction of disc brake pads on rotors when the brakes are not engaged because the brake pads are pulled away from the rotating disc either by mechanical or electric methods.²⁷⁰ DOT estimated the effectiveness of LDB technology to be a range from 0.5–1.0 percent, based on CBI data. DOT applied a learning curve to the estimated cost for LDB, but noted that the technology was considered high volume, mature, and stable. DOT explained that confidential manufacturer comments in response to the NPRM for MY 2011 (73 FR 24352, May 2, 2008) indicated that most passenger cars have already adopted LDB technology, but ladder frame trucks have not.

DOT and EPA continued to use the same definition for LDB in the MY 2012–2016 rule (75 FR 25324, May 7, 2010), with an estimated effectiveness of up to 1 percent based on CBI data.²⁷¹ DOT only allowed LDB technology to be applied to large car, minivan, medium

and large truck, and SUV classes because the agency determined the technology was already largely utilized in most other subclasses. The 2011 NAS committee also utilized NHTSA and EPA's definition for LDB and added that most new vehicles have low-drag brakes.²⁷² The committee confirmed that the impact over conventional brakes may be about a 1 percent reduction of fuel consumption.

For the MY 2017–2025 rule, however, DOT and EPA updated the effectiveness estimate for LDB to 0.8 percent based on a 2011 Ricardo study and updated lumped-parameter model.²⁷³ The agencies considered LDB technology to be off the learning curve (*i.e.*, the DMC does not change year-over-year). The 2015 NAS report continued to use the agencies' definition for LDB and commented that the 0.8 percent effectiveness estimate is a reasonable estimate.²⁷⁴ The 2015 NAS committee did not opine on the application of LDB technology in the fleet. The agencies used the same definition, cost, and effectiveness estimates for LDB in the Draft TAR, but also noted the existence of zero drag brake systems which use

electrical actuators that allow brake pads to move farther away from the rotor.²⁷⁵ However, the agencies did not include zero drag brake technology in either compliance simulation. EPA continued with this approach in its first 2017 Final Determination that the standards through 2025 were appropriate.²⁷⁶

In the 2020 final rule, the agencies applied LDB sparingly in the MY 2017 analysis fleet using the same cost and effectiveness estimates from the 2011 Ricardo study, with approximately less than 15% of vehicles being assigned the technology. In addition, DOT noted the existence of zero drag brakes in production for some BEVs, similar to the summary in the Draft TAR, but did not opine on the existence of zero drag brakes in the fleet. Some stakeholders commented to the 2020 final rule that other vehicle technologies, including LDB, were actually overapplied in the analysis fleet.

For this action, DOT considered the conflicting statements that LDB were both universally applied in new vehicles and that the new vehicle fleet still had space to improve LDB technology. DOT determined that LDB technology as previously defined going back to the MY 2011 rule (74 FR 14196, March 30, 2009) was universally

²⁷⁰ Final Regulatory Impact Analysis, Corporate Average Fuel Economy for MY 2011 Passenger Cars and Light Trucks (March 2009), at V–135.

²⁷¹ Final Regulatory Impact Analysis, Corporate Average Fuel Economy for MY 2012–MY 2016 Passenger Cars and Light Trucks (March 2010), at 249.

²⁷² 2011 NAS report, at 104.

²⁷³ Joint Technical Support Document: Final Rulemaking for 2017–2025 Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards (August 2012), at 3–211.

²⁷⁴ 2015 NAS report, at 231.

²⁷⁵ Draft TAR, at 5–207.

²⁷⁶ EPA Proposed Determination TSD, at 2–422.

applied in the MY 2020 fleet. However, DOT determined that zero drag brakes, the next level of brake technology, was sparingly applied in the MY 2020 analysis fleet. Currently, DOT does not believe that zero drag brake systems will be available for wide scale application in the rulemaking timeframe and did not include it as a technology for this analysis. DOT will consider how to define a new level of low drag brake technology that either encompasses the definition of zero drag brakes or similar technology in future rulemakings. We invite comment on the issue, and any available data regarding use of such systems on current and forthcoming production vehicles, any available data regarding system costs and efficacy in reducing drag (*i.e.*, force at different speeds) and vehicle fuel economy levels (*i.e.*, through coastdown testing).

(d) Secondary Axle Disconnect

All-wheel drive (AWD) and four-wheel drive (4WD) vehicles provide improved traction by delivering torque to the front and rear axles, rather than just one axle. When a second axle is rotating, it tends to consume more energy because of additional losses related to lubricant churning, seal friction, bearing friction, and gear train inefficiencies.²⁷⁷ Some of these losses may be reduced by providing a secondary axle disconnect function that disconnects one of the axles when driving conditions do not call for torque to be delivered to both.

The terms AWD and 4WD are often used interchangeably, although they have also developed a colloquial distinction, and are two separate systems. The term AWD has come to be associated with light-duty passenger vehicles providing variable operation of one or both axles on ordinary roads. The term 4WD is often associated with larger truck-based vehicle platforms providing a locked driveline configuration and/or a low range gearing meant primarily for off-road use.

Many 4WD vehicles provide for a single-axle (or two-wheel) drive mode that may be manually selected by the user. In this mode, a primary axle

(usually the rear axle) will be powered, while the other axle (known as the secondary axle) is not. However, even though the secondary axle and associated driveline components are not receiving engine power, they are still connected to the non-driven wheels and will rotate when the vehicle is in motion. This unnecessary rotation consumes energy,²⁷⁸ and leads to increased fuel consumption that could be avoided if the secondary axle components were completely disconnected and not rotating.

Light-duty AWD systems are often designed to divide variably torque between the front and rear axles in normal driving to optimize traction and handling in response to driving conditions. However, even when the secondary axle is not necessary for enhanced traction or handling, in traditional AWD systems it typically remains engaged with the driveline and continues to generate losses that could be avoided if the axle was instead disconnected. The SAX technology observed in the marketplace disengages one axle (typically the rear axle) for two-wheel drive (2WD) operation but detects changes in driving conditions and automatically engages AWD mode when it is necessary. The operation in 2WD can result in reduced fuel consumption. For example, Chrysler has estimated the secondary axle disconnect feature in the Jeep Cherokee reduces friction and drag attributable to the secondary axle by 80% when in disconnect mode.²⁷⁹

Observing SAX technology on actual vehicles is very difficult. Manufacturers do not typically identify the technology on technical specifications or other widely available information. The agency employed an approach consistent with previous rulemaking in assigning this technology. Specifically, the agency assigned SAX technology based on a combination of publicly available information and previously submitted confidential information. In the analysis fleet, 38% of the vehicles that had AWD or 4WD are determined to have SAX technology. All vehicles in the analysis fleet with front-wheel drive

(FWD) or rear-wheel drive (RWD) have SAX skipped since SAX technology is a way to emulate FWD or RWD in AWD and 4WD vehicles, respectively. The agency does not allow for the application of SAX technology to FWD or RWD vehicles because they do not have a secondary driven axle to disconnect.

SAX technology can be adopted by any vehicle in the analysis fleet, including those with a HEV or BEV powertrain,²⁸⁰ which was identified as having AWD or 4WD. It does not supersede any technology or result in any other technology being excluded for future implementation for that vehicle. SAX technology can be applied during any refresh or redesign. DOT seeks comment on whether it is appropriate for SAX technology to be allowed to be applied to BEVs, or if the technology only provides benefits to ICE vehicles.

This analysis carries forward work on the effectiveness of SAX systems conducted in the Draft TAR and EPA Proposed Determination.²⁸¹ This work involved gathering information by monitoring press reports, holding meetings with suppliers and OEMs, and attending industry technical conferences. DOT does not simulate SAX effectiveness in the Autonomie modeling because, similar to LDB, IACC, and EFR, the fuel economy benefits from the technology are not fully captured on the two-cycle test. The secondary axle disconnect effectiveness values, for the most part, have been accepted as plausible based on the rulemaking record and absence of contrary comments. As such, the agency has prioritized its extensive Autonomie vehicle simulation work toward other technologies that are emerging or considered more critical for total system effectiveness. The resulting effectiveness estimates we use are shown below. The agency welcomes comment on these effectiveness values and will consider any material data providing revised, or confirmatory, values for those being used in the analysis.

²⁷⁸ Any time a drivetrain component spins it consumes some energy, primarily to overcome frictional forces.

²⁷⁹ Brooke, L. "Systems Engineering a new 4x4 benchmark", *SAE Automotive Engineering*, June 2, 2014.

²⁸⁰ The inefficiencies addressed on ICEs by SAX technology may not be similar enough, or even present, in HEVs or BEVs.

²⁸¹ Draft TAR, at 5–412; Proposed Determination TSD, at 2–422.

²⁷⁷ Pilot Systems, "AWD Component Analysis", Project Report, performed for Transport Canada, Contract T8080-

150132, May 31, 2016.

Table III-34 – Fuel Consumption Improvement Values for Secondary Axle Disconnect

Tech Class	SAX
SmallCar	1.40%
SmallCarPerf	
MedCar	1.40%
MedCarPerf	
SmallSUV	1.40%
SmallSUVPerf	
MedSUV	1.30%
MedSUVPerf	
Pickup	1.60%
PickupHT	

(e) Other Vehicle Technology Costs

The cost estimates for EPS, IACC, SAX, and LDB²⁸² rely on previous work published as part of past rulemakings with learning applied to those cost

values which is founded in the 2002 NAS report.²⁸³ The cost values are the same values that were used for the Draft TAR and 2020 final rule, updated to 2018 dollars. Table III-35 shows examples of costs for these technologies

across select model years. Note that these costs are the same for all vehicle technology classes. For all absolute EPS, IACC, LDB, and SAX technology costs across all model years, see the Technologies file.

Table III-35 – Examples of Costs for EPS, IACC, LDB, and SAX Technologies in 2018\$ for Select Model Years

Technology	MY 2020	MY 2025	MY 2030
EPS	126.53	117.28	110.90
IACC	169.70	146.67	135.17
LDB	86.42	78.35	73.12
SAX	88.69	80.34	75.15

8. Simulating Air Conditioning Efficiency and Off-Cycle Technologies

Off-cycle and air conditioning (A/C) efficiency technologies can provide fuel economy benefits in real-world vehicle operation, but those benefits cannot be fully captured by the traditional 2-cycle test procedures used to measure fuel economy.²⁸⁴ Off-cycle technologies include technologies like high efficiency alternators and high efficiency exterior lighting.²⁸⁵ A/C efficiency technologies

are technologies that reduce the operation of or the loads on the compressor, which pressurizes A/C refrigerant. The less the compressor operates or the more efficiently it operates, the less load the compressor places on the engine, resulting in better fuel efficiency.

Vehicle manufacturers have the option to generate credits for off-cycle technologies and improved A/C systems under the EPA’s CO₂ program and

receive a fuel consumption improvement value (FCIV) equal to the value of the benefit not captured on the 2-cycle test under NHTSA’s CAFE program. The FCIV is not a “credit” in the NHTSA CAFE program,²⁸⁶ but the FCIVs increase the reported fuel economy of a manufacturer’s fleet, which is used to determine compliance. EPA applies FCIVs during determination of a fleet’s final average fuel economy reported to NHTSA.²⁸⁷

²⁸² Note that because LDB technology is applied universally as a baseline technology in the MY 2020 fleet, there is functionally zero costs for this technology associated with this proposed rulemaking.

²⁸³ National Research Council 2002. *Effectiveness and Impact of Corporate Average Fuel Economy (CAFE) Standards*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/10172>.

²⁸⁴ See 49 U.S.C 32904(c) (“The Administrator shall measure fuel economy for each model and calculate average fuel economy for a manufacturer under testing and calculation procedures prescribed by the Administrator. . . . the Administrator shall use the same procedures for passenger automobiles the Administrator used for model year 1975 (weighted 55 percent urban cycle and 45 percent highway cycle), or procedures that give comparable results.”).

²⁸⁵ 40 CFR 86.1869–12(b)—Credit available for certain off-cycle technologies.

²⁸⁶ Unlike, for example, the statutory overcompliance credits prescribed in 49 U.S.C. 32903.

²⁸⁷ 49 U.S.C. 32904(c)–(e). EPCA granted EPA authority to establish fuel economy testing and calculation procedures. See Section VII for more information.

FCIVs are only calculated and applied at a fleet level for a manufacturer and are based on the volume of the manufacturer's fleet that contain qualifying technologies.²⁸⁸

There are three pathways that can be used to determine the value of A/C efficiency and off-cycle adjustments. First, manufacturers can use a predetermined list or "menu" of g/mi values that EPA established for specific off-cycle technologies.²⁸⁹ Second, manufacturers can use 5-cycle testing to demonstrate off-cycle CO₂ benefit;²⁹⁰ the additional tests allow emissions benefits to be demonstrated over some elements of real-world driving not captured by the 2-cycle compliance tests, including high speeds, rapid accelerations, hot temperatures, and cold temperatures. Third, manufacturers can seek EPA approval, through a notice and comment process, to use an alternative methodology other than the menu or 5-cycle methodology for determining the off-cycle technology improvement values.²⁹¹ For further discussion of the A/C and off-cycle compliance and application process, see Section VII.

DOT and EPA have been collecting data on the application of these technologies since implementing the A/C and off-cycle programs.^{292 293} Most manufacturers are applying A/C efficiency and off-cycle technologies; in MY 2019, 17 manufacturers employed A/C efficiency technologies and 20 manufacturers employed off-cycle

technologies, though the level of deployment varies by manufacturer.²⁹⁴

Manufacturers have only recently begun including detailed information on off-cycle and A/C efficiency technologies equipped on vehicles in compliance reporting data. For this analysis, though, such information was not sufficiently complete to support a detailed representation of the application of off-cycle technology to specific vehicle model/configurations in the MY 2020 fleet. To account for the A/C and off-cycle technologies equipped on vehicles and the potential that manufacturers will apply additional A/C and off-cycle technologies in the rulemaking timeframe, DOT specified model inputs for A/C efficiency and off-cycle fuel consumption improvement values in grams/mile for each manufacturer's fleet in each model year. DOT estimated future values based on an expectation that manufacturers already relying heavily on these adjustments would continue to do so, and that other manufacturers would, over time, also approach the limits on adjustments allowed for such improvements.

The next sections discuss how the CAFE Model simulates the effectiveness and cost for A/C efficiency and off-cycle technology adjustments.

(a) A/C and Off-Cycle Effectiveness Modeling in the CAFE Model

In this analysis, the CAFE Model applies A/C and off-cycle flexibilities to manufacturer's CAFE regulatory fleet performance in a similar way to the regulation.²⁹⁵ In the analysis and after the first MY, A/C efficiency and off-cycle FCIVs apply to each manufacturer's regulatory fleet after the CAFE Model applies conventional technologies for a given standard. That is, conventional technologies are applied to each manufacturers' vehicles in each MY to assess the 2-cycle sales weighted harmonic average CAFE rating. Then, the CAFE Model assesses the CAFE rating to use for a manufacturer's compliance value after applying the A/C efficiency and off-cycle FCIVs designated in the Market Data file. This assessment of adoption of conventional technology and the A/C efficiency and off-cycle technology occurs on a year-by-year basis in the CAFE Model. The CAFE Model attempts to apply technologies and flexibilities in a way that both minimizes cost and allows the manufacturer to meet their

standards without over or under complying.

To determine how manufacturers might adopt A/C efficiency and off-cycle technologies in the rulemaking timeframe, DOT began with data from EPA's 2020 Trends Report and CBI compliance material from manufacturers.^{296 297} DOT used manufacturer's MY 2020 A/C efficiency and off-cycle FCIVs as a starting point, and then extrapolated values in each MY until MY 2026, for light trucks to the proposed regulatory cap, for each manufacturer's fleets by regulatory class.

To determine the rate at which to extrapolate the addition of A/C and off-cycle technology adoption for each manufacturer, DOT reviewed historical A/C and off-cycle technology applications, each manufacturer's fleet composition (*i.e.*, breakdown between passenger cars (PCs) and light trucks (LTs)), availability of A/C and off-cycle technologies that manufacturers could still use, and CBI compliance data. Different manufacturers showed different levels of historical A/C efficiency and off-cycle technology adoption; therefore, different manufacturers hit the proposed regulatory caps for A/C efficiency technology for both their PC and LT fleets, and different manufacturers hit caps for off-cycle technologies in the LT regulatory class. DOT declined to extrapolate off-cycle technology adoption for PCs to the proposed regulatory cap for a few reasons. First, past EPA Trends Reports showed that many manufacturers did not adopt off-cycle technology to their passenger car fleets. Next, manufacturers limited PC offerings in MY 2020 as compared to historical trends. Last, CBI compliance data available to DOT indicated a lower adoption of menu item off-cycle technologies to PCs compared to LTs. DOT accordingly limited the application of off-cycle FCIVs to 10 g/mi for PCs but allowed LTs to apply 15 g/mi of off-cycle FCIVs. The inputs for A/C efficiency technologies were set to 5 g/mi and 7.2 g/mi for PCs and LTs, respectively. DOT allowed A/C efficiency technologies to reach the regulatory caps by MY 2024, which is the first year of standards assessed in this analysis.

DOT decided to apply the FCIVs in this way because the A/C and off-cycle

²⁹⁶ Vehicle and Engine Certification. Compliance Information for Light-Duty Gas (GHG) Standards. Compliance Information for Light-Duty Greenhouse Gas (GHG) Standards | Certification and Compliance for Vehicles and Engines | U.S. EPA. Last Accessed May 24, 2021.

²⁹⁷ 49 U.S.C. 32907.

²⁸⁸ 40 CFR 600.510–12(c).

²⁸⁹ See 40 CFR 86.1869–12(b). The TSD for the 2012 final rule for MYs 2017 and beyond provides technology examples and guidance with respect to the potential pathways to achieve the desired physical impact of a specific off-cycle technology from the menu and provides the foundation for the analysis justifying the credits provided by the menu. The expectation is that manufacturers will use the information in the TSD to design and implement off-cycle technologies that meet or exceed those expectations in order to achieve the real-world benefits of off-cycle technologies from the menu.

²⁹⁰ See 40 CFR 86.1869–12(c). EPA proposed a correction for the 5-cycle pathway in a separate technical amendments rulemaking. See 83 FR 49344 (Oct. 1, 2019). EPA is not approving credits based on the 5-cycle pathway pending the finalization of the technical amendments rule.

²⁹¹ See 40 CFR 86.1869–12(d).

²⁹² See 77 FR at 62832, 62839 (Oct. 15, 2012). EPA introduced A/C and off-cycle technology credits for the CO₂ program in the MY 2012–2016 rule and revised the program in the MY 2017–2025 rule and NHTSA adopted equivalent provisions for MYs 2017 and later in the MY 2017–2025 rule.

²⁹³ Vehicle and Engine Certification. Compliance Information for Light-Duty Gas (GHG) Standards. Compliance Information for Light-Duty Greenhouse Gas (GHG) Standards | Certification and Compliance for Vehicles and Engines | U.S. EPA. Last Accessed May 24, 2021.

²⁹⁴ See 2020 EPA Automotive Trends Report, at 91.

²⁹⁵ 49 CFR 531.6 and 49 CFR 533.6 Measurement and Calculation procedures.

technologies are generally more cost-effective than other technologies. The details of this assessment (and the calculation) are further discussed in the CAFE Model Documentation.²⁹⁸ The A/C efficiency and off-cycle adjustment schedules used in this analysis are shown in TSD Chapter 3.8 and in the Market Data file's Credits and Adjustments worksheet.

(b) A/C and Off-Cycle Costs

For this analysis, A/C and off-cycle technologies are applied independently of the decision trees using the extrapolated values shown above, so it is necessary to account for the costs of those technologies independently. Table III-36 shows the costs used for A/C and off-cycle FCIVs in this analysis. The

costs are shown in dollars per gram of CO₂ per mile (\$ per g/mile). The A/C efficiency and off-cycle technology costs are the same costs used in the EPA Proposed Determination and described in the EPA Proposed Determination TSD.²⁹⁹

To develop the off-cycle technology costs, DOT selected the 2nd generic 3 gram/mile package estimated to cost \$170 (in 2015\$) to apply in this analysis in \$ per gram/mile. DOT updated the costs used in the Proposed Determination TSD from 2015\$ to 2018\$, adjusted the costs for RPE, and applied a relatively flat learning rate. We seek comment on whether these costs are still appropriate, or whether a different \$ per gram/mile cost should be used. If commenters believe a different

\$ per gram/mile cost should be used, we request commenters provide any data or information on which any alternative costs are based. This should include a description of how the alternative costs are representative of costs across the industry, and whether the \$ per gram/mile estimate is based on a package of specific off-cycle technologies.

Similar to off-cycle technology costs, DOT used the cost estimates from EPA Proposed Determination TSD for A/C efficiency technologies that relied on the 2012 rulemaking TSD.³⁰⁰ DOT updated these costs to 2018\$ and adjusted for RPE for this analysis, and applied the same mature learning rate that DOT applied for off-cycle technologies.

Table III-36 – Estimated Costs (\$ per g/mi) for A/C and Off-Cycle Adjustments

Model Year	A/C Efficiency	A/C Leakage	Off-Cycle
2020	4.30	10.76	83.79
2025	3.89	9.72	77.47
2030	3.52	8.79	71.83

E. Consumer Responses to Manufacturer Compliance Strategies

The previous subsections in Section III have so far discussed how manufacturers might respond to changes to the standards. While the technology analysis is informative of the different compliance strategies available to manufactures, the tangible costs and benefits that accrue because of CAFE standards are dependent on how consumers respond to the decisions made by manufacturers. Many, if not most, of the benefits and costs resulting from changes to CAFE standards are private benefits that accrue to the buyers of new cars and trucks, produced in the model years under consideration. These benefits and costs largely flow from the changes to vehicle ownership and operating costs that result from improved fuel economy, and the cost of the technology required to achieve those improvements. The remaining external benefits are also derived from how consumers use—or do not use—vehicles. The next few subsections walk through how the analysis models consumer responses to changing vehicles and prices. NHTSA requests comment on the following discussion.

1. Macroeconomic and Consumer Behavior Assumptions

This proposal includes a comprehensive economic analysis of the impacts of altering the CAFE standards. Most of the effects measured are influenced by macroeconomic conditions that are exogenous to the agency's influence. For example, fuel prices are mainly determined by global demand, and yet they determine how much fuel efficiency technology manufacturers will apply to U.S.-bound vehicles, how much consumers are willing to pay for a new vehicle, the amount of travel in which all users engage, and the value of each gallon saved from higher CAFE standards. Constructing these forecasts requires robust projections of macroeconomic variables that span the timeframe of the analysis, including real U.S. Gross Domestic Product (GDP), consumer confidence, U.S. population, and real disposable personal income.

In order to ensure internal consistency within the analysis, relevant economic assumptions are derived from the same source. The analysis presented in this analysis employs forecasts developed by DOT using the U.S. Energy Information Administration's (EIA's) National

Energy Model System (NEMS). EIA is an agency within the U.S. Department of Energy (DOE) which collects, analyzes, and disseminates independent and impartial energy information to promote sound policymaking, efficient markets, and public understanding of energy and its interaction with the economy and the environment. EIA uses NEMS to produce its Annual Energy Outlook (AEO), which presents forecasts of future fuel prices, among many other energy-related variables. The analysis employs forecasts of fuel prices, real U.S. GDP, real disposable personal income, U.S. population, and fuel prices from the AEO 2021 Reference Case. The agency also uses a forecast of consumer confidence to project sales from the IHS Markit Global Insight long-term macroeconomic model. The IHS Markit Global Insight model is also used by EIA for the AOE.

While these macroeconomic assumptions are some of the most critical inputs to the analysis, they are also subject to the most uncertainty—particularly over the full lifetimes of the vehicles affected by this proposed rule. The agency uses low and high cases from the AEO as bounding cases for sensitivity analyses. The purpose of the sensitivity analyses, discussed in greater

²⁹⁸ CAFE Model Documentation, S5.

²⁹⁹ EPA PD TSD. EPA-420-R-16-021. November 2016. At 2-423-2-245. <https://nepis.epa.gov/Exe/>

[ZyPDF.cgi?Dockey=P100Q3L4.pdf](https://www.eia.gov/energyexplained/zy/pdf.cgi?Dockey=P100Q3L4.pdf). Last accessed May 24, 2021.

³⁰⁰ Joint NHTSA and EPA 2012 TSD, *see* Section 5.1.

detail in PRIA Chapter 6 and PRIA Chapter 7, is not to posit a more credible future state of the world than the central case assumes—we assume the central case is the most likely future state of the world—but rather to measure the degree to which important outcomes can change under different assumptions about fuel prices.

The first year simulated in this analysis is 2020, though it is based on observational data (rather than forecasts) to the greatest extent possible. The elements of the analysis that rely most heavily on the macroeconomic inputs—aggregate demand for VMT, new vehicle sales, used vehicle retirement rates—all reflect the relatively rapid climb back to pre-pandemic growth rates (in all the regulatory alternatives).

See TSD Chapter 4.1 for a more complete discussion of the macroeconomic assumptions made for the analysis.

Another key assumption that permeates throughout the analysis is how much consumers are willing to pay for fuel economy. Increased fuel efficiency offers vehicle owners significant savings; in fact, the analysis shows that fuel savings exceed the technology cost to comply with even the most stringent standards analyzed by this proposal at a 3% discount rate. It would be reasonable to assume that consumers value the full value of fuel savings as they would be better off not having to spend more of their disposable income on fuel. If consumers did value the full amount of fuel savings, fuel-efficient vehicles would functionally be *cheaper* for consumers to own when considering both purchasing and operational costs, and thus making the vehicles offered under the stricter alternatives more attractive than similar models offered in the baseline. Recent econometric research remains divided between studies that conclude has shown that consumers may value most, if not all of potential fuel savings, and those that conclude that consumers significantly undervalue expected fuel savings (NASEM, 2021, p. 11–351).^{301 302 303}

³⁰¹ There is a great deal of work attempting to test the question whether consumers are adequately informed about, and sufficiently attentive to, potential fuel savings at the time of purchase. The existing research is not conclusive and leaves many open questions. On the one hand, there is significant support for the proposition that consumers are responsive to changes in fuel costs. See, e.g., Busse et al.; Sallee, et al. On the other hand, there is also support for the proposition that many consumers do not, in fact, give full or sufficient attention to potential savings from fuel-efficient vehicles, and thus make suboptimal decisions. See Duncan et al.; Gillingham et al.

³⁰² Allcott, H. and C. Knittel, 2019. “Are Consumers Poorly Informed about Fuel Economy?

If buyers fully value the savings in fuel costs that result from higher fuel economy, manufacturers would be expected to supply the improvements that buyers demand, and vehicle demand would be expected to fully consider both future fuel cost savings consumers would realize from owning—and potentially re-selling—more fuel-efficient models and increased cost of vehicles due to technological and design changes made to increase fuel economy. If instead, consumers systematically undervalue future fuel savings, the result would be an underinvestment in fuel-saving technology. In that case, more stringent fuel economy standards would also lead manufacturers to adopt improvements in fuel economy that improve consumer welfare (e.g., Allcott et al., 2014; Heutel, 2015).

There is substantial evidence that consumers do not fully value lifetime fuel savings. Even though the average fuel economy of new vehicles reached an all-time high in MY 2020 of 25.7 MPG,³⁰⁴ this is still significantly below the fuel economy of the fleet’s most efficient vehicles that are readily available to consumers.³⁰⁵ Manufacturers have repeatedly informed the agency that consumers only value between 2 to 3 years-worth of fuel savings when making purchasing decisions. The potential for car buyers voluntarily to forego improvements in fuel economy that offer savings exceeding their initial costs is one example of what is often termed the “energy-efficiency gap.” This appearance of such a gap, between the level of energy efficiency that would minimize consumers’ overall expenses and what they actually purchase, is typically based on engineering calculations that compare the initial cost for providing higher energy efficiency to the discounted present value of the resulting savings in future energy costs. There has long been an active debate about why such a gap might arise and whether it actually exists. Economic theory predicts that economically rational individuals will purchase more energy-efficient products only if the savings in future energy costs they offer promise to offset their higher initial costs. On the other hand,

Evidence from Two Experiments”, AEJ: Economic Policy, 11(1): 1–37.

³⁰³ D. Duncan, A. Ku, A. Julian, S. Carley, S. Siddiki, N. Zirogiannis and J. Graham, 2019. “Most Consumers Don’t Buy Hybrids: Is Rational Choice a Sufficient Explanation?”, J. of Benefit-Cost Analysis, 10(1): 1–38.

³⁰⁴ See EPA 2020 Automotive Trends Report at 6, available at <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1010U68.pdf>.

³⁰⁵ *Id.* At 9.

behavioral economics has documented numerous situations in which the decision-making of consumers differs in important ways from the predictions of economic consumer model (e.g., Dellavigna, 2009).

A behavioral explanation of such ‘undervaluation’ of the savings from purchasing higher-mpg models is myopia or present bias; consumers may give undue focus to short-term costs and insufficient attention to long-term benefits.³⁰⁶ This situation could arise because they are unsure of the fuel savings that will be achieved in real-world driving, what future fuel prices will be, how long they will own a new vehicle, whether they will drive it enough to realize the promised savings. As a consequence, they may view choosing to purchase or not purchase a fuel-efficient technology as a risky bet; behavioral economics has demonstrated that faced with the decision to accept or reject a risky choice, some consumers weigh potential losses approximately twice as heavily as potential gains, significantly undervaluing the choice relative to its expected value (e.g., Kahneman and Tversky, 1979; Kahneman, 2011). In the context of a choice to pay more for a fuel-saving technology, loss aversion has been shown to have the potential to cause undervaluation of future fuel savings similar to that reported by manufacturers (Greene, 2011; Greene et al., 2013).³⁰⁷ The behavioral model holds that consumers’ decisions are affected by the context, or framing, of choices. As explained in NASEM (2021), Ch. 11.3.3, it is possible that consumers respond to changes in fuel economy regulations differently than they respond to manufacturers voluntarily offering the option to purchase fuel economy technology to new car buyers. We explain this differential more thoroughly in TSD Chapter 4.2.1.1, but here is the contextual explanation for the differential valuation. If a consumer is thinking about buying a new car and is looking at two models, one that includes voluntarily added fuel economy technology and is more expensive and another that does not, she may buy the cheaper, less fuel efficient version even if the more expensive model will save

³⁰⁶ Gillingham et al., 2021, which is an AEJ: Economic Policy paper, just published on consumer myopia in vehicle purchases; a standard reference on present bias generally is O’Donoghue and Rabin, AER: Papers and Proceedings, 2015.

³⁰⁷ Application of investment under uncertainty will yield similar results as costs may be more certain and up front while the fuel savings or benefits of the investment may be perceived as more uncertain and farther into future, thereby reducing investments in fuel saving technologies.

money in the long run. But if, instead, the consumer is faced with whether to buy a new car at all as opposed to keeping an older one, if all new cars contain technology to meet fuel economy standards, then she may view the decision differently. Will, for example, an extra \$1,000 for a new car—a \$1,000 that the consumer will more than recoup in fuel savings—deter her from buying the new car, especially when most consumers finance cars over a number of years rather than paying the \$1,000 cost up front (therefore any increase in monthly payment would be partly or entirely offset with lower fuel costs)? In addition, the fact that standards generally increase gradually over a period of years allows time for consumers and other information sources to verify that fuel savings are real and of substantial value.

Another alternative is that consumers view the increase in immediate costs associated with fuel economy technology in the context of tradeoffs they must make amongst their purchasing decisions. American households must choose how to spend their income amongst many competing goods and services, including how much to spend on a new vehicle. They may also decide to opt for another form of transportation. While a consumer may recognize and value the potential long-term value of fuel savings, they may also prefer to spend their money on other items, either in the form of other vehicle attributes—such as picking a truck with a larger flatbed or upgrading to a more luxurious trim package—or other unrelated goods and services. The same technologies that can be used to increase fuel economy can also be used to enable increased vehicle power or weight while maintaining fuel economy. While increased fuel efficiency will free up disposable income throughout the lifetime of the vehicle (and may even exceed the additional upfront costs to purchase a more expensive fuel-efficient vehicle), the value of owning a different good sooner may provide consumers even more benefit.

As explained more thoroughly in TSD Chapter 4.2.1.1, the analysis assumes that potential car and light truck buyers value only the undiscounted savings in fuel costs from purchasing a higher-mpg model they expect to realize over the first 30 months they own it. Depending on the discount rate buyers are assumed to apply, this amounts to 25–30% of the expected savings in fuel costs over its entire lifetime. These savings would offset only a fraction of the expected increase in new car and light truck prices that the agency estimates will be required for manufacturers to recover

their increased costs for making required improvements to fuel economy. The agency seeks comment on whether 30 months of undiscounted fuel savings is an appropriate measure for the analysis of consumer willingness to pay for fuel economy. The assumption also has important implications for other outcomes of the model, including for VMT, safety, and air pollution emissions projections. If NHTSA is incorrect about the undervaluation of fuel economy in the context of regulatory standards and its effect on car sales, correcting the assumption should result in improved safety outcomes and additional declines in conventional air pollutants. If commenters believe a different amount of time should be used for the payback assumption, it would be most helpful to NHTSA if commenters could define the amount of time, provide an explanation of why that amount of time is preferable, provide any data or information on which the amount of time is based, and provide any discussion of how changing this assumption would interact with other elements in the analysis.

2. Fleet Composition

The composition of the on-road fleet—and how it changes in response to CAFE standards—determines many of the costs and benefits of the proposal. For example, how much fuel the light-duty consumes is dependent on the number of new vehicles sold, older (and less efficient) vehicles retired, and how much those vehicles are driven.

Prior to the 2020 CAFE standards, all previous CAFE rulemaking analyses used static fleet forecasts that were based on a combination of manufacturer compliance data, public data sources, and proprietary forecasts (or product plans submitted by manufacturers). When simulating compliance with regulatory alternatives, those analyses projected identical sales and retirements across the alternatives, for each manufacturer down to the make/model level—where the exact same number of each model variant was assumed to be sold in a given model year under both the least stringent alternative (typically the baseline) and the most stringent alternative considered (intended to represent “maximum technology” scenarios in some cases). To the extent that an alternative matched the assumptions made in the production of the proprietary forecast, using a static fleet based upon those assumptions may have been warranted.

However, a fleet forecast is unlikely to be representative of a broad set of regulatory alternatives with significant

variation in the cost of new vehicles. A number of commenters on previous regulatory actions and peer reviewers of the CAFE Model encouraged consideration of the potential impact of fuel efficiency standards on new vehicle prices and sales, the changes to compliance strategies that those shifts could necessitate, and the downstream impact on vehicle retirement rates. In particular, the continued growth of the utility vehicle segment causes changes within some manufacturers’ fleets as sales volumes shift from one region of the footprint curve to another, or as mass is added to increase the ride height of a vehicle on a sedan platform to create a crossover utility vehicle, which exists on the same place of the footprint curve as the sedan upon which it might be based.

The analysis now dynamically simulates changes in the vehicle fleet’s size, composition, and usage as manufacturers and consumers respond to regulatory alternatives, fuel prices, and macroeconomic conditions. The analysis of fleet composition is comprised of two forces, how new vehicle sales—the flow of new vehicles into the registered population—changes in response to regulatory alternatives, and the influence of economic and regulatory factors on vehicle retirement (otherwise known as scrappage). Below are brief descriptions that of how the agency models sales and scrappage. For a full explanation, refer to TSD Chapter 4.2. Particularly given the broad uncertainty discussed in TSD Chapter 4.2, NHTSA seeks comment on the discussion below and the associated discussions in the TSD, on the internal structure of the sales and scrappage modules, and whether and how to change the sales and scrappage analyses for the final rule.

(a) Sales

For the purposes of regulatory evaluation, the relevant sales metric is the difference between alternatives rather than the absolute number of sales in any of the alternatives. As such, the sales response model currently contains three parts: A nominal forecast that provides the level of sales in the baseline (based upon macroeconomic inputs, exclusively), a price elasticity that creates sales differences relative to that baseline in each year, and a fleet share model that produces differences in the passenger car and light truck market share in each alternative. The nominal forecast does not include price and is merely a (continuous) function of several macroeconomic variables that are provided to the model as inputs. The price elasticity is also specified as an

input, but this analysis assumes a unit elastic response of -1.0 —meaning that a one percent increase in the average price of a new vehicle produces a one percent decrease in total sales. NHTSA seeks comment on this assumption. The price change on which the elasticity acts is calculated net of some portion of the future fuel savings that accrue to new vehicle buyers (2.5 years' worth, in this analysis, as discussed in the previous section).

The current baseline sales module reflects the idea that total new vehicle sales are primarily driven by conditions in the economy that are exogenous to the automobile industry. Over time, new vehicle sales have been cyclical—rising when prevailing economic conditions are positive (periods of growth) and falling during periods of economic contraction. While the kinds of changes to vehicle offerings that occur as a result of manufacturers' compliance actions exert some influence on the total volume of new vehicle sales, they are not determinative. Instead, they drive the kinds of marginal differences between regulatory alternatives that the current sales module is designed to simulate—more expensive vehicles, generally, reduce total sales but only marginally.

The first component of the sales response model is the nominal forecast, which is a function (with a small set of inputs) that determines the size of the new vehicle market in each calendar year in the analysis for the baseline. It is of some relevance that this statistical model is intended only as a means to project a baseline sales series. Past reviewers expressed concerns about the possibility of econometrically estimating an industry average price elasticity in a way that isolates the causal effect of new vehicle prices on new vehicle sales (and properly addresses the issue of endogeneity between sales and price). The nominal forecast model does not include prices and is not intended for statistical inference around the question of price response in the new vehicle market. The economic response to the pandemic has created uncertainty, particularly in the near-term, around pace at which the market for automobiles will recover—and the scale and timing of the recovery's peak—before returning to its long-term trend. DOT will continue to monitor macroeconomic data and new vehicle sales and update its baseline forecast as appropriate.

The second component of the sales response model captures how price changes affect the number of vehicles sold. The price elasticity is applied to the percentage change in average price

(in each year). The price change does not represent an increase/decrease over the last observed year, but rather the percentage change relative to the baseline for that year. In the baseline, the average price is defined as the observed new vehicle price in 2019 (the last historical year before the simulation begins) plus the average regulatory cost associated with the baseline alternative.³⁰⁸ The central analysis in this proposal simulates multiple programs simultaneously (CAFE final standards, EPA final greenhouse gas standards, ZEV, and the California Framework Agreement), and the regulatory cost includes both technology costs and civil penalties paid for non-compliance (with CAFE standards) in a model year. Because the elasticity assumes no perceived change in the quality of the product, and the vehicles produced under different regulatory scenarios have inherently different operating costs, the price metric must account for this difference. The price to which the unit elasticity is applied in this analysis represents the residual price change *between scenarios* after accounting for 2.5 years' worth of fuel savings to the new vehicle buyer.

The third and final component of the sales model is the dynamic fleet share module (DFS). Some commenters to previous rules noted that the market share of SUVs continues to grow, while conventional passenger car body-styles continue to lose market share. For instance, in the 2012 final rule, the agencies projected fleet shares based on the continuation of the baseline standards (MYs 2012–2016) and a fuel price forecast that was much higher than the realized prices since that time. As a result, that analysis assumed passenger car body-styles comprising about 70 percent of the new vehicle market by 2025, which was internally consistent. The reality, however, has been quite different. The CAFE Model includes the DFS model in an attempt to address these market realities.

The DFS distributes the total industry sales across two different body-types: “cars” and “light trucks.” While there are specific definitions of “passenger cars” and “light trucks” that determine a vehicle's regulatory class, the distinction used in this phase of the analysis is more simplistic. All body-

styles that are obviously cars—sedans, coupes, convertibles, hatchbacks, and station wagons—are defined as “cars” for the purpose of determining fleet share. Everything else—SUVs, smaller SUVs (crossovers), vans, and pickup trucks—are defined as “light trucks”—even though they may not be treated as such for compliance purposes. The DFS uses two functions from the National Energy Modeling System (NEMS) used in the 2017 AEO to independently estimate the share of passenger cars and light trucks, respectively, given average new market attributes (fuel economy, horsepower, and curb weight) for each group and current fuel prices, as well as the prior year's market share and prior year's attributes. The two independently estimated shares are then normalized to ensure that they sum to one.

These shares are applied to the total industry sales derived in the first stage of the sales response. This produces total industry volumes of car and light truck body styles. Individual model sales are then determined from there based on the following sequence: (1) Individual manufacturer shares of each body style (either car or light truck) times the total industry sales of that body style, then (2) each vehicle within a manufacturer's volume of that body-style is given the same percentage of sales as appear in the 2020 fleet. This implicitly assumes that consumer preferences for particular styles of vehicles are determined in the aggregate (at the industry level), but that manufacturers' sales shares of those body styles are consistent with MY 2020 sales. Within a given body style, a manufacturer's sales shares of individual models are also assumed to be constant over time. This approach implicitly assumes that manufacturers are currently pricing individual vehicle models within market segments in a way that maximizes their profit. Without more information about each OEM's true cost of production and operation, fixed and variables costs, and both desired and achievable profit margins on individual vehicle models, there is no basis to assume that strategic shifts within a manufacturer's portfolio will occur in response to standards.

The DFS model show passenger car styles gaining share with higher fuel prices and losing them when prices are decline. Similarly, as fuel economy increases in light truck models, which offer consumers other desirable attributes beyond fuel economy (ride height or interior volume, for example) their relative share increases. However, this approach does not suggest that consumers dislike fuel economy in passenger cars, but merely recognizes

³⁰⁸ The CAFE Model currently operates as if all costs incurred by the manufacturer as a consequence of meeting regulatory requirements, whether those are the cost of additional technology applied to vehicles in order to improve fleetwide fuel economy or civil penalties paid when fleets fail to achieve their standard, are “passed through” to buyers of new vehicles in the form of price increases.

the fact that fuel economy has diminishing returns in terms of fuel savings. As the fuel economy of light trucks increases, the tradeoff between passenger car and light truck purchases increasingly involves a consideration of other attributes. The coefficients also show a relatively stronger preference for power improvements in cars than light trucks because that is an attribute where trucks have typically outperformed cars, just as cars have outperformed trucks for fuel economy.

For years, some commenters encouraged the agency to consider vehicle attributes beyond price and fuel economy when estimating a sales response to fuel economy standards, and suggested that a more detailed representation of the new vehicle market would allow the agency to simulate strategic mix shifting responses from manufacturers and diverse attribute preferences among consumers. Doing so would have required a discrete choice model (at some level). Discrete models are highly sensitive on their inputs and typically fit well on a single year of data (a cross-section of vehicles and buyers). This approach misses relevant trends that build over time, such as rising GDP or shifting consumer sentiment toward emerging technologies and are better used for analysis as opposed to prediction. While the agency believes that these challenges provide a reasonable basis for not employing a discrete choice model in the current CAFE Model, the agency also believes these challenges are not insurmountable, and that some suitable variant of such models may yet be developed for use in future fuel economy rulemakings. The agency has not abandoned the idea and plans to continue experimenting with econometric specifications that address heterogeneous consumer preferences in the new vehicle market as they further refine the analytical tools used for regulatory analysis. The agency seeks suggestions on how to incorporate other vehicle attributes into the current analysis, or, alternatively, methods to implement a discrete choice model that can capture changing technologies and consumer trends over an extended time-period.

(b) Scrappage

New and used vehicles are substitutes. When the price of a good's substitute increases/decreases, the demand curve for that good shifts upwards/downwards and the equilibrium price and quantity supplied also increases/decreases. Thus, increasing the quality-adjusted price of new vehicles will result in an increase

in equilibrium price and quantity of used vehicles. Since, by definition, used vehicles are not being "produced" but rather "supplied" from the existing fleet, the increase in quantity must come via a reduction in their scrappage rates. Practically, when new vehicles become more expensive, demand for used vehicles increases (and they become more expensive). Because used vehicles are more valuable in such circumstances, they are scrapped at a lower rate, and just as rising new vehicle prices push marginal prospective buyers into the used vehicle market, rising used vehicle prices force marginal prospective buyers of used vehicles to acquire older vehicles or vehicles with fewer desired attributes. The effect of fuel economy standards on scrappage is partially dependent on how consumers value future fuel savings and our assumption that consumers value only the first 30 months of fuel savings.

Many competing factors influence the decision to scrap a vehicle, including the cost to maintain and operate it, the household's demand for VMT, the cost of alternative means of transportation, and the value that can be attained through reselling or scrapping the vehicle for parts. A car owner will decide to scrap a vehicle when the value of the vehicle is less than the value of the vehicle as scrap metal, plus the cost to maintain or repair the vehicle. In other words, the owner gets more value from scrapping the vehicle than continuing to drive it, or from selling it. Typically, the owner that scraps the vehicle is not the first owner.

While scrappage decisions are made at the household level, the agency is unaware of sufficient household data to sufficiently capture scrappage at that level. Instead, the agency uses aggregate data measures that capture broader market trends. Additionally, the aggregate results are consistent with the rest of the CAFE Model as the model does not attempt to model how manufacturers will price new vehicles; the model instead assumes that all regulatory costs to make a particular vehicle compliant are passed onto the purchaser who buys the vehicle. It is more likely that manufacturers will defray a portion of the increased regulatory cost across its vehicles or to other manufacturers' buyers through the sale of credits.

The most predictive element of vehicle scrappage is 'engineering scrappage.' This source of scrappage is largely determined by the age of a vehicle and the durability of a specific model year vintage, which the agency uses proprietary vehicle registration data from IHS/Polk to collect vehicle

age and durability. Other factors include fuel economy and new vehicle prices. For historical data on new vehicle transaction prices, the agency uses National Automobile Dealers Association (NADA) Data.³⁰⁹ The data consists of the average transaction price of all light-duty vehicles; since the transaction prices are not broken-down by body style, the model may miss unique trends within a particular vehicle body style. The transaction prices are the amount consumers paid for new vehicles and exclude any trade-in value credited towards the purchase. This may be particularly relevant for pickup trucks, which have experienced considerable changes in average price as luxury and high-end options entered the market over the past decade. Future models will further consider incorporating price series that consider the price trends for cars, SUVs and vans, and pickups separately. The other source of vehicle scrappage is from cyclical effects, which the model captures using forecasts of GDP and fuel prices.

Vehicle scrappage follows a roughly logistic function with age—that is, when a vintage is young, few vehicles in the cohort are scrapped, as they age, more and more of the cohort are retired and the instantaneous scrappage (the rate at which vehicles are scrapped) reaches a peak, and then scrappage declines as vehicles enter their later years as fewer and fewer of the cohort remains on the road. The analysis uses a logistic function to capture this trend of vehicle scrappage with age. The data shows that the durability of successive model years generally increases over time, or put another way, historically newer vehicles last longer than older vintages. However, this trend is not constant across all vehicle ages—the instantaneous scrappage rate of vehicles is generally lower for later vintages up to a certain age, but increases thereafter so that the final share of vehicles remaining converges to a similar share remaining for historically observed vintages.³¹⁰ The agency uses fixed effects to capture potential changes in durability across model years and to ensure that vehicles approaching the end of their life are scrapped in the analysis, the agency applies a decay function to vehicles after they reach age 30. The macroeconomic conditions variables discussed above are included

³⁰⁹ The data can be obtained from NADA. For reference, the data for MY 2020 may be found at <https://www.nada.org/nadadata/>.

³¹⁰ Examples of why durability may have changed are new automakers entering the market or general changes to manufacturing practices like switching some models from a car chassis to a truck chassis.

in the logistic model to capture cyclical effects. Finally, the change in new vehicle prices projected in the model (technology costs minus 30 months of fuel savings) are included which generates differing scrappage rates across the alternatives.

In addition to the variables included in the scrappage model, the agency considered several other variables that likely either directly or indirectly influence scrappage in the real world including, maintenance and repair costs, the value of scrapped metal, vehicle characteristics, the quantity of new vehicles purchased, higher interest rates, and unemployment. These variables were excluded from the model either because of a lack of underlying data or modeling constraints. Their exclusion from the model is not intended to diminish their importance, but rather highlights the practical constraints of modeling intricate decisions like scrappage.

3. Changes in Vehicle Miles Traveled (VMT)

In the CAFE Model, VMT is the product of average usage per vehicle in the fleet and fleet composition, which is itself a function of new vehicle sales and vehicle retirement decisions, otherwise known as scrappage. These three components—average vehicle usage, new vehicle sales, and older vehicle scrappage—jointly determine total VMT projections for each alternative. VMT directly influences many of the various effects of fuel economy standards that decision-makers consider in determining what levels of standards to set. For example, the value of fuel savings is a function of a vehicle's efficiency, miles driven, and fuel price. Similarly, factors like criteria pollutant emissions, congestion, and fatalities are direct functions of VMT.

It is the agency's perspective that the total demand for VMT should not vary excessively across alternatives. The basic travel needs for an average household are unlikely to be influenced heavily by the stringency of the CAFE standards, as the daily need for a vehicle will remain the same. That said, it is reasonable to assume that fleets with differing age distributions and inherent cost of operation will have slightly different annual VMT (even without considering VMT associated with rebound miles); however, the difference could conceivably be small. Based on the structure of the CAFE Model, the combined effect of the sales and scrappage responses would create small percentage differences in total VMT across the range of regulatory alternatives if steps are not taken to

constrain VMT. Because VMT is related to many of the costs and benefits of the program, even small magnitude differences in VMT across alternatives can have meaningful impacts on the incremental net benefit analysis. Furthermore, since decisions about alternative stringencies look at the incremental costs and benefits across alternatives, it is more important that the analysis capture the variation of VMT across alternatives than to accurately predict total VMT within a scenario.

To ensure that travel demand remains consistent across the different regulatory scenarios, the CAFE Model begins with a model of aggregate VMT developed by the Federal Highway Administration (FHWA) that is used to produce their official annual VMT forecasts. These estimates provide the aggregate VMT of all model years and body styles for any given calendar year and are same across regulatory alternatives for each year in the analysis.

Since vehicles of different ages and body styles carry different costs and benefits, to account properly for the average value of consumer and societal costs and benefits associated with vehicle usage under various CAFE alternatives, it is necessary to partition miles by age and body type. The agency created "mileage accumulation schedules" using IHS-Polk odometer data to construct mileage accumulation schedules as an initial estimate of how much a vehicle expected to drive at each age throughout its life. The agency uses simulated new vehicle sales, annual rates of retirement for used vehicles, and the mileage accumulation schedules to distribute VMT across the age distribution of registered vehicles in each calendar year to preserve the non-rebound VMT constraint.

The fuel economy rebound effect—a specific example of the well-documented energy efficiency rebound effect for energy-consuming capital goods—refers to the tendency of motor vehicles' use (as measured by VMT) to increase when their fuel economy is improved and, as a result, the cost per mile (CPM) of driving declines. Establishing more stringent CAFE standards than the baseline level will lead to comparatively higher fuel economy for new cars and light trucks, thus decreasing the amount of fuel consumed and increasing the amount of travel in which new car and truck buyers engage. The agency recognizes that the value selected for the rebound effect influences overall costs and benefits associated with the regulatory alternatives under consideration as well as the estimates of lives saved under

various regulatory alternatives, and that the rebound estimate, along with fuel prices, technology costs, and other analytical inputs, is part of the body of information that agency decision-makers have considered in determining the appropriate levels of the CAFE standards in this proposal. We also note that the rebound effect diminishes the economic and environmental benefits associated with increased fuel efficiency.

The agency conducted a review of the literature related to the fuel economy rebound effect, which is extensive and covers multiple decades and geographic regions. The totality of evidence, without categorically excluding studies on grounds that they fail to meet certain criteria, and evaluating individual studies based on their particular strengths, suggests that a plausible range for the rebound effect is 10–50 percent. The central tendency of this range appears to be at or slightly above its midpoint, which is 30 percent. Considering only those studies that the agency believes are derived from extremely robust and reliable data, employ identification strategies that are likely to prove effective at isolating the rebound effect, and apply rigorous estimation methods suggests a range of approximately 10–45 percent, with most of their estimates falling in the 15–30 percent range.

A case can also be made to support values of the rebound effect falling in the 5–15 percent range. There is empirical evidence supported by theory, that the rebound effect has been declining over time due to factors such as increasing income that affects the value of time, increasing fuel economy that makes the fuel cost of driving a smaller share of the total costs of vehicle travel, as well as diminishing impacts of increased car ownership and rates of license holding on vehicle travel. Lower rebound estimates are associated with studies that include recently published analyses using U.S. data, and to accord the most weight to research that relies on measures of vehicle use derived from odometer readings, controls for the potential endogeneity of fuel economy, and estimates the response of vehicle use to variation in fuel economy itself, rather than to fuel cost per distance driven or fuel prices. This approach suggests that the rebound effect is likely in the range from 5–15 percent and is more likely to lie toward the lower end of that range.

The agency selected a rebound magnitude of 15% for the analysis because it was well-supported by the totality of the evidence and aligned well with FHWA's estimated elasticity for

travel (14.6%). However, recognizing the uncertainty surrounding the rebound value, we also examine the sensitivity of estimated impacts to values of the rebound ranging from 10 percent to 20 percent. NHTSA seeks comment on the above discussion, and whether to consider a different value for the rebound effect for the final rule analysis.

In order to calculate total VMT *with* rebound, the CAFE Model applies the price elasticity of VMT (taken from the FHWA forecasting model) to the full change in CPM and the initial VMT schedule, but applies the (user defined) rebound parameter to the incremental percentage change in CPM between the non-rebound and full CPM calculations to the miles applied to each vehicle during the reallocation step that ensured adjusted non-rebound VMT matched the non-rebound VMT constraint.

The approach in the model is a combination of top-down (relying on the FHWA forecasting model to determine total light-duty VMT in a given calendar year), and bottom-up (where the composition and utilization of the on-road fleet determines a base level of VMT in a calendar year, which is constrained to match the FHWA model). While the agency and the model developers agree that a joint household consumer choice model—if one could be developed adequately and reliably to capture the myriad circumstances under which families and individuals make decisions relating to vehicle purchase, use, and disposal—would reflect decisions that are made at the household level, it is not obvious, or necessarily appropriate, to model the national program at that scale in order to produce meaningful results that can be used to inform policy decisions.

The most useful information for policymakers relates to national impacts of potential policy choices. No other element of the rulemaking analysis occurs at the household level, and the error associated with allocating specific vehicles to specific households over the course of three decades would easily dwarf any error associated with the estimation of these effects in aggregate. We have attempted to incorporate estimates of changes to the new and used vehicle markets at the highest practical levels of aggregation, and worked to ensure that these effects produce fleetwide VMT estimates that are consistent with the best, current projections given our economic assumptions. While future work will always continue to explore approaches to improve the realism of CAFE policy simulation, there are important differences between small-scale

econometric studies and the kind of flexibility that is required to assess the impacts of a broad range of regulatory alternatives over multiple decades. To assist with creating even more precise estimates of VMT, the agency requests comment on alternative approaches to simulate VMT demand.

See TSD Chapter 4.3 for a complete accounting of how the agency models VMT.

4. Changes to Fuel Consumption

The agency uses the fuel economy and age and body-style VMT estimates to determine changes in fuel consumption. The agency divides the expected vehicle use by the anticipated MPG to calculate the gallons consumed by each simulated vehicle, and when aggregated, the total fuel consumed in each alternative.

F. Simulating Environmental Impacts of Regulatory Alternatives

This proposal includes the adoption of electric vehicles and other fuel-saving technologies, which produce additional co-benefits. These co-benefits include reduced vehicle tailpipe emissions during operation as well as reduced upstream emissions during petroleum extraction, transportation, refining, and finally fuel transportation, storage, and distribution. This section provides an overview of how we developed input parameters for criteria pollutants, greenhouse gases, and air toxics. This section also describes how we generated estimates of how these emissions could affect human health, in particular criteria pollutants known to cause poor air quality and damage human health when inhaled.

The rule implements an emissions inventory methodology for estimating impacts. Vehicle emissions inventories are often described as three-legged stools, comprised of activity (*i.e.*, miles traveled, hours operated, or gallons of fuel burned), population (or number of vehicles), and emission factors. An emissions factor is a representative rate that attempts to relate the quantity of a pollutant released to the atmosphere per unit of activity.³¹¹

In this rulemaking, upstream emission factors are on a fuel volume basis and tailpipe emission factors are on a distance basis. Simply stated, the rule's upstream emission inventory is the product of the per-gallon emission factor and the corresponding number of gallons of gasoline or diesel consumed.

Similarly, the tailpipe emission inventory is the product of the per-mile emission factor and the appropriate miles traveled estimate. The only exceptions are that tailpipe sulfur oxides (SO_x) and carbon dioxide (CO₂) also use a per-gallon emission factor in the CAFE Model. The activity levels—both miles traveled and fuel consumption—are generated by the CAFE Model, while the emission factors have been incorporated from other Federal models.

For this rule, vehicle tailpipe (downstream) and upstream emission factors and subsequent inventories were developed independently from separate data sources. Upstream emission factors are estimated from a lifecycle emissions model developed by the U.S. Department of Energy's (DOE) Argonne National Laboratory, the Greenhouse gases, Regulated Emissions, and Energy use in Transportation (GREET) Model.³¹² Tailpipe emission factors are estimated from the regulatory highway emissions inventory model developed by the U.S. Environmental Protection Agency's (EPA) National Vehicle and Fuel Emissions Laboratory, the Motor Vehicle Emission Simulator (MOVES3). Data from GREET and MOVES3 have been utilized to update the CAFE Model for this rulemaking.

The changes in adverse health outcomes due to criteria pollutants emitted, such as differences in asthmatic episodes and hospitalizations due to respiratory or cardiovascular distress, are generally reported in incidence per ton values. Incidence values were developed using several EPA studies and recently updated from the 2020 final rule to better account for the emissions source sectors used in the CAFE Model analysis.

Chapter 5 of the TSD accompanying this proposal includes the detailed discussion of the procedures we used to simulate the environmental impact of regulatory alternatives, and the implementation of these procedures into the CAFE Model is discussed in detail in the CAFE Model Documentation. Further discussion of how the health impacts of upstream and tailpipe criteria pollutant emissions have been monetized in the analysis can be found in Section III.G.2.b)(2). The Supplemental Environmental Impact Statement accompanying this analysis also includes a detailed discussion of both criteria pollutant and GHG emissions and their impacts. NHTSA

³¹¹ USEPA, Basics Information of Air Emissions Factors and Quantification, <https://www.epa.gov/air-emissions-factors-and-quantification/basic-information-air-emissions-factors-and-quantification>.

³¹² U.S. Department of Energy, Argonne National Laboratory, Greenhouse gases, Regulated Emissions, and Energy use in Transportation (GREET) Model, Last Update: 9 Oct. 2020, <https://greet.es.anl.gov/>.

seeks comment on the following discussion.

1. Activity Levels Used To Calculate Emissions Impacts

Emission inventories in this rule vary by several key activity parameters, especially relating to the vehicle's model year and relative age. Most importantly, the CAFE Model accounts for vehicle sales, turnover, and scrappage as well as travel demands over its lifetime. Like other models, the CAFE Model includes procedures to estimate annual rates at which new vehicles are purchased, driven, and subsequently scrapped. Together, these procedures result in, for each vehicle model in each model year, estimates of the number remaining in service in each calendar year, as well as the annual mileage accumulation (*i.e.*, VMT) at each age. Inventories by model year are derived from the annual mileage accumulation rates and corresponding emission factors.

As discussed in Section III.C.2, for each vehicle model/configuration in each model year from 2020 to 2050 for upstream estimates and 2060 for tailpipe estimates, the CAFE Model estimates and records the fuel type (*e.g.*, gasoline, diesel, electricity), fuel economy, and number of units sold in the U.S. The model also makes use of an aggregated representation of vehicles sold in the U.S. during 1975–2019. The model estimates the numbers of each cohort of vehicles remaining in service in each calendar year, and the amount of driving accumulated by each such cohort in each calendar year.

The CAFE Model estimates annual vehicle-miles of travel (VMT) for each individual car and light truck model produced in each model year at each age of their lifetimes, which extend for a maximum of 40 years. Since a vehicle's age is equal to the current calendar year minus the model year in which it was originally produced, the age span of each vehicle model's lifetime corresponds to a sequence of 40 calendar years beginning in the calendar year corresponding to the model year it was produced.³¹³ These estimates reflect the gradual decline in the fraction of each car and light truck model's original model year production volume that is expected to remain in

³¹³In practice, many vehicle models bearing a given model year designation become available for sale in the preceding calendar year, and their sales can extend through the following calendar year as well. However, the CAFE Model does not attempt to distinguish between model years and calendar years; vehicles bearing a model year designation are assumed to be produced and sold in that same calendar year.

service during each year of its lifetime, as well as the well-documented decline in their typical use as they age. Using this relationship, the CAFE Model calculates fleet-wide VMT for cars and light trucks in service during each calendar year spanned in this analysis.

Based on these estimates, the model also calculates quantities of each type of fuel or energy, including gasoline, diesel, and electricity, consumed in each calendar year. By combining these with estimates of each model's fuel or energy efficiency, the model also estimates the quantity and energy content of each type of fuel consumed by cars and light trucks at each age, or viewed another way, during each calendar year of their lifetimes. As with the accounting of VMT, these estimates of annual fuel or energy consumption for each vehicle model and model year combination are combined to calculate the total volume of each type of fuel or energy consumed during each calendar year, as well as its aggregate energy content.

The procedures the CAFE Model uses to estimate annual VMT for individual car and light truck models produced during each model year over their lifetimes and to combine these into estimates of annual fleet-wide travel during each future calendar year, together with the sources of its estimates of their survival rates and average use at each age, are described in detail in Section III.E.2. The data and procedures it employs to convert these estimates of VMT to fuel and energy consumption by individual model, and to aggregate the results to calculate total consumption and energy content of each fuel type during future calendar years, are also described in detail in that same section.

The model documentation accompanying this NPRM describes these procedures in detail.³¹⁴ The quantities of travel and fuel consumption estimated for the cross section of model years and calendar years constitutes a set of "activity levels" based on which the model calculates emissions. The model does so by multiplying activity levels by emission factors. As indicated in the previous section, the resulting estimates of vehicle use (VMT), fuel consumption, and fuel energy content are combined with emission factors drawn from various sources to estimate emissions of GHGs, criteria air pollutants, and airborne toxic compounds that occur throughout the fuel supply and distribution process, as well as during

³¹⁴CAFE Model documentation is available at <https://www.nhtsa.gov/corporate-average-fuel-economy/compliance-and-effects-modeling-system>.

vehicle operation, storage, and refueling. Emission factors measure the mass of each GHG or criteria pollutant emitted per vehicle-mile of travel, gallon of fuel consumed, or unit of fuel energy content. The following sections identifies the sources of these emission factors and explains in detail how the CAFE Model applies them to its estimates of vehicle travel, fuel use, and fuel energy consumption to estimate total annual emissions of each GHG, criteria pollutant, and airborne toxic.

2. Simulating Upstream Emissions Impacts

Building on the methodology for simulating upstream emissions impacts used in prior CAFE rules, this analysis uses emissions factors developed with the U.S. Department of Energy's Greenhouse gases, Regulated Emissions, and Energy use in Transportation (GREET) Model, specifically GREET 2020.³¹⁵ The analysis includes emissions impacts estimates for regulated criteria pollutants,³¹⁶ greenhouse gases,³¹⁷ and air toxics.³¹⁸

The upstream emissions factors included in the CAFE Model input files include parameters for 2020 through 2050 in five-year intervals (*e.g.*, 2020, 2025, 2030, and so on). For gasoline and diesel fuels, each analysis year includes upstream emissions factors for the four following upstream emissions processes: Petroleum extraction, petroleum transportation, petroleum refining, and fuel transportation, storage, and distribution (TS&D). In contrast, the upstream electricity emissions factor is only a single value per analysis year. We briefly discuss the components included in each upstream emissions factor here, and a more detailed discussion is included in Chapter 5 of the TSD accompanying this proposal and the CAFE Model Documentation.

The first step in the process for calculating upstream emissions includes any emissions related to the extraction, recovery, and production of petroleum-based feedstocks, namely conventional crude oil, oil sands, and shale oils. Then, the petroleum transportation process accounts for the transport

³¹⁵U.S. Department of Energy, Argonne National Laboratory, Greenhouse gases, Regulated Emissions, and Energy use in Transportation (GREET) Model, Last Update: 9 Oct. 2020, <https://greet.es.anl.gov/>.

³¹⁶Carbon monoxide (CO), volatile organic compounds (VOCs), nitrogen oxides (NO_x), sulfur oxides (SO_x), and particulate matter with 2.5-micron (μm) diameters or less (PM_{2.5}).

³¹⁷Carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O).

³¹⁸Acetaldehyde, acrolein, benzene, butadiene, formaldehyde, diesel particulate matter with 10-micron (μm) diameters or less (PM₁₀).

processes of crude feedstocks sent for domestic refining. The petroleum refining calculations are based on the aggregation of fuel blendstock processes rather than the crude feedstock processes, like the petroleum extraction and petroleum transportation calculations. The final upstream process after refining is the transportation, storage, and distribution (TS&D) of the finished fuel product.

The upstream gasoline and diesel emissions factors are aggregated in the CAFE Model based on the share of fuel savings leading to reduced domestic oil fuel refining and the share of reduced domestic refining from domestic crude oil. The CAFE Model applies a fuel savings adjustment factor to the petroleum refining process and a combined fuel savings and reduced domestic refining adjustment to both the petroleum extraction and petroleum transportation processes for both gasoline and diesel fuels and for each pollutant. These adjustments are consistent across fuel types, analysis years, and pollutants, and are unchanged from the 2020 final rule. Additional discussion of the methodology for estimating the share of fuel savings leading to reduced domestic oil refining is located in Chapter 6.2.4.3 of the TSD. NHTSA seeks comment on the methodology used and specifically whether all of the change in refining would happen domestically, rather than the current division between domestic and non-domestic refining.

Upstream electricity emissions factors are also calculated using GREET 2020. GREET 2020 projects a national default electricity generation mix for transportation use from the latest Annual Energy Outlook (AEO) data available from the previous year. As discussed above, the CAFE Model uses a single upstream electricity factor for each analysis year.

3. Simulating Tailpipe Emissions Impacts

Tailpipe emission factors are generated using the latest regulatory model for on-road emission inventories from the U.S. Environmental Protection Agency, the Motor Vehicle Emission Simulator (MOVES3), November 2020 release. MOVES3 is a state-of-the-science, mobile-source emissions inventory model for regulatory applications.³¹⁹ New MOVES3 tailpipe emission factors have been incorporated

³¹⁹ U.S. Environmental Protection Agency, Office of Transportation and Air Quality, Motor Vehicle Emission Simulator (MOVES), Last Updated: March 2021, <https://www.epa.gov/moves/latest-version-motor-vehicle-emission-simulator-moves>.

into the CAFE parameters, and these updates supersede tailpipe data previously provided by EPA under MOVES2014 for past CAFE analyses. MOVES3 accounts for a variety of processes related to emissions impacts from vehicle use, including running exhaust, start exhaust, refueling displacement vapor loss, brakewear, and tirewear, among others.

The CAFE Model uses tailpipe emissions factors for all model years from 2020 to 2060 for criteria pollutants and air toxics. To maintain continuity in the historical inventories, only emission factors for model years 2020 and after were updated; all emission factors prior to MY 2020 were unchanged from previous CAFE rulemakings. In addition, the updated tailpipe data in the current CAFE reference case no longer account for any fuel economy improvements or changes in vehicle miles traveled from the 2020 final rule. In order to avoid double-counting effects from the previous rulemaking in the current rulemaking, the new tailpipe baseline backs out 1.5% year-over-year stringency increases in fuel economy, and 0.3% VMT increases assumed each year (20% rebound on the 1.5% improvements in stringency). Note that the MOVES3 data do not cover all the model years and ages required by the CAFE Model. MOVES only generates emissions data for vehicles made in the last 30 model years for each calendar year being run. This means emissions data for some calendar year and vehicle age combinations are missing. To remedy this, we take the last vehicle age that has emissions data and forward fill those data for the following vehicle ages. Due to incomplete available data for years prior to MY 2020, tailpipe emission factors for MY 2019 and earlier have not been modified and continue to utilize MOVES2014 data.

For tailpipe CO₂ emissions, these factors are defined based on the fraction of each fuel type's mass that represents carbon (the carbon content) along with the mass density per unit of the specific type of fuel. To obtain the emission factors associated with each fuel, the carbon content is then multiplied by the mass density of a particular fuel as well as by the ratio of the molecular weight of carbon dioxide to that of elemental carbon. This ratio, a constant value of 44/12, measures the mass of carbon dioxide that is produced by complete combustion of mass of carbon contained in each unit of fuel. The resulting value defines the emission factor attributed to CO₂ as the amount of grams of CO₂ emitted during vehicle operation from each type of fuel. This calculation is repeated for gasoline, E85, diesel, and

compressed natural gas (CNG) fuel types. In the case of CNG, the mass density and the calculated CO₂ emission factor are denoted as grams per standard cubic feet (scf), while for the remainder of fuels, these are defined as grams per gallon of the given fuel source. Since electricity and hydrogen fuel types do not cause CO₂ emissions to be emitted during vehicle operation, the carbon content, and the CO₂ emission factors for these two fuel types are assumed to be zero. The mass density, carbon content, and CO₂ emission factors for each fuel type are defined in the Parameters file.

The CAFE Model calculates CO₂ tailpipe emissions associated with vehicle operation of the surviving on-road fleet by multiplying the number of gallons (or scf for CNG) of a specific fuel consumed by the CO₂ emissions factor for the associated fuel type. More specifically, the amount of gallons or scf of a particular fuel are multiplied by the carbon content and the mass density per unit of that fuel type, and then applying the ratio of carbon dioxide emissions generated per unit of carbon consumed during the combustion process.³²⁰

4. Estimating Health Impacts From Changes in Criteria Pollutant Emissions

The CAFE Model computes select health impacts resulting from three criteria pollutants: NO_x, SO_x,³²¹ and PM_{2.5}. Out of the six criteria pollutants currently regulated, NO_x, SO_x, and PM_{2.5} are known to be emitted regularly from mobile sources and have the most adverse effects to human health. These health impacts include several different morbidity measures, as well as low and high mortality estimates, and are measured by the number of instances predicted to occur per ton of emitted pollutant.³²² The model reports total health impacts by multiplying the estimated tons of each criteria pollutant by the corresponding health incidence per ton value. The inputs that inform the calculation of the total tons of emissions resulting from criteria pollutants are discussed above. This section discusses how the health

³²⁰ Chapter 3, Section 4 of the CAFE Model Documentation provides additional description for calculation of CO₂ tailpipe emissions with the model.

³²¹ Any reference to SO_x in this section refers to the sum of sulfur dioxide (SO₂) and sulfate particulate matter (pSO₄) emissions, following the methodology of the EPA papers cited.

³²² The complete list of morbidity impacts estimated in the CAFE Model is as follows: Acute bronchitis, asthma exacerbation, cardiovascular hospital admissions, lower respiratory symptoms, minor restricted activity days, non-fatal heart attacks, respiratory emergency hospital admissions, respiratory emergency room visits, upper respiratory symptoms, and work loss days.

incidence per ton values were obtained. See Section III.G.2.b)(2) and Chapter 6.2.2 of the TSD accompanying this proposal for information regarding the monetized damages arising from these health impacts.

The SEIS that accompanies this proposal also includes a detailed discussion of the criteria pollutants and air toxics analyzed and their potential health effects. In addition, consistent with past analyses, NHTSA will perform full-scale photochemical air quality modeling and present those results in the Final SEIS associated with the final rule. That analysis will provide additional assessment of the human health impacts from changes in PM_{2.5} and ozone associated with this rule. NHTSA will also consider whether such modeling could practicably and meaningfully be included in the FRIA, noting that compliance with CAFE standards is based on the *average* performance of manufacturers' production for sale *throughout* the U.S., and that the FRIA will involve sensitivity analysis spanning a range of model inputs, many of which impact estimates of future emissions from passenger cars and light trucks. Chapter 6 of the FRIA includes a discussion of overall changes in health impacts associated with criteria pollutant changes across the different rulemaking scenarios.

In previous rulemakings, health impacts were split into two categories based on whether they arose from upstream emissions or tailpipe emissions. In the current analysis, these health incidence per ton values have been updated to reflect the differences in health impacts arising from each emission source sector, according to the latest publicly available EPA reports. Five different upstream emission source sectors (Petroleum Extraction, Petroleum Transportation, Refineries, Fuel Transportation, Storage and Distribution, and Electricity Generation) are now represented. As the health incidences for the different source sectors are all based on the emission of one ton of the same pollutants, NO_x, SO_x, and PM_{2.5}, the differences in the incidence per ton values arise from differences in the geographic distribution of the pollutants, a factor which affects the number of people impacted by the pollutants.³²³

The CAFE Model health impacts inputs are based partially on the structure of EPA's 2018 technical

support document, Estimating the Benefit per Ton of Reducing PM_{2.5} Precursors from 17 Sectors (referred to here as the 2018 EPA source apportionment TSD),³²⁴ which reported benefit per ton values for the years 2016, 2020, 2025, and 2030.³²⁵ For the years in between the source years used in the input structure, the CAFE Model applies values from the closest source year. For instance, 2020 values are applied for 2020–2022, and 2025 values are applied for 2023–2027. For further details, see the CAFE Model documentation, which contains a description of the model's computation of health impacts from criteria pollutant emissions.

Despite efforts to be as consistent as possible between the upstream emissions sectors utilized in the CAFE Model with the 2018 EPA source apportionment TSD, the need to use up-to-date sources based on newer air quality modeling updates led to the use of multiple papers. In addition to the 2018 EPA source apportionment TSD used in the 2020 final rule, DOT used additional EPA sources and conversations with EPA staff to appropriately map health incidence per ton values to the appropriate CAFE Model emissions source category.

We understand that uncertainty exists around the contribution of VOCs to PM_{2.5} formation in the modeled health impacts from the petroleum extraction sector; however, based on feedback to the 2020 final rule we believe that the updated health incidence values specific to petroleum extraction sector emissions may provide a more appropriate estimate of potential health impacts from that sector's emissions than the previous approach of applying refinery sector emissions impacts to the petroleum extraction sector. That said, we are aware of work that EPA has been doing to address concerns about the BPT estimates, and NHTSA will work further with EPA to update and synchronize approaches to the BPT estimates.

The basis for the health impacts from the petroleum extraction sector was a 2018 oil and natural gas sector paper written by EPA staff (Fann et al.), which estimated health impacts for this sector in the year 2025.³²⁶ This paper defined

the oil and gas sector's emissions not only as arising from petroleum extraction but also from transportation to refineries, while the CAFE/GREET component is composed of only petroleum extraction. After consultation with the authors of the EPA paper, it was determined that these were the best available estimates for the petroleum extraction sector, notwithstanding this difference. Specific health incidence per pollutant were not reported in the paper, so EPA staff sent BenMAP health incidence files for the oil and natural gas sector upon request. DOT staff then calculated per ton values based on these files and the tons reported in the Fann et al. paper.³²⁷ The only available health impacts corresponded to the year 2025. Rather than trying to extrapolate, these 2025 values were used for all the years in the CAFE Model structure: 2020, 2025, and 2030.³²⁸ This simplification implies an overestimate of damages in 2020 and an underestimate in 2030.³²⁹

The petroleum transportation sector and fuel TS&D sector did not correspond to any one EPA source sector in the 2018 EPA source apportionment TSD, so a weighted average of multiple different EPA sectors was used to determine the health impact per ton values for those sectors. We used a combination of different EPA mobile source sectors from two different papers, the 2018 EPA source apportionment TSD,³³⁰ and a 2019 mobile source sectors paper (Wolfe et al.)³³¹ to generate these values. The health incidence per ton values associated with the refineries sector and

2025. *Environmental science & technology*, 52(15), 8095–8103 (*hereinafter* Fann et al.).

³²⁷ Nitrate-related health incidents were divided by the total tons of NO_x projected to be emitted in 2025, sulfate-related health incidents were divided by the total tons of projected SO_x, and EC/OC (elemental carbon and organic carbon) related health incidents were divided by the total tons of projected EC/OC. Both Fann et al. and the 2018 EPA source apportionment TSD define primary PM_{2.5} as being composed of elemental carbon, organic carbon, and small amounts of crustal material. Thus, the EC/OC BenMAP file was used for the calculation of the incidents per ton attributable to PM_{2.5}.

³²⁸ These three years are used in the CAFE Model structure because it was originally based on the estimate provided in the 2018 EPA source apportionment TSD.

³²⁹ See EPA. 2018. Estimating the Benefit per Ton of Reducing PM_{2.5} Precursors from 17 Sectors. https://www.epa.gov/sites/production/files/2018-02/documents/sourceapportionmentbpttsd_2018.pdf p.9.

³³⁰ Environmental Protection Agency (EPA). 2018. Estimating the Benefit per Ton of Reducing PM_{2.5} Precursors from 17 Sectors. https://www.epa.gov/sites/production/files/2018-02/documents/sourceapportionmentbpttsd_2018.pdf.

³³¹ Wolfe et al. 2019. Monetized health benefits attributable to mobile source emissions reductions across the United States in 2025. <https://pubmed.ncbi.nlm.nih.gov/30296769/>.

³²³ See Environmental Protection Agency (EPA). 2018. Estimating the Benefit per Ton of Reducing PM_{2.5} Precursors from 17 Sectors. https://www.epa.gov/sites/production/files/2018-02/documents/sourceapportionmentbpttsd_2018.pdf.

³²⁴ Environmental Protection Agency (EPA). 2018. Estimating the Benefit per Ton of Reducing PM_{2.5} Precursors from 17 Sectors. https://www.epa.gov/sites/production/files/2018-02/documents/sourceapportionmentbpttsd_2018.pdf.

³²⁵ As the year 2016 is not included in this analysis, the 2016 values were not used.

³²⁶ Fann, N., Baker, K. R., Chan, E., Eyth, A., Macpherson, A., Miller, E., & Snyder, J. (2018). Assessing Human Health PM_{2.5} and Ozone Impacts from U.S. Oil and Natural Gas Sector Emissions in

electricity generation sector were drawn solely from the 2018 EPA source apportionment TSD.

The CAFE Model follows a similar process for computing health impacts resulting from tailpipe emissions as it does for calculating health impacts from upstream emissions. Previous rulemakings used the 2018 EPA source apportionment TSD as the source for the health incidence per ton, matching the CAFE Model tailpipe emissions inventory to the “on-road mobile sources sector” in the TSD. However, a more recent EPA paper from 2019 (Wolfe et al.)³³² computes monetized damage costs per ton values at a more disaggregated level, separating on-road mobile sources into multiple categories based on vehicle type and fuel type. Wolfe et al. did not report incidences per ton, but that information was obtained through communications with EPA staff.

The methodology for generating values for each emissions category in the CAFE Model is discussed in detail in Chapter 5 of the TSD accompanying this proposal. The Parameters file contains all of the health impact per ton of emissions values used in this proposal.

G. Simulating Economic Impacts of Regulatory Alternatives

This section describes the agency’s approach for measuring the economic costs and benefits that will result from

establishing alternative CAFE standards for future model years. The benefit and cost measures the agency uses are important considerations, because as Office of Management and Budget (OMB) Circular A–4 states, benefits and costs reported in regulatory analyses must be defined and measured consistently with economic theory, and should also reflect how alternative regulations are anticipated to change the behavior of producers and consumers from a baseline scenario.³³³ For CAFE standards, those include vehicle manufacturers, buyers of new cars and light trucks, owners of used vehicles, and suppliers of fuel, all of whose behavior is likely to respond in complex ways to the level of CAFE standards that DOT establishes for future model years.

It is important to report the benefits and costs of this proposed action in a format that conveys useful information about how those impacts are generated and also distinguishes the impacts of those economic consequences for private businesses and households from the effects on the remainder of the U.S. economy. A reporting format will accomplish this objective to the extent that it clarifies who incurs the benefits and costs of the proposed, and shows how the economy-wide or “social” benefits and costs of the proposed action are composed of its direct effects on vehicle producers, buyers, and users, plus the indirect or “external” benefits

and costs it creates for the general public.

Table III–37 and Table III–38 present the incremental economic benefits and costs of the proposed action and the alternatives (described in detail in Section IV) to increase CAFE standards for model years 2024–26 at three percent and seven percent discount rates in a format that is intended to meet these objectives. The tables include costs which are transfers between different economic actors—these will appear as both a cost and a benefit in equal amounts (to separate affected parties). Societal cost and benefit values shown elsewhere in this document do not show costs which are transfers for the sake of simplicity but report the same net societal costs and benefits. The proposed action and the alternatives would increase costs to manufacturers for adding technology necessary to enable new cars and light trucks to comply with fuel economy and emission regulations. It may also increase fine payments by manufacturers who would have achieved compliance with the less demanding baseline standards. Manufacturers are assumed to transfer these costs on to buyers by charging higher prices; although this reduces their revenues, on balance, the increase in compliance costs and higher sales revenue leaves them financially unaffected. Since the analysis assumes that manufacturers are left in the same economic position regardless of the standards, they are excluded from the tables.

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³³² Wolfe et al. 2019. Monetized health benefits attributable to mobile source emissions reductions across the United States in 2025. <https://pubmed.ncbi.nlm.nih.gov/30296769/>.

³³³ White House Office of Management and Budget, *Circular A–4: Regulatory Analysis*, September 17, 2003 (https://obamawhitehouse.archives.gov/omb/circulars_a004_a-4/), Section E.

Table III-37 – Incremental Benefits and Costs Over the Lifetimes of Total Fleet Produced Through 2029 (2018\$ Billions), 3% Percent Discount Rate, by Alternative

Alternative:	1	2	3
Private Costs			
Technology Costs to Increase Fuel Economy	34.3	67.6	100.1
Increased Maintenance and Repair Costs	-	-	-
Sacrifice in Other Vehicle Attributes	-	-	-
Consumer Surplus Loss from Reduced New Vehicle Sales	0.1	0.6	1.3
Safety Costs Internalized by Drivers	6.2	8.2	11.2
Subtotal - Incremental Private Costs	40.6	76.3	112.7
External Costs			
Congestion and Noise Costs from Rebound-Effect Driving	7.3	10.1	13.5
Safety Costs Not Internalized by Drivers	7.5	15.8	23.2
Loss in Fuel Tax Revenue	11.0	18.9	27.0
Subtotal - Incremental External Costs	25.9	44.7	63.6
Total Incremental Social Costs	66.5	121.1	176.3
Private Benefits			
Reduced Fuel Costs ³³⁴	47.9	73.0	103.8
Benefits from Additional Driving	12.3	15.3	20.8
Less Frequent Refueling	-0.5	-0.8	0.3
Subtotal - Incremental Private Benefits	59.7	87.6	124.8
External Benefits			
Reduction in Petroleum Market Externality	0.9	1.5	2.1
Reduced Climate Damages	20.3	32.0	45.6
Reduced Health Damages	1.7	0.4	0.3
Subtotal - Incremental External Benefits	22.8	33.9	48.0
Total Incremental Social Benefits	82.6	121.4	172.9
Net Incremental Social Benefits	16.1	0.3	-3.4

³³⁴ A portion of Reduced Fuel Costs represent the benefit to consumers of not having to pay taxes on avoided gasoline consumption. This amount offsets

the Loss in Fuel Tax Revenue in External Costs. For example, the \$47.9 billion in Reduced Fuel Costs

in alternative 1 represents \$11 billion of avoided fuel taxes and \$36.9 billion in gasoline savings.

Table III-38 – Incremental Benefits and Costs Over the Lifetimes of Total Fleet Produced Through 2029 (2018\$ Billions), 7% Percent Discount Rate, by Alternative

Alternative:	1	2	3
Private Costs			
Technology Costs to Increase Fuel Economy	28.1	55.0	81.4
Increased Maintenance and Repair Costs	-	-	-
Sacrifice in Other Vehicle Attributes	-	-	-
Consumer Surplus Loss from Reduced New Vehicle Sales	0.1	0.5	1.1
Safety Costs Internalized by Drivers	3.7	4.9	6.8
Subtotal - Incremental Private Costs	31.9	60.4	89.3
External Costs			
Congestion and Noise Costs from Rebound-Effect Driving	4.8	6.8	9.3
Safety Costs Not Internalized by Drivers	5.5	11.6	17.3
Loss in Fuel Tax Revenue	7.0	11.9	17.0
Subtotal - Incremental External Costs	17.3	30.3	43.5
Total Incremental Social Costs	49.3	90.7	132.8
Private Benefits			
Reduced Fuel Costs	29.7	44.9	63.7
Benefits from Additional Driving	7.5	9.3	12.7
Less Frequent Refueling	-0.4	-0.6	0.0
Subtotal - Incremental Private Benefits	36.8	53.6	76.4
External Benefits			
Reduction in Petroleum Market Externality	0.5	0.9	1.3
Reduced Climate Damages	13.3	21.0	29.9
Reduced Health Damages	0.9	0.1	-0.1
Subtotal - Incremental External Benefits	14.8	22.0	31.2
Total Incremental Social Benefits	51.6	75.6	107.6
Net Incremental Social Benefits	2.3	-15.1	-25.2

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Compared to the baseline standards, if the preferred alternative is finalized, the analysis shows that buyers of new cars and light trucks will incur higher purchasing prices and financing costs, which will lead to some buyers dropping out of the new vehicle market. Drivers of new vehicles will also experience a slight uptick in the risk of being injured in a crash because of mass reduction technologies employed to meet the increased standards. While this effect is not statistically significant, NHTSA provides these results for transparency, and to demonstrate that their inclusion does not affect NHTSA's proposed policy decision. Because of the increasing price of new vehicles, some owners may delay retiring and replacing their older vehicles with newer models. In effect, this will

transfer some driving that would have been done in newer vehicles under the baseline scenario to older models within the legacy fleet, thus increasing costs for injuries (both fatal and less severe) and property damages sustained in motor vehicle crashes. This stems from the fact that cars and light trucks have become progressively more protective in crashes over time (and also slightly less prone to certain types of crashes, such as rollovers). Thus, shifting some travel from newer to older models would increase injuries and damages sustained by drivers and passengers because they are traveling in less safe vehicles and not because it changes the risk profiles of drivers themselves. These costs are largely driven by assumptions regarding consumer valuation of fuel efficiency and an assumption that more fuel-efficient vehicles are less preferable to

consumers than their total cost to improve fuel economy. These are issues on which we seek comments.

In exchange for these costs, consumers will benefit from new cars and light trucks with better fuel economy. Drivers will experience lower costs as a consequence of new vehicles' decreased fuel consumption, and from fewer refueling stops required because of their increased driving range. They will experience mobility benefits as they use newly purchased cars and light trucks more in response to their lower operating costs. On balance, consumers of new cars and light trucks produced during the model years subject to this proposed action will experience significant economic benefits.

Table III-37 and Table III-38 also show that the changes in fuel consumption and vehicle use resulting

from this proposed action will in turn generate both benefits and costs to society writ large. These impacts are “external,” in the sense that they are by-products of decisions by private firms and individuals that alter vehicle use and fuel consumption but are experienced broadly throughout society rather than by the firms and individuals who indirectly cause them. In terms of costs, additional driving by consumers of new vehicles in response to their lower operating costs will increase the external costs associated with their contributions to traffic delays and noise levels in urban areas, and these additional costs will be experienced throughout much of the society. While most of the risk of additional driving or delaying purchasing a newer vehicle are internalized by those who make those decisions, a portion of the costs are borne by other road users. Finally, since owners of new vehicles will be consuming less fuel, they will pay less in fuel taxes.

Society will also benefit from more stringent standards. Increased fuel efficiency will reduce the amount of petroleum-based fuel consumed and refined domestically, which will decrease the emissions of carbon dioxide and other greenhouse gases that contribute to climate change, and, as a result, the U.S. (and the rest of world) will avoid some of the economic damages from future changes in the global climate. Similarly, reduced fuel production and use will decrease emissions of more localized air pollutants (or their chemical precursors), and the resulting decrease in the U.S. population’s exposure to harmful levels of these pollutants will lead to lower costs from its adverse effects on health. Decreasing consumption and imports of crude petroleum for refining lower volumes of gasoline and diesel will also accrue some benefits throughout to the U.S., in the form of potential gains of energy security as businesses and households that are dependent on fuel are subject to less sudden and sharp changes in energy prices.

On balance, Table III–37 and Table III–38 show that both consumers and society as a whole will experience net economic benefits from the proposed action. The following subsections will briefly describe the economic costs and benefits considered by the agency. For a complete discussion of the methodology employed and the results, see TSD Chapter 6 and PRIA Chapter 6, respectively. The safety implications of the proposal—including the monetary impacts—are reserved for Section III.H.

NHTSA seeks comment on the following discussion.

1. Private Costs and Benefits

(a) Costs to Consumers

(1) Technology Costs

The proposed action and the alternatives would increase costs to manufacturers for adding technology necessary to enable new cars and light trucks to comply with fuel economy and emission regulations. Manufacturers are assumed to transfer these costs on to buyers by charging higher prices. See Section III.C.6 and TSD Chapter 2.5.

(2) Consumer Sales Surplus

Buyers who would have purchased a new vehicle with the baseline standards in effect but decide not to do so in response to the changes in new vehicles’ prices due to more stringent standards in place will experience a decrease in welfare. The collective welfare loss to those “potential” new vehicle buyers is measured by the foregone consumer surplus they would have received from their purchase of a new vehicle in the baseline.

Consumer surplus is a fundamental economic concept and represents the net value (or net benefit) a good or service provides to consumers. It is measured as the difference between what a consumer is willing to pay for a good or service and the market price. OMB Circular A–4 explicitly identifies consumer surplus as a benefit that should be accounted for in cost-benefit analysis. For instance, OMB Circular A–4 states the “net reduction in total surplus (consumer plus producer) is a real cost to society,” and elsewhere elaborates that consumer surplus values be monetized “when they are significant.”³³⁵

Accounting for the portion of fuel savings that the average new vehicle buyer demands, and holding all else equal, higher average prices should depress new vehicle sales and by extension reduce consumer surplus. The inclusion of consumer surplus is not only consistent with OMB guidance, but with other parts of the regulatory analysis. For instance, we calculate the increase in consumer surplus associated with increased driving that results from the decrease in the cost per mile of operation under more stringent regulatory alternatives, as discussed in Section III.G.1.b)(3). The surpluses associated with sales and additional mobility are inextricably linked as they capture the direct costs and benefits accrued by purchasers of new vehicles.

³³⁵ OMB Circular A–4, at 37–38.

The sales surplus captures the welfare loss to consumers when they forego a new vehicle purchase in the presence of higher prices and the additional mobility measures the benefit increased mobility under lower operating expenses.

The agency estimates the loss of sales surplus based on the change in quantity of vehicles projected to be sold after adjusting for quality improvements attributable to fuel economy. For additional information about consumer sales surplus, see TSD Chapter 6.1.5.

(3) Ancillary Costs of Higher Vehicle Prices

Some costs of purchasing and owning a new or used vehicle scale with the value of the vehicle. Where fuel economy standards increase the transaction price of vehicles, they will affect both the absolute amount paid in sales tax and the average amount of financing required to purchase the vehicle. Further, where they increase the MSRP, they increase the appraised value upon which both value-related registration fees and a portion of insurance premiums are based. The analysis assumes that the transaction price is a set share of the MSRP, which allows calculation of these factors as shares of MSRP. For a detailed explanation of how the agency estimates these costs, see TSD Chapter 6.1.1.

These costs are included in the consumer per-vehicle cost-benefit analysis but are not included in the societal cost-benefit analysis because they are assumed to be transfers from consumers to governments, financial institutions, and insurance companies.

(b) Benefits to Consumers

(1) Fuel Savings

The primary benefit to consumers of increasing CAFE standards are the additional fuel savings that accrue to new vehicle owners. Fuel savings are calculated by multiplying avoided fuel consumption by fuel prices. Each vehicle of a given body style is assumed to be driven the same as all the others of a comparable age and body style in each calendar year. The ratio of that cohort’s VMT to its fuel efficiency produces an estimate of fuel consumption. The difference between fuel consumption in the baseline, and in each alternative, represents the gallons (or energy) saved. Under this assumption, our estimates of fuel consumption from increasing the fuel economy of each individual model depend only on how much its fuel economy is increased, and do not reflect whether its actual use differs from other

models of the same body type. Neither do our estimates of fuel consumption account for variation in how much vehicles of the same body type and age are driven each year, which appears to be significant (see TSD Chapter 4.3.1.2). Consumers save money on fuel expenditures at the average retail fuel price (fuel price assumptions are discussed in detail in TSD Chapter 4.1.2), which includes all taxes and represents an average across octane blends. For gasoline and diesel, the included taxes reflect both the Federal tax and a calculated average state fuel tax. Expenditures on alternative fuels (E85 and electricity, primarily) are also included in the calculation of fuel expenditures, on which fuel savings are based. And while the included taxes net out of the social benefit cost analysis (as they are a transfer), consumers value each gallon saved at retail fuel prices including any additional fees such as taxes.

See TSD Chapter 6.1.3 for additional details. In the TSD, the agency considers the possibility that several of the

assumptions made about vehicle use could lead to misstating the benefits of fuel savings. The agency notes that these assumptions are necessary to model fuel savings and likely have minimal impact to the accuracy of this analysis.

Technologies that can be used to improve fuel economy can also be used to increase other vehicle attributes, especially acceleration performance, weight, and energy-using accessories. While this is most obvious for technologies that improve the efficiency of engines and transmissions, it is also true of technologies that reduce mass, aerodynamic drag, rolling resistance or any road or accessory load. The exact nature of the potential to trade-off attributes for fuel economy varies with the technology, but at a minimum, increasing vehicle efficiency or reducing loads allows a more powerful engine to be used while achieving the same level of fuel economy. How consumers value increased fuel economy and how fuel economy regulations affect manufacturers' decisions about how to use efficiency improving technologies

can have important effects on the estimated costs, benefits, and indirect impacts of fuel economy standards.

NHTSA's preliminary regulatory impact analysis assumes that consumers will purchase, and manufacturers will supply, fuel economy technologies in the absence of fuel economy standards if the technology "pays for itself" in fuel savings over the first 30 months vehicle use. This assumption is based on statements manufacturers have made to us and to NASEM CAFE committees and has been deployed in NHTSA's prior analyses of fuel economy standards. However, classical economic concepts suggest that deploying this assumption may be problematic when the baseline standards are binding—meaning that they constrain consumers' behavior to vehicles that are more fuel efficient than they would have chosen in the absence of fuel economy standards. To demonstrate this, we introduce a standard economic model of consumer optimization subject to a budgetary constraint.³³⁶

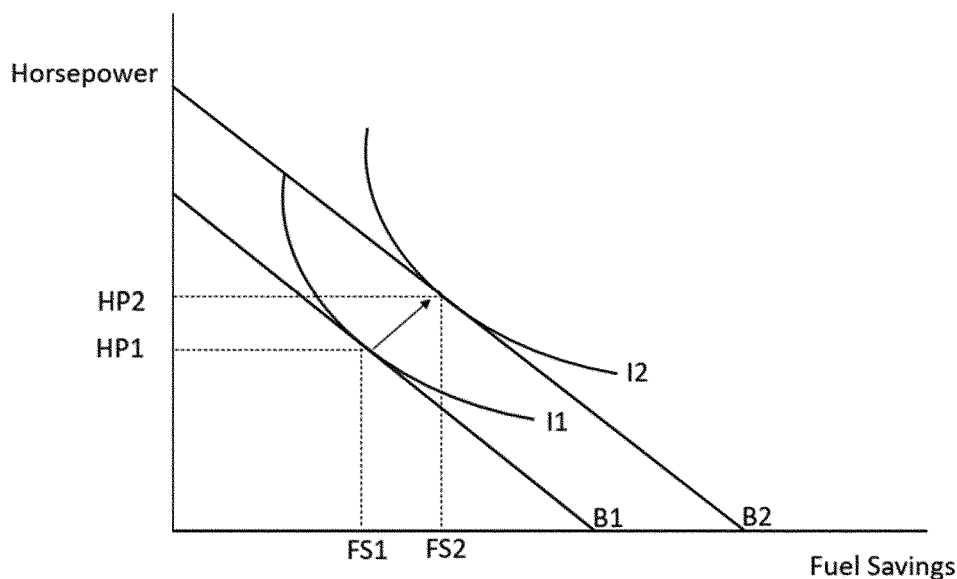


Figure III-17 – Constrained Optimization Model of Consumer Preferences Between Horsepower and Fuel Economy in the Absence of Fuel Economy Standards

Figure III-17 models consumer behavior when constrained by a budget. Line B1 represents the consumer's original budget constraint. Curve I1 is called an indifference curve, which shows each combination of horsepower, which we use here to represent a variety of attributes that could be traded-off for

increased fuel economy, and fuel savings between which a consumer is indifferent. The curvature of the indifference curve reflects the principle of diminishing marginal utility—the idea that consumers value consumption of the first unit of any product greater than subsequent units. Curve I1

represents the highest utility achievable when subject to budget constraint B1, as the consumer may select the combination of performance and fuel economy represented by point (HP1, FS1)—which is the point of tangency between I1 and B1. When new technology becomes available that

³³⁶ Note that the following section examines whether consumers are rational in their fuel

economy consumption patterns. This analysis could represent a scenario where consumers are rational,

or one in which the underweight future fuel savings in their car purchasing decisions.

makes either fuel economy or performance (or both) more affordable, the consumer's budget constraint shifts from B1 to B2, and the consumer can

now achieve the point of tangency between I2 and B2 (HP2, FS2). In this case, both fuel economy and performance are modeled as normal

goods—meaning that as they become more affordable, consumers will elect to consume more of each.

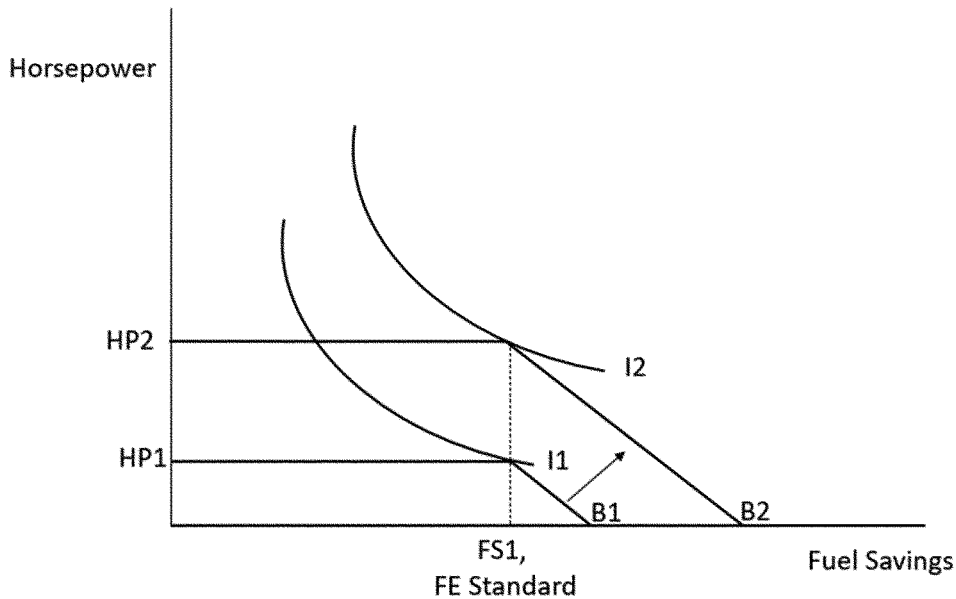


Figure III-18 – Constrained Optimization Model of Consumer Preferences Between Horsepower and Fuel Economy in the Presence of Binding Fuel Economy Standards

A different analysis is required when fuel economy standards also bind on consumer decisions. Here, minimum fuel economy standards eliminate some combinations of performance and fuel economy, creating a corner solution in the budget constraint. Figure III-18 shows this effect, as the consumer will elect the point of tangency with budget constraint B1 at the corner solution at (HP1 and FS1), which is also the minimum fuel economy standard. When new technology is introduced (or becomes cheaper) which makes fuel economy and performance more

affordable, the consumer's budget constraint shifts from B1 to B2 again, but the existing fuel economy standard is still binding, so a corner solution remains at FS1. The consumer will choose the corner combination of fuel economy and performance again, where I2 is tangent with B2, at point (FS1, HP2). *Note that the consumer has elected to improve performance from HP1 to HP2 but has not elected to improve fuel economy.*

This model implies that fuel economy standards prevent consumers from achieving their optimal bundle of fuel

economy and performance given their current preferences, creating an opportunity cost to consumers in the form of lost performance. The constrained optimization model can be slightly tweaked to show this loss to consumers. In this example, the y-axis uses the composite good M reflecting all other goods and services, including performance. This makes the interpretation of the y axis simpler, as it can be more easily translated into dollars.

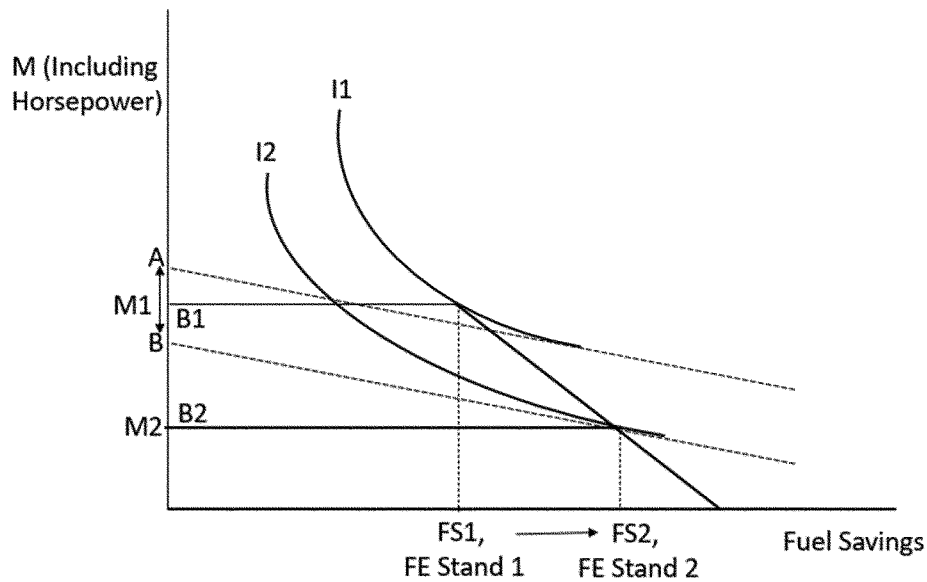


Figure III-19 – Constrained Optimization Model of Consumer Preferences Between Horsepower and Fuel Economy Showing Opportunity Cost of Fuel Economy Standards

Figure III-19 shows the effect of new binding fuel economy standards on consumer behavior. The consumer begins at point (M1, FS1) on indifference curve I1. If more stringent fuel economy standards were in place, the consumer would shift to the lower indifference curve I2—reflecting a lower level of utility—and would consume at point (M2, FS2). One concept from the economics literature for valuing the change in welfare from a change in prices or quality (or in this case fuel economy standards) is to look at the compensating variation between the

original and final equilibrium. The compensating variation is the amount of money that a consumer would need to return to their original indifference curve.³³⁷ It is found by finding the point of tangency with the new indifference curve at the new marginal rate of substitution between the two products and finding the equivalent point on the old indifference curve. Figure III-19 shows this as the distance between points A and B on the Y-axis.³³⁸

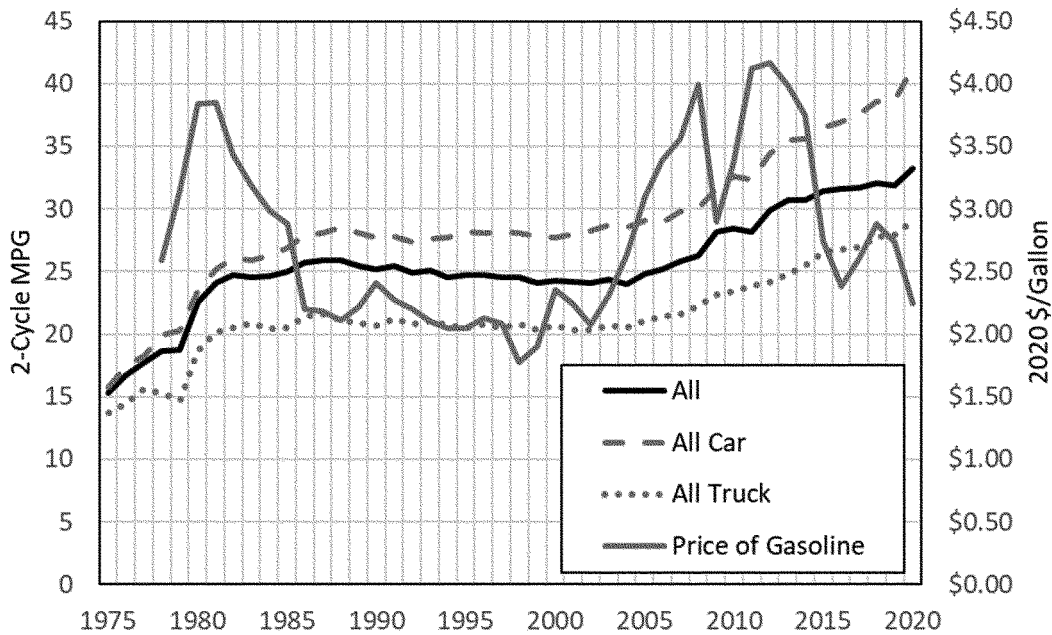
The above logic appears to explain the trends in fuel economy and vehicle performance (measured by horsepower/

pound) between 1986 and 2004, when gasoline prices fluctuated between \$2.00 and \$2.50 per gallon and new light duty vehicle fuel economy standards remained nearly constant Figure III-20. Over the same period numerous advanced technologies with the potential to increase fuel economy were adopted. However, the fuel economy of new light duty vehicles did not increase. In fact, increases in the market share of light trucks caused fuel economy to decline somewhat.

³³⁷ There is a very similar concept for valuing this opportunity cost known as the equivalent variation. NHTSA presents the compensating variation here

for simplicity but acknowledges that the equivalent variation is an equally valid approach.

³³⁸ Boardman, Greenberg, Vining, Weimer (2011). *Cost-Benefit Analysis: Concepts and Practice*. Pgs. 69–73.



Sources: EPA 2020 Automotive Trends Report; EIA Monthly Energy Review, 5/21; Federal Reserve Bank of St. Louis, CPI-U

Figure III-20 – Test Cycle Combined Fuel Economy and Gasoline Price: 1975-2020

On the other hand, from 1986–2004 the acceleration performance of light-duty vehicles increased by 45% (Figure III-21). Advances in engine technology are reflected in the steadily increasing ratio of power output to engine size, measured by displacement. Without increased fuel economy standards, all the potential of advanced technology appears to have gone into increasing performance and other attributes (for example average weight also increased by 27% from 1986–2004) and none to increasing fuel economy. Fuel economy remained nearly constant at the levels

required by the car and light truck standards, consistent with the idea the standards were a binding constraint on the fuel economy of new vehicles. The pattern for periods of price shocks and increasing standards is different, however, as can be seen in Figure III-20. In the early period up to 1986, there is almost no change in performance and vehicle weight decreased. However, in the more recent period post-2004, performance continued to increase although apparently at a slower rate than during the 1986–2004 period and vehicle weight changed very little. The

large and rapid price increases appear to have been an important factor. Even before manufacturers can respond to prices and regulations by adding fuel economy technologies to new vehicles, demand can respond by shifting towards smaller, lighter and less powerful makes and models. The period of voluntary increase in fuel economy is consistent with the constrained optimization problem presented above if fuel economy standards no longer constrained consumer behavior after the change in fuel prices.

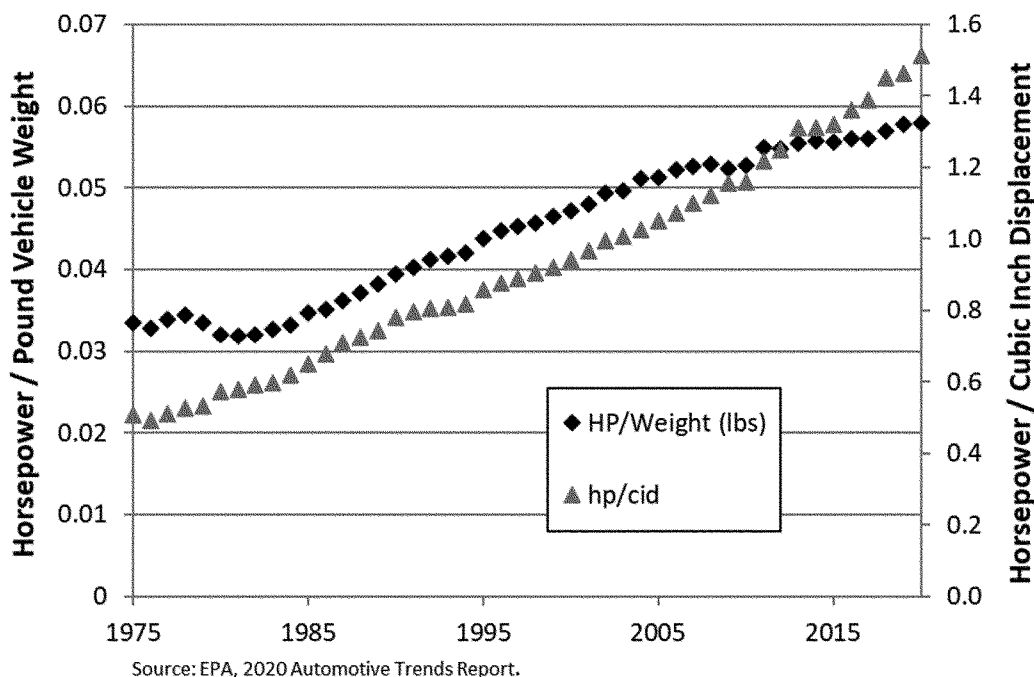


Figure III-21 – Trends in Performance and Engine Technology: 1975-2020

If this constrained optimization model is a reliable predictor of consumer behavior for some substantive portion of the new vehicle market, it would have important implications for how NHTSA models baseline consumer choices. In this case, it would mean that as technology that could improve fuel economy is added absent standards, it would be primarily geared towards enhancing performance rather than fuel economy. Depending on how consumers value future fuel savings, it might be appropriate for NHTSA to change its methods of analysis to reflect consumer preferences for performance, and to develop methods for valuing the opportunity cost to consumers for constraining them to more fuel efficient options. NHTSA seeks comment on the analysis presented in this section and its implications for the assumptions that consumers will add technologies that payback within thirty months. It also seeks comment on possible approaches to valuing the opportunity cost to consumers.

Potential Implications of Behavioral Theories for Fuel Economy Standards

In this proposed rule, the cost-effectiveness of technology-based fuel economy improvements is used to estimate fuel economy improvements by manufacturers in the No-Policy case and to estimate components of the benefits and costs of alternative increases in fuel economy standards. In the interest of insuring that our theory and methods

reflect the best current understanding of how consumers perceive the value of technology-based fuel economy improvements, we are seeking comment on our current, and possible alternative representations of how consumers value fuel economy when purchasing a new vehicle and while owning and operating it, and how manufacturers decide to implement fuel economy technologies.³³⁹ We are particularly interested in comments on our assumption that in our Alternative 0 (no change in existing standards) manufacturers will implement technologies to improve fuel economy even if existing standards do not require them to do so, provided that the first 30 months of fuel savings will be greater than or equal to the cost of the technology. We are also interested in comments concerning our use of the difference between the price consumers pay for increased fuel economy and the value of fuel savings over the first 30 month for estimating the impacts of the standards on new and used vehicle markets. Finally, we are interested in comments on when attributes that can be traded-off for increased fuel economy should be considered opportunity costs of increasing fuel economy.

³³⁹ We are making a distinction between consumers choices when presented with technology-based fuel economy improvements versus consumers' choices among various makes and models of vehicles. The latter topic is also of interest and is discussed in (see TSD, Ch. 4.2.1).

How manufacturers choose to implement technologies that can increase fuel economy depends on consumers' willingness to pay (WTP) for fuel economy and the other attributes the technologies can improve. Consumers' WTP for increasing levels of an attribute defines the consumers' demand function for that attribute. Here, we consider how consumers' WTP for increased fuel economy (WTP_{FE}) and for performance (WTP_{HP}), where FE stands for fuel economy and HP stands for "Horse Power"/performance, and the cost of technology (C) affect manufacturers' decisions about how to implement the technologies with and without fuel economy standards. For the purpose of this discussion, it is convenient to think of fuel economy in terms of its inverse, the rate of fuel consumption per mile. While miles per gallon (mpg) delivers decreasing fuel savings per mpg, decreasing fuel consumption delivers constant fuel savings per gallon per mile (gpm) reduced. Thinking in terms of gpm is appropriate because fuel economy standards are in fact defined in terms of the inverse of fuel economy, *i.e.*, gpm.

In the CAFE Model we typically assume that for a technology that can improve fuel economy, consumers are willing to pay an amount equal to the first thirty months of fuel savings (WTP_{30FE}). This is an important assumption for several reasons. The market will tend to equilibrate the ratio of consumers' WTP for fuel economy

divided by its cost to the ratio of consumers' WTP for other attributes divided by their cost. The value of the first thirty months of fuel savings is typically about one-fourth of the value of savings over the expected life of a vehicle, discounted at annual rates between 3% and 7%. Arguably, this represents an important undervaluing of technology-based fuel economy improvement relative to its true economic value. Our use of the 30-month payback assumption is based on statements manufacturers have made to us and to NASEM CAFE committees. It is also based on the fact that repeated assessments of the potential for technology to improve fuel economy have consistently found a substantial potential to cost-effectively increase fuel economy. But it is also partly based on the fact that the substantial literature that has endeavored to infer consumers' WTP for fuel economy is approximately evenly divided between studies that support severe undervaluation and those that support valuation at approximately full lifetime discounted present value (e.g., Greene et al., 2018; Helfand and Wolverton, 2011; Greene, 2010; for a more complete discussion see TSD, Ch. 6.1.6). The most recent studies based on detailed data and advanced methods of statistical inference have not resolved the issue (NASEM, 2021, Ch. 11.3).

If consumers value technology-based fuel economy improvements at only a small fraction of their lifetime present value and the market equates WTP_{30FE}/C to WTP_{HP}/C , the market will tend to oversupply performance relative to fuel economy (Allcott et al., 2014; Heutel, 2015). The WTP_{30FE} assumption also has important consequences when fuel economy standards are in effect. Alternative 0 in this proposed rule

assumes not only that the SAFE standards are in effect but that the manufacturers who agreed to the California Framework will be bound by that agreement. If those existing regulations are binding, it is likely that $WTP_{HP} > WTP_{30FE}$. (For simplicity we assume that over the range of fuel economy and performance achievable by the technology, both WTP values are constant.)³⁴⁰ This outcome would be expected in a market where consumers undervalue fuel savings in their normal car buying decisions and standards require levels of fuel economy beyond what they are willing to pay.³⁴¹ This is illustrated in Figure III–22. The initial consumer demand function for vehicles (D_0) is shifted upward by WTP_{30FE} to represent the consumer demand function for the increased fuel economy the technology could produce (D_{30FE}) and by WTP_{HP} to represent the demand function (D_{HP}) for the potential increase in performance. Because the technology has a cost (C), the manufacturers' supply function (S_0) shifts upward to $S_1 = S_0 + C$.³⁴² If the cost of the technology

³⁴⁰ Although there are diminishing returns to increased miles per gallon, in terms of fuel savings in gallons or dollars, there are not diminishing returns to reductions in fuel consumption per mile, except due to decreasing marginal utility of income. WTP_{HP} likely decreases with increasing performance, but if the changes are not too large, the assumption of constant WTP is reasonable.

³⁴¹ If there are no binding regulatory constraints and fuel economy and other vehicle attributes are normal goods, consumers will elect more of each in the event technological progress makes it possible to afford them. This simplifying assumption is consistent with a scenario where consumers' baseline vehicle choices are constrained by regulatory standards. See above for more discussion.

³⁴² The supply function for new cars is assumed to be perfectly elastic for the sake of simplicity of exposition. Note that if the cost of the technology exceeds consumers' WTP for both fuel economy and performance, the technology will not be adopted in the absence of regulations requiring it.

exceeds consumers' WTP for either the fuel economy or the performance it can deliver, the technology will not be adopted in the absence of regulations requiring it. In Figure III–22 we show the case where $C < WTP_{30FE} < WTP_{HP}$. In this case, using the technology to increase performance provides the greatest increase in sales and revenues: $Q_{HP} > Q_{30FE} > Q_0$. Since both WTP values are assumed to be approximately constant over the range of improvement the technology can provide, there is no possible combination of fuel economy and performance improvement that would produce a larger increase in sales than using the technology entirely to increase performance.³⁴³ Importantly, as long as $C < WTP_{HP}$, the actual cost of the technology does not affect the manufacturer's decision to use 100% of its potential to increase performance and 0% to increase fuel economy. The technology's payback period for the increase in fuel economy is irrelevant. If we reverse the relative WTP values (i.e., $WTP_{30FE} > WTP_{HP}$), then the manufacturer will choose to use 100% of the technology's potential to increase fuel economy and 0% to increase performance, assuming constant WTP values.³⁴⁴ This conclusion may contradict our current method, which assumes that even with increasing fuel economy standards in Alternative 0, manufacturers will adopt fuel economy technologies with $WTP_{30FE} < C$ and use them to increase fuel economy rather than performance.

³⁴³ In fact, all that is required is that over the range of increases achievable by the technology, $WTP_{HP} > WTP_{FE}$.

³⁴⁴ However, as noted above, the market will tend to equate WTP_{HP}/C to WTP_{FE}/C , so if there is sufficient variation in WTP_{HP} over the range of values achievable by the technology, some of each will be provided.

how they might affect our current methods for estimate the impacts of standards on new vehicle sales and the used vehicle market, and whether any changes to our current methods are appropriate.

The existence of fuel economy standards changes manufacturers' decision making. First, if a standard is set at a level that requires only part of the technological potential to increase fuel economy, if $C < WTP_{HP}$, and $WTP_{HP} > WTP_{30FE}$, the remainder of the technology's potential will be used to provide some increase in performance. This appears to have occurred post 2004 when the rate of improvement in performance slowed while fuel

economy improved. Assuming that consumers value fuel economy improvement at time of purchase at WTP_{30FE} , there would be a consumers' surplus cost of foregone performance equal to the cross-hatched trapezoid in Figure III-23. The foregone performance cost will be less than what it would have been if none of the technology's potential to increase fuel economy were used to increase performance. Even if the cost of the technology is less than WTP_{30FE} , the technology will be applied to improve fuel economy only up to the required level and the remainder of its potential will be used to increase performance. If the cost of applying

enough of the technology to achieve the fuel economy standard is greater than WTP_{HP} , there would be no cost of foregone performance since the cost of applying the technology to increasing fuel economy exceeds its opportunity cost when applied to increase performance.³⁴⁵ In that case, the technology cost represents the full cost of the fuel economy improvement, since that cost exceeds consumers' WTP for the performance it could produce. On the other hand, if under regulatory standards consumers valued fuel economy at WTP_{PVFE} , there would also be no opportunity cost of performance because $WTP_{PVFE} > WTP_{HP}$.

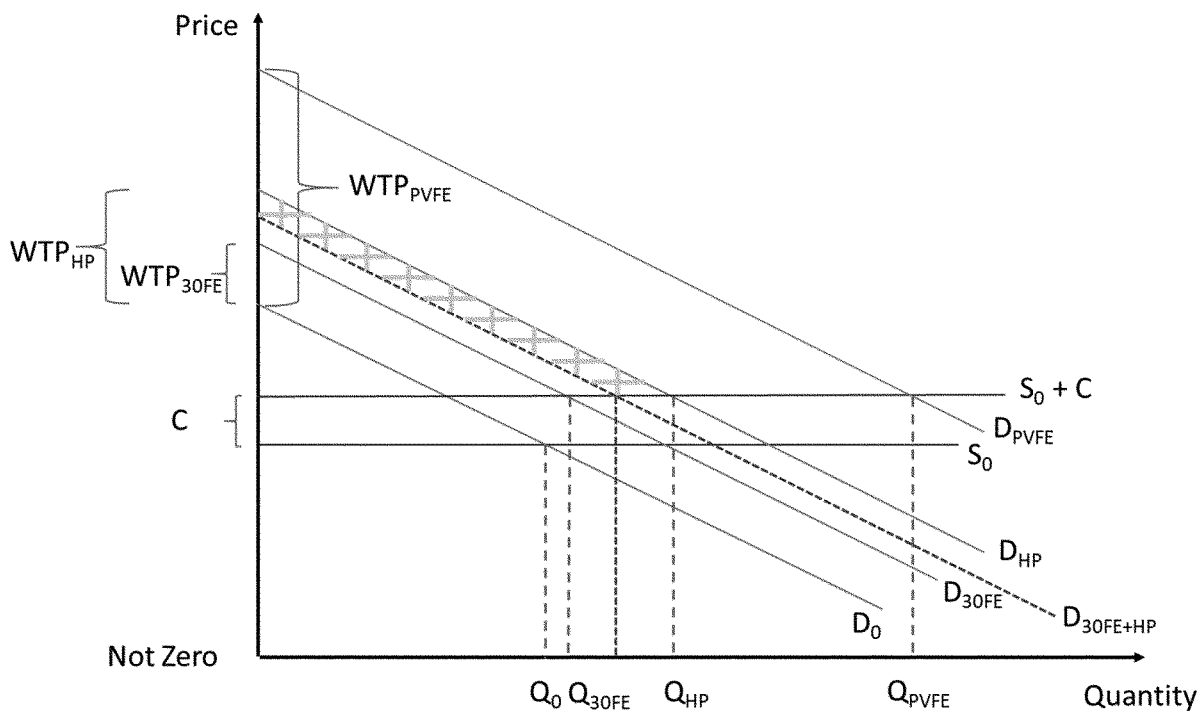


Figure III-23 – Manufacturers’ Decision to Adopt Technology with Fuel Economy Standards

Because the CAFE Model estimates the effects of standards on new vehicle sales and scrappage based on the difference between the cost of technology and the perceived value of fuel savings at the time a new vehicle is purchased, whether consumers perceive the value differently in regulated and unregulated markets is an important question. Traditional utility theory of consumer decision making does not allow that consumers' preference rankings depend on the context of the choices they make.

However, in addition to the theory of utility maximizing rational economic behavior, modern economics includes the insights and findings of behavioral economics, which has established many examples of human decision making that differ in important ways from the rational economic model. In particular, the behavioral model allows the possibility that consumers' preferences and decision-making processes often do change depending on the context or framing of choices. The possibility that behavioral theories of decision making

may be useful for understanding how consumers value fuel economy and for evaluating the costs and benefits of fuel economy standards was noted in the most recent NASEM (2021) report. An explanation of the different contexts helps to illustrate this point. If a consumer is thinking about buying a new car and is looking at two models, one that includes fuel economy technology and is more expensive and another that does not, she may buy the cheaper, less fuel efficient version even if the more expensive model will save

³⁴⁵ This is because using the technology to increase performance would not be the second-best

use of the cost of increasing fuel economy. The

second-best use would instead be to invest the cost at a market rate of return.

money in the long run. But if, instead, the consumer is faced with whether to buy a new car at all as opposed to keeping an older one, if all new cars contain technology to meet fuel economy standards then she may view the decision differently. Will, for example, an extra \$1,000 for a new car—a \$1,000 that the consumer will more than recoup in fuel savings—deter her from buying the new car, especially when most consumers finance cars over a number of years rather than paying the \$1,000 cost up front and will therefore partly or entirely offset any increase in monthly payment with lower fuel costs? In addition, the fact that standards generally increase gradually over a period of years allows time for consumers and other information sources to verify that fuel savings are real and of substantial value.

The CAFE Model's representation of consumers' vehicle choices under regulation reflects the "Gruenspecht Effect", the theory that regulation will inevitably cause new vehicles to be less desirable than they would have been in the absence of regulation, which will inevitably lead to reduced new vehicle sales, higher prices for used vehicles and slower turnover of the vehicle stock. However, if consumers severely undervalue fuel savings at the time of vehicle purchase, not only is that itself a market failure (a large discrepancy between decision and experienced utility) but it raises important questions about what causes such undervaluation and whether consumers' perceptions may change as the benefits of increased fuel economy are realized or whether the different framing of new vehicle choices in a regulated market might partially or entirely mitigate that undervaluation. The 2021 NASEM report asserts that if the behavioral model is correct, consumers might value fuel savings at or near their full lifetime discounted present value, potentially reversing the Gruenspecht Effect.

"On the other hand, the Gruenspecht effect is not predicted by the behavioral model, under which it is not only possible but likely that if the fuel savings from increased fuel economy exceed its cost, consumers will find the more fuel-efficient vehicles required by regulation to be preferable to those that would otherwise have been produced." "It is possible that sales would increase rather than decrease and likewise manufacturers' profits. In that case, increased new vehicle sales would reduce used vehicle prices, benefiting buyers of used vehicles and accelerating the turnover of the vehicle stock."³⁴⁶

NHTSA is interested in comments that can help contribute to resolving or improving our understanding of this issue and its implications for how the costs and benefits of fuel economy standards should be estimated.

(2) Refueling Benefit

Increasing CAFE standards, all else being equal, affect the amount of time drivers spend refueling their vehicles in several ways. First, they increase the fuel economy of ICE vehicles produced in the future, which increases vehicle range and decreases the number of refueling events for those vehicles. Conversely, to the extent that more stringent standards increase the purchase price of new vehicles, they may reduce sales of new vehicles and scrapping of existing ones, causing more VMT to be driven by older and less efficient vehicles which require more refueling events for the same amount of VMT driven. Finally, sufficiently stringent standards may also change the number of electric vehicles that are produced, and shift refueling to occur at a charging station, rather than at the pump—changing per-vehicle lifetime expected refueling costs.

The agency estimates these savings by calculating the amount of refueling time avoided—including the time it takes to find, refuel, and pay—and multiplying it by DOT's value of time of travel savings estimate. For a full description of the methodology, refer to TSD Chapter 6.1.4.

(3) Additional Mobility

Any increase in travel demand provides benefits that reflect the value to drivers and other vehicle occupants of the added—or more desirable—social and economic opportunities that become accessible with additional travel. Under the alternatives in this analysis, the fuel cost per mile of driving would decrease as a consequence of the higher fuel economy levels they require, thus increasing the number of miles that buyers of new cars and light trucks would drive as a consequence of the well-documented fuel economy rebound effect.

The fact that drivers and their passengers elect to make more frequent or longer trips to gain access to these opportunities when the cost of driving declines demonstrates that the benefits they gain by doing so exceed the costs they incur. At a minimum, the benefits must equal the cost of the fuel consumed to travel the additional miles (or they would not have occurred). The cost of that energy is subsumed in the simulated fuel expenditures, so it is necessary to account for the benefits

associated with those miles traveled here. But the benefits must also offset the economic value of their (and their passengers') travel time, other vehicle operating costs, and the economic cost of safety risks due to the increase in exposure that occurs with additional travel. The amount by which the benefits of this additional travel exceeds its economic costs measures the net benefits drivers and their passengers experience, usually referred to as increased consumer surplus.

TSD Chapter 6.1.5 explains the agency's methodology for calculating additional mobility.

2. External Costs and Benefits

(a) Costs

(1) Congestion and Noise

Increased vehicle use associated with the rebound effect also contributes to increased traffic congestion and highway noise. Although drivers obviously experience these impacts, they do not fully value their impacts on other system users, just as they do not fully value the emissions impacts of their own driving. Congestion and noise costs are "external" to the vehicle owners whose decisions about how much, where, and when to drive more—or less—in response to changes in fuel economy result in these costs. Therefore, unlike changes in the costs incurred by drivers for fuel consumption or safety risks they willingly assume, changes in congestion and noise costs are not offset by corresponding changes in the travel benefits drivers experience.

Congestion costs are limited to road users; however, since road users include a significant fraction of the U.S. population, changes in congestion costs are treated as part of the rule's economic impact on the broader society instead of as a cost or benefit to private parties. Costs resulting from road and highway noise are even more widely dispersed, because they are borne partly by surrounding residents, pedestrians, and other non-road users, and for this reason are also considered as a cost to the society as a whole.

To estimate the economic costs associated with changes in congestion and noise caused by differences in miles driven, the agency updated the underlying components of the cost estimates of per-mile congestion and noise costs from increased automobile and light truck use provided in FHWA's 1997 Highway Cost Allocation Study. The agencies previously relied on this study in the 2010, 2011, and 2012 final rules, and updating the individual underlying components for congestion

³⁴⁶ NASEM, 2021, p. 11–357.

costs in this analysis improves currency and internal consistency with the rest of the analysis. See TSD Chapter 6.2 for details on how the agency calculated estimate the economic costs associated with changes in congestion and noise caused by differences in miles driven. NHTSA specifically seeks comment on the congestion costs employed in this analysis, and whether and how to change them for the analysis for the final rule.

(2) Fuel Tax Revenue

As mentioned in III.G.1.b)(1), a portion of the fuel savings experienced by consumers includes avoided fuel taxes. While fuel taxes are treated as a transfer within the analysis and do not affect net benefits, the agency provides an estimate here to show the potential impact to state and local governments.

(b) Benefits

(1) Reduced Climate Damages

Extracting and transporting crude petroleum, refining it to produce transportation fuels, and distributing fuel generate additional emissions of GHGs and criteria air pollutants beyond those from cars' and light trucks' use of fuel. By reducing the volume of petroleum-based fuel produced and consumed, adopting higher CAFE standards will thus mitigate global climate-related economic damages caused by accumulation of GHGs in the atmosphere, as well as the more immediate and localized health damages caused by exposure to criteria pollutants. Because they fall broadly on the U.S.—and global, in the case of climate damages—population, reducing them represents an external benefit from requiring higher fuel economy.

NHTSA estimates the global social benefits of CO₂, CH₄, and N₂O emission reductions expected from this proposed rule using the social cost of greenhouse gases (SC–GHG) estimates presented in the Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive Order 13990 (“February 2021 TSD”). These SC–GHG estimates are interim values developed under Executive Order (E.O.) 13990 for use in benefit-cost analyses until updated estimates of the impacts of climate change can be developed based on the best available science and economics. NHTSA uses the SC–GHG interim values to estimate the benefits of decreased fuel consumption stemming from the proposal.

The SC–GHG estimates used in our analysis 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 the DOT 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 dioxide (SC–CO₂) values used across agencies. The IWG published SC–CO₂ estimates in 2010. 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–CH₄) and nitrous oxide (SC–N₂O) using methodologies that are consistent with the methodology underlying the SC–CO₂ estimates. Executive Order 13990 (issued on January 20, 2021) re-established the IWG and directed it to publish interim SC–GHG values for CO₂, CH₄, and N₂O within thirty days. Furthermore, the E.O. tasked the IWG with devising long-term recommendations to update the methodologies used in calculating these SC–GHG values, based on “the best available economics and science,” and incorporating principles of “climate risk, environmental justice, and intergenerational equity”.³⁴⁷ The E.O. also instructed the IWG to take into account the recommendations from the NAS committee convened on this topic, published in 2017.³⁴⁸ The February 2021 TSD provides a complete discussion of the IWG’s initial review conducted under E.O. 13990.

NHTSA is using the IWG’s interim values, published in February 2021 in a technical support document, for the CAFE analysis in this NPRM.³⁴⁹ This approach is the same as that taken in DOT regulatory analyses over 2009 through 2016. If the IWG issues new estimates before the final rule, the agency will consider revising the estimates within the CAFE Model time permitting. We request comment on this

³⁴⁷ Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis. (2021). Available at <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/20/executive-order-protecting-public-health-and-environment-and-restoring-science-to-tackle-climate-crisis/>.

³⁴⁸ National Academies of Science (NAS). (2017). Valuing Climate Damage: Updating Estimation of the Social Cost of Carbon Dioxide. Available at <https://www.nap.edu/catalog/24651/valuing-climate-damages-updating-estimation-of-the-social-cost-of->

³⁴⁹ Interagency Working Group on Social Cost of Greenhouse Gases, United States Government. (2021). *Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive Order 13990*, available at https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf?source=email.

approach to estimating social benefits of reducing GHG emissions in this rulemaking in light of the ongoing interagency process.

NHTSA notes that the primary analysis for this proposal estimates benefits from reducing emissions of CO₂ and other GHGs that incorporate a 2.5% discount rate for distant future climate damages, while discounting costs and non-climate related benefits using a 3% rate. NHTSA also presents cost and benefits estimates in the primary analysis that reflect a 3% discount rate for reductions in climate-related damages while discounting costs and non-climate related benefits at 7%. NHTSA believes this approach represents an appropriate treatment of the intergenerational issues presented by emissions that result in climate-related damages over a very-long time horizon, and is within scope of the IWG’s *Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide* that recommends discounting future climate damages at rates of 2.5%, 3%, and 5%.³⁵⁰

In addition, NHTSA emphasize the importance and value of considering the benefits calculated using all four SC–GHG estimates for each of three greenhouse gases. NHTSA includes the social costs of CO₂, CH₄, and N₂O calculated using the four different estimates recommended in the February 2021 TSD (model average at 2.5 percent, 3 percent, and 5 percent discount rates; 95th percentile at 3 percent discount rate) in the PRIA.

The February 2021 TSD does not specify how agencies should combine its estimates of benefits from reducing GHG emissions that reflect these alternative discount rates with the discount rates for nearer-term benefits and costs prescribed in OMB Circular A–4. Instead, it provides agencies with broad flexibility in implementing the February 2021 TSD. However, the February 2021 TSD does identify 2.5% as the “average certainty-equivalent rate using the mean-reverting and random walk approaches from Newell and Pizer (2003) starting at a discount rate of 3 percent.”³⁵¹ As such, NHTSA believes using a 2.5% discount rate for climate-related damages is consistent with the IWG guidance.

This section provides further discussion of the discount rates that NHTSA uses in its regulatory analysis

³⁵⁰ Interagency Working Group on Social Cost of Greenhouse Gases, United States Government, *Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide, Interim Estimates under Executive Order 13990*, February 2021.

³⁵¹ *Ibid.*

and presents results of a sensitivity analysis using a 3% discount rate for reductions in climate-related damages. NHTSA welcomes public comment on its selection of 2.5% for climate-related damages and will consider other discount rates for the final rule.

For a full discussion of the agency's quantification of GHGs, see TSD Chapter 6.2.1 and the PRIA.

(a) Discount Rates Accounting for Intergenerational Impacts

A standard function of regulatory analysis is to evaluate tradeoffs between impacts that occur at different points in time. Many, if not most, Federal regulations involve costly upfront investments that generate future benefits in the form of reductions in health, safety, or environmental damages. To evaluate these tradeoffs, the analysis must account for the social rate of time preference—the broadly observed social preference for benefits that occur sooner versus those that occur further in the future.³⁵² This is accomplished by discounting impacts that occur further in the future more than impacts that occur sooner.

OMB Circular A-4 affirmed the appropriateness of accounting for the social rate of time preference in regulatory analyses and prescribed discount rates of 3% and 7% for doing so. The 3% discount rate was chosen to represent the “consumption rate of interest” approach, which discounts future costs and benefits to their present values using the rate at which consumers appear to make tradeoffs between current consumption and equal consumption opportunities deferred to the future. OMB Circular A-4 reports a real rate of return on 10-year Treasury notes of 3.1% between 1973 and its 2003 publication date and interprets this as approximating the rate at which society is indifferent between consumption today and in the future.

The 7% rate reflects the opportunity cost of capital approach to discounting, where the discount rate approximates the foregone return on private investment if the regulation were to divert resources from capital formation. OMB Circular A-4 cites pre-tax rates of return on capital as part of its selection of the 7% rate.³⁵³ The IWG rejected the use of the opportunity cost of capital approach to discounting reductions in climate-related damages because

“consumption rate of interest is the correct discounting concept to use when future damages from elevated temperatures are estimated in consumption-equivalent units as is done in the IAMs used to estimate the SC-GHG (National Academies 2017).”³⁵⁴

As the IWG states, “GHG emissions are stock pollutants, where damages are associated with what has accumulated in the atmosphere over time, and they are long lived such that subsequent damages resulting from emissions today occur over many decades or centuries depending on the specific greenhouse gas under consideration.”³⁵⁵ OMB Circular A-4 states that impacts occurring over such intergenerational time horizons require special treatment:

Special ethical considerations arise when comparing benefits and costs across generations. Although most people demonstrate time preference in their own consumption behavior, it may not be appropriate for society to demonstrate a similar preference when deciding between the well-being of current and future generations. Future citizens who are affected by such choices cannot take part in making them, and today's society must act with some consideration of their interest.³⁵⁶

In addition to the ethical considerations, Circular A-4 also identifies uncertainty in long-run interest rates as a potential justification for using lower rates to discount intergenerational impacts. As Circular A-4 states, “Private market rates provide a reliable reference for determining how society values time within a generation, but for extremely long time periods no comparable private rates exist.”³⁵⁷ The social costs of distant future climate damages—and by implication, the value of reducing them by lowering emissions of GHGs—are highly sensitive to the discount rate, and the present value of reducing climate damages grows at an increasing rate as the discount rate used in the analysis declines. This “non-linearity” means that even if uncertainty about the exact value of the long-run interest rate is equally distributed between values above and below the 3% consumption rate of interest, the probability-weighted (or “expected”) present value of a unit reduction in climate damages will be higher than the value calculated using a 3% discount rate. The effect of such

uncertainty about the correct discount rate can thus be accounted for by using a lower “certainty-equivalent” rate to discount distant future damages.

The IWG identifies “a plausible range of certainty-equivalent constant consumption discount rates: 2.5, 3, and 5 percent per year.” The IWG's justification for its selection of these rates is summarized in this excerpt from its 2021 guidance:

The 3 percent value was included as consistent with estimates provided in OMB's Circular A-4 (OMB 2003) guidance for the consumption rate of interest. . . . The upper value of 5 percent was included to represent the possibility that climate-related damages are positively correlated with market returns, which would imply a certainty equivalent value higher than the consumption rate of interest. The low value, 2.5 percent, was included to incorporate the concern that interest rates are highly uncertain over time. It represents the average certainty-equivalent rate using the mean-reverting and random walk approaches from Newell and Pizer (2003) starting at a discount rate of 3 percent. Using this approach, the certainty equivalent is about 2.2 percent using the random walk model and 2.8 percent using the mean reverting approach. Without giving preference to a particular model, the average of the two rates is 2.5 percent. Additionally, a rate below the consumption rate of interest would also be justified if the return to investments in climate mitigation are negatively correlated with the overall market rate of return. Use of this lower value was also deemed responsive to certain judgments based on the prescriptive or normative approach for selecting a discount rate and to related ethical objections that have been raised about rates of 3 percent or higher.

Because the certainty-equivalent discount rate will lie progressively farther below the best estimate of the current rate as the time horizon when future impacts occur is extended, the IWG's recent guidance also suggest that it may be appropriate to use a discount rate that declines over time to account for interest rate uncertainty, as has been recommended by the National Academies and EPA's Science Advisory Board.³⁵⁸ The IWG mentioned that it will consider these recommendations and the relevant academic literature on declining rates in developing its final

³⁵² This preference is observed in many market transactions, including by savers that expect a return on their investments in stocks, bonds, and other equities; firms that expect positive rates of return on major capital investments; and banks that demand positive interest rates in lending markets.

³⁵³ OMB Circular A-4.

³⁵⁴ Interagency Working Group on Social Cost of Greenhouse Gases, United States Government, *Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide, Interim Estimates under Executive Order 13990*, February 2021.

³⁵⁵ *Ibid.*

³⁵⁶ OMB Circular A-4.

³⁵⁷ *Ibid.*

³⁵⁸ Interagency Working Group on Social Cost of Greenhouse Gases, United States Government, *Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide, Interim Estimates under Executive Order 13990*, February 2021.

guidance on the social cost of greenhouse gases.

The IWG 2021 interim guidance also presented new evidence on the consumption-based discount rate suggesting that a rate lower than 3% may be appropriate. For example, the IWG replicated OMB Circular A–4’s original 2003 methodology for estimating the consumption rate using the average return on 10-year Treasury notes over the last 30 years and found a discount rate close to 2%. They also presented rates over a longer time horizon, finding an average rate of 2.3% from 1962 to the present. Finally, they summarized results from surveys of experts on the topic and found a “surprising degree of consensus” for using a 2% consumption rate of interest to discount future climate-related impacts.³⁵⁹

NHTSA expects that the Interagency Working Group will continue to develop its final guidance on the appropriate discount rates to use for reductions in climate damages as NHTSA develops its final rule. If new guidance is issued in time for NHTSA’s final rule, NHTSA will incorporate the IWG’s updated guidance in the final regulatory analysis.

(b) Discount Rates Used in This Proposal for Climate-Related Benefits

As indicated above, NHTSA’s primary analysis presents cost and benefit estimates using a 2.5% discount rate for reductions in climate-related damages and 3% for non-climate related impacts. NHTSA also presents cost and benefits estimates using a 3% discount rate for reductions in climate-related damages alongside estimates of non-climate related impacts discounted at 7%. This latter pairing of a 3% rate for discounting benefits from reducing climate-related damages with a 7% discount rate for non-climate related impacts is consistent with NHTSA’s past practice.³⁶⁰ However, NHTSA’s pairing of 2.5% for climate-related damage reductions with 3% for non-climate related impacts is novel in this proposal.

As discussed above, the IWG’s guidance indicates that uncertainty in long-run interest rates suggests that a lower “certainty-equivalent” discount rate is appropriate for intergenerational impacts, and identifies 2.5%, 3%, and 5% as “certainty-equivalent” discount rates. NHTSA emphasizes the importance and value of considering the

benefits calculated using all four SC–GHG estimates for each of three greenhouse gases. NHTSA includes the social costs of CO₂, CH₄, and N₂O calculated using the four different estimates recommended in the February 2021 TSD (model average at 2.5 percent, 3 percent, and 5 percent discount rates; 95th percentile at 3 percent discount rate) in the PRIA. For presentation purposes in this rule, NHTSA shows two primary estimates. NHTSA believes that pairing OMB’s 3% estimate of the consumption discount rate for near-term costs and benefits with the IWG’s lower certainty-equivalent rate of 2.5% is consistent with current interim guidance in the February 2021 TSD. NHTSA also believe that its pairing of the 3% certainty-equivalent rate for climate-related benefits with OMB’s 7% discount rate is consistent with guidance from the February 2021 TSD for GHGs and OMB Circular A–4 for other costs and benefits.

In addition, NHTSA presents a sensitivity analysis where both distant future and nearer-term GHG impacts are discounted using the 3% rate combined with all other costs and benefits discounted at 3%.

Table III-39 – Comparison of Results Using a 3% Discount Rate for All Impacts Except GHGs with Impacts Using Either 2.5% or 3% for Climate-Related Benefits, Model Years 1981 through 2029

	Totals	
	3%/2.5% SC-GHG Discount Rate	3%/3% SC-GHG Discount Rate
Costs	121.1	121.1
Benefits	121.4	110.5
Net Benefits	0.3	-10.6

Table III-40 – Comparison of Results Using a 3% Discount Rate for All Impacts Except GHGs with Impacts Using Either 2.5% or 3% for Climate-Related Benefits, Calendar Years 2021 through 2050

	Totals	
	3%/2.5% SC-GHG Discount Rate	3%/3% SC-GHG Discount Rate
Costs	333.6	333.6
Benefits	433.6	391.7
Net Benefits	100	58.1

³⁵⁹ *Ibid.*

³⁶⁰ *See, e.g.,* the 2012 and 2020 final CAFE rules.

NHTSA seeks comment on the above discussion.

(2) Reduced Health Damages

The CAFE Model estimates monetized health effects associated with emissions from three criteria pollutants: NO_x, SO_x, and PM_{2.5}. As discussed in Section III.F above, although other criteria pollutants are currently regulated, only impacts from these three pollutants are calculated since they are known to be emitted regularly from mobile sources, have the most adverse effects to human health, and there exist several papers from the EPA estimating the benefits per ton of reducing these pollutants. Other pollutants, especially those that are precursors to ozone, are more difficult to model due to the complexity of their formation in the atmosphere, and EPA does not calculate benefit-per-ton estimates for these. The CAFE Model computes the monetized impacts associated with health damages from each pollutant by multiplying monetized health impact per ton values by the total tons of these pollutants, which are emitted from both upstream and tailpipe sources. Chapter 5 of the TSD accompanying this proposal includes a detailed description of the emission factors that inform the CAFE Model's calculation of the total tons of each pollutant associated with upstream and tailpipe emissions.

These monetized health impacts per ton values are closely related to the health incidence per ton values described above in Section III.F and in detail in Chapter 5.4 of the TSD. We use the same EPA sources that provided health incidence values to determine which monetized health impacts per ton values to use as inputs in the CAFE Model. Like the estimates associated with health incidences per ton of criteria pollutant emissions, we used multiple EPA papers and conversations with EPA staff to appropriately account for monetized damages for each pollutant associated with the source sectors included in the CAFE Model, based on which papers contained the most up-to-date data.³⁶¹ The various emission source sectors included in the EPA papers do not always correspond exactly to the emission source categories

used in the CAFE Model.³⁶² In those cases, we mapped multiple EPA sectors to a single CAFE source category and computed a weighted average of the health impact per ton values.

The EPA uses the value of a statistical life (VSL) to estimate premature mortality impacts, and a combination of willingness to pay estimates and costs of treating the health impact for estimating the morbidity impacts.³⁶³ EPA's 2018 technical support document, "Estimating the Benefit per Ton of Reducing PM_{2.5} Precursors from 17 Sectors,"³⁶⁴ (referred to here as the 2018 EPA source apportionment TSD) contains a more detailed account of how health incidences are monetized. It is important to note that the EPA sources cited frequently refer to these monetized health impacts per ton as "benefits per ton," since they describe these estimates in terms of emissions avoided. In the CAFE Model input structure, these are generally referred to as monetized health impacts or damage costs associated with pollutants emitted, not avoided, unless the context states otherwise.

The CAFE Model health impacts inputs are based partially on the structure the 2018 EPA source apportionment TSD, which reported benefits per ton values for the years 2020, 2025, and 2030. For the years in between the source years used in the input structure, the CAFE Model applies values from the closest source year. For instance, the model applies 2020 monetized health impact per ton values for calendar years 2020–2022 and applies 2025 values for calendar years 2023–2027. For some of the monetized health damage values, in order to match the structure of other impacts costs, DOT staff developed proxies for 7% discounted values for specific source sectors by using the ratio between a comparable sector's 3% and 7% discounted values. In addition, we used implicit price deflators from the Bureau of Economic Analysis (BEA) to convert different monetized estimates to 2018 dollars, in order to be consistent with the rest of the CAFE Model inputs.

³⁶² The CAFE Model's emission source sectors follow a similar structure to the inputs from GREET. See Chapter 5.2 of the TSD accompanying this proposal for further information.

³⁶³ Although EPA and DOT's VSL values differ, DOT staff determined that using EPA's VSL was appropriate here, since it was already included in these monetized health impact values, which were best suited for the purposes of the CAFE Model.

³⁶⁴ See Environmental Protection Agency (EPA). 2018. Estimating the Benefit per Ton of Reducing PM_{2.5} Precursors from 17 Sectors. https://www.epa.gov/sites/production/files/2018-02/documents/sourceapportionmentbpttsd_2018.pdf.

This process is described in more detail in Chapter 6.2.2 of the TSD accompanying this proposal. In addition, the CAFE Model documentation contains more details of the model's computation of monetized health impacts. All resulting emissions damage costs for criteria pollutants are located in the Criteria Emissions Cost worksheet of the Parameters file.

(3) Reduction in Petroleum Market Externality

By amending existing standards, the proposal would decrease domestic consumption of gasoline, producing a correspondingly decrease in the Nation's demand for crude petroleum, a commodity that is traded actively in a worldwide market. Although the U.S. accounts for a sufficient (albeit diminishing) share of global oil consumption that the resulting decrease in global petroleum demand will exert some downward pressure on worldwide prices.

U.S. consumption and imports of petroleum products have three potential effects on the domestic economy that are often referred to collectively as "energy security externalities," and increases in their magnitude are sometimes cited as possible social costs of increased U.S. demand for petroleum. First, any increase in global petroleum prices that results from higher U.S. gasoline demand will cause a transfer of revenue to oil producers worldwide from consumers of petroleum, because consumers throughout the world are ultimately subject to the higher global price that results. Although this transfer is simply a shift of resources that produces no change in global economic welfare, the financial drain it produces on the U.S. economy is sometimes cited as an external cost of increased U.S. petroleum consumption because consumers of petroleum products are unlikely to consider it.

As the U.S. approaches self-sufficiency in petroleum production (the Nation became a net exporter of petroleum in 2020), this transfer is increasingly from U.S. consumers of refined petroleum products to U.S. petroleum producers, so it not only leaves welfare unaffected, but even ceases to be a financial burden on the U.S. economy. In fact, as the U.S. becomes a larger net petroleum exporter, any transfer from global consumers to petroleum producers would become a financial benefit to the U.S. economy. Nevertheless, uncertainty in the Nation's long-term import-export balance makes it difficult to project precisely how these effects might

³⁶¹ Environmental Protection Agency (EPA). 2018. Estimating the Benefit per Ton of Reducing PM_{2.5} Precursors from 17 Sectors. https://www.epa.gov/sites/production/files/2018-02/documents/sourceapportionmentbpttsd_2018.pdf; Wolfe et al. 2019. Monetized health benefits attributable to mobile source emissions reductions across the United States in 2025. <https://pubmed.ncbi.nlm.nih.gov/30296769/>; Fann et al. 2018. Assessing Human Health PM_{2.5} and Ozone Impacts from U.S. Oil and Natural Gas Sector Emissions in 2025. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6718951/>.

change in response to increased consumption.

Higher U.S. petroleum consumption can also increase domestic consumers' exposure to oil price shocks and thus increase potential costs to all U.S. petroleum users (including those outside the light duty vehicle sector, whose consumption would be unaffected by this proposed rule) from possible interruptions in the global supply of petroleum or rapid increases in global oil prices. Because users of petroleum products are unlikely to consider the effect of their increased purchases on these risks, their economic value is often cited as an external cost of increased U.S. consumption.

Finally, some analysts argue that domestic demand for imported petroleum may also influence U.S. military spending; because the increased cost of military activities would not be reflected in the price paid at the gas pump, this is often suggested to represent a third category of external costs from increased U.S. petroleum consumption. For example, NHTSA has received extensive comments to past actions from the group Securing America's Energy Future on this topic.

Each of these three factors would be expected to decrease—albeit by a limited magnitude—as a consequence of decrease in U.S. petroleum consumption resulting from the proposed standards. TSD Chapter 6.2.4 provides a comprehensive explanation of the agency's analysis of these three impacts.

(4) Changes in Labor

As vehicle prices rise, we expect consumers to purchase fewer vehicles than they would have at lower prices. If manufacturers produce fewer vehicles as a consequence of lower demand, manufacturers may need less labor to produce their fleet and dealers may need less labor to sell the vehicles. Conversely, as manufacturers add equipment to each new vehicle, the industry will require labor resources to develop, sell, and produce additional fuel-saving technologies.³⁶⁵ We also account for the possibility that new standards could shift the relative shares of passenger cars and light trucks in the overall fleet. Since the production of different vehicles involves different amounts of labor, this shift impacts the quantity of estimated labor.

The analysis considers the direct labor effects that the CAFE standards have across the automotive sector. The

facets include (1) dealership labor related to new light-duty vehicle unit sales; (2) assembly labor for vehicles, engines, and transmissions related to new vehicle unit sales; and (3) labor related to mandated additional fuel savings technologies, accounting for new vehicle unit sales. The labor utilization analysis is intentionally narrow in its focus and does not represent an attempt to quantify the overall labor or economic effects of this rulemaking because adjacent employment factors and consumer spending factors for other goods and services are uncertain and difficult to predict. We do not consider how direct labor changes may affect the macro economy and potentially change employment in adjacent industries. For instance, we do not consider possible labor changes in vehicle maintenance and repair, nor changes in labor at retail gas stations. We also do not consider possible labor changes due to raw material production, such as production of aluminum, steel, copper, and lithium, nor does the agency consider possible labor impacts due to changes in production of oil and gas, ethanol, and electricity.

All labor effects are estimated and reported at a national level, in person-years, assuming 2,000 hours of labor per person-year.³⁶⁶ These labor hours are not converted into monetized values because we assume that the labor costs are included into a new vehicle's purchasing price. The analysis estimates labor effects from the forecasted CAFE Model technology costs and from review of automotive labor for the MY 2020 fleet. The agency uses information about the locations of vehicle assembly, engine assembly, and transmission assembly, and the percent of U.S. content of vehicles collected from American Automotive Labeling Act (AALA) submissions for each vehicle in the reference fleet.³⁶⁷ The analysis assumes the portion of parts that are made in the U.S. will remain constant for each vehicle as manufacturers add fuel-savings technologies. This should not be misconstrued as a prediction that the percentage of U.S.-made parts—and by extension U.S. labor—will remain constant, but rather that the agency does not have a clear basis to project where future productions may shift. The analysis also uses data from the National Automotive Dealers

Association (NADA) annual report to derive dealership labor estimates.

In sum, the analysis shows that the increased labor from production of new technologies used to meet the preferred alternative will outweigh any decreases attributable to the change in new vehicle sales. For a full description of the process the agency uses to estimate labor impacts, see TSD Chapter 6.2.5.

3. Costs and Benefits Not Quantified

In addition to the costs and benefits described above, Table III–37 and Table III–38 each include two line-items without values. The first is maintenance and repair costs. Many of the technologies manufacturers apply to vehicles to meet CAFE standards are sophisticated and costly. The technology costs capture only the initial or “upfront” costs to incorporate this equipment into new vehicles; however, if the equipment is costlier to maintain or repair—which is likely either because the materials used to produce the equipment are more expensive or the equipment is significantly more complex than less fuel efficient alternatives and requires more time and labor—then consumers will also experience increased costs throughout the lifetime of the vehicle to keep it operational. The agency does not calculate the additional cost of repair and maintenance currently because it lacks a basis for estimating the incremental change attributable to the standards. The agency seeks comment on methods for estimating these costs.

The second item is the potential sacrifice in other vehicle attributes. In addition to fuel economy, potential buyers of new cars and light trucks value other features such as their seating and cargo-carrying capacity, ride comfort, safety, and performance. Changing some of these other features, however, can affect vehicles' fuel economy, so manufacturers will carefully consider tradeoffs among them when deciding how to comply with stricter CAFE standards. Currently the analysis assumes that these vehicle attributes will not change as a result of these rules,³⁶⁸ but in practice manufacturers may need to make practical design changes to meet the standards. Even if manufacturers are able to hold vehicles' other attributes at *today's* levels while meeting higher fuel economy targets, manufacturers may have to dedicate additional resources to comply with stricter CAFE targets and forego improvements in other vehicle attributes. The potential loss of other

³⁶⁵ For the purposes of this analysis, DOT assumes a linear relationship between labor and production volumes.

³⁶⁶ The agencies recognize a few local production facilities may contribute meaningfully to local economies, but the analysis reports only on national effects.

³⁶⁷ 49 CFR part 583.

³⁶⁸ See TSD Chapter 2.4.5.

vehicle attributes is an opportunity cost to consumers.

The agency has previously attempted to model the potential sacrifice in other vehicle attributes in sensitivity analyses. In those other rulemakings, the agency acknowledged that it is extremely difficult to quantify the potential loss of other vehicle attributes. To accurately do so requires extensive projections about which and how much of other attributes will be sacrificed and a detailed accounting of how much value consumers assigned to those attributes. The agency modeled the loss in other vehicle attributes using published empirical estimates of tradeoffs between higher fuel economy and improvements to other attributes, together with estimates of the values buyers attach to those attributes. The agency is unsure whether this is an appropriate methodology since there is uncertainty about how much fuel economy consumers are willing to pay for and how consumers value other vehicle attributes. The agency seeks comment on alternative methods for estimating the potential sacrifice in other vehicle attributes.

H. Simulating Safety Effects of Regulatory Alternatives

The primary objective of CAFE standards is to achieve maximum feasible fuel economy, thereby reducing fuel consumption. In setting standards to achieve this intended effect, the potential of the standards to affect vehicle safety is also considered. As a safety agency, the agency has long considered the potential for adverse safety consequences when establishing CAFE standards.

This safety analysis includes the comprehensive measure of safety impacts from three factors:

1. Changes in Vehicle Mass. Similar to previous analyses, the agency calculates the safety impact of changes in vehicle mass made to reduce fuel consumption and comply with the standards. Statistical analysis of historical crash data indicates reducing mass in heavier vehicles generally improves safety, while reducing mass in lighter vehicles generally reduces safety. The agency's crash simulation modeling of vehicle design concepts for reducing mass revealed similar effects. These observations align with the role of mass disparity in crashes; when vehicles of different masses collide, the smaller vehicle will experience a larger change in velocity (and, by extension, force) which increases the risk to its occupants.

2. Impacts of Vehicle Prices on Fleet Turnover. Vehicles have become safer

over time through a combination of new safety regulations and voluntary safety improvements. The agency expects this trend to continue as emerging technologies, such as advanced driver assistance systems, are incorporated into new vehicles. Safety improvements will likely continue regardless of changes to CAFE standards.

As discussed in Section III.E.2, technologies added to comply with fuel economy standards have an impact on vehicle prices, therefore slowing the acquisition of newer vehicles and retirement of older ones. The delay in fleet turnover caused by the effect of new vehicle prices affect safety by slowing the penetration of new safety technologies into the fleet.

The standards also influence the composition of the light-duty fleet. As the safety provided by light trucks, SUVs and passenger cars responds differently to technology that manufacturers employ to meet the standards—particularly mass reduction—fleets with different compositions of body styles will have varying numbers of fatalities, so changing the share of each type of light-duty vehicle in the projected future fleet impacts safety outcomes.

3. Increased driving because of better fuel economy. The “rebound effect” predicts consumers will drive more when the cost of driving declines. More stringent standards reduce vehicle operating costs, and in response, some consumers may choose to drive more. Additional driving increases exposure to risks associated with motor vehicle travel, and this added exposure translates into higher fatalities and injuries.

The contributions of the three factors described above generate the differences in safety outcomes among regulatory alternatives.³⁶⁹ The agency's analysis makes extensive efforts to allocate the differences in safety outcomes between the three factors. Fatalities expected during future years under each alternative are projected by deriving a fleet-wide fatality rate (fatalities per vehicle mile of travel) that incorporates the effects of differences in each of the three factors from baseline conditions and multiplying it by that alternative's expected VMT. Fatalities are converted

³⁶⁹ The terms safety performance and safety outcome are related but represent different concepts. When we use the term safety performance, we are discussing the intrinsic safety of a vehicle based on its design and features, while safety outcome is used to describe whether a vehicle has been involved in an accident and the severity of the accident. While safety performance influences safety outcomes, other factors such as environmental and behavioral characteristics also play a significant role.

into a societal cost by multiplying fatalities with the DOT-recommended value of a statistical life (VSL) supplemented by economic impacts that are external to VSL measurements. Traffic injuries and property damage are also modeled directly using the same process and valued using costs that are specific to each injury severity level.

All three factors influence predicted fatalities, but only two of them—changes in vehicle mass and in the composition of the light-duty fleet in response to changes in vehicle prices—impose increased risks on drivers and passengers that are not compensated for by accompanying benefits. In contrast, increased driving associated with the rebound effect is a consumer choice that reveals the benefit of additional travel. Consumers who choose to drive more have apparently concluded that the utility of additional driving exceeds the additional costs for doing so, including the crash risk that they perceive additional driving involves. As discussed in Chapter 7 of the accompanying Technical Support Document, the benefits of rebound driving are accounted for by offsetting a portion of the added safety costs.

The agency categorizes safety outcome through three measures of light-duty vehicle safety: Fatalities to occupants occurring in crashes, serious injuries sustained by occupants, and the number of vehicles involved in crashes that cause property damage but no injuries. Counts of fatalities to occupants of automobiles and light trucks are obtained from the agency's Fatal Accident Reporting System (FARS). Estimates of the number of serious injuries to drivers and passengers of light-duty vehicles are tabulated from the agency's General Estimates System (GES), an annual sampling of motor vehicle crashes occurring throughout the U.S. Weights for different types of crashes were used to expand the samples of each type to estimates of the total number of crashes occurring during each year. Finally, estimates of the number of automobiles and light trucks involved in property damage-only (PDO) crashes each year were also developed using GES. NHTSA seeks comment on the following discussion.

1. Mass Reduction Impacts

Vehicle mass reduction can be one of the more cost-effective means of improving fuel economy, particularly for makes and models not already built with much high-strength steel or aluminum closures or low-mass components. Manufacturers have stated that they will continue to reduce vehicle

mass to meet more stringent standards, and therefore, this expectation is incorporated into the modeling analysis supporting the standards. Safety trade-offs associated with mass-reduction have occurred in the past, particularly before CAFE standards were attribute-based; past safety trade-offs may have occurred because manufacturers chose at the time, in response to CAFE standards, to build smaller and lighter vehicles. In cases where fuel economy improvements were achieved through reductions in vehicle size and mass, the smaller, lighter vehicles did not fare as well in crashes as larger, heavier vehicles, on average. Although The agency now uses attribute-based standards, in part to reduce or eliminate the incentive to downsize vehicles to comply with CAFE standards, the agency must be mindful of the possibility of related safety trade-offs.

For this proposed rule, the agency employed the modeling technique developed in the 2016 Puckett and Kindelberger report to analyze the updated crash and exposure data by examining the cross sections of the societal fatality rate per billion vehicle miles of travel (VMT) by mass and footprint, while controlling for driver age, gender, and other factors, in separate logistic regressions for five vehicle groups and nine crash types.³⁷⁰ The agency utilized the relationships between weight and safety from this analysis, expressed as percentage increases in fatalities per 100-pound weight reduction (which is how mass reduction is applied in the technology analysis; see Section III.D.4), to examine the weight impacts applied in this CAFE analysis. The effects of mass reduction on safety were estimated relative to (incremental to) the regulatory baseline in the CAFE analysis, across all vehicles for MY 2021 and beyond.

In computing the impact of changes in mass on safety, the agency is faced with competing challenges. Research has consistently shown that mass reduction affects “lighter” and “heavier” vehicles differently across crash types. The 2016 Puckett and Kindelberger report found mass reduction concentrated among the heaviest vehicles is likely to have a beneficial effect on overall societal fatalities, while mass reduction concentrated among the lightest vehicles is likely to have a detrimental effect on fatalities. This represents a relationship between the dispersion of

mass across vehicles in the fleet and societal fatalities: Decreasing dispersion is associated with a decrease in fatalities. Mass reduction in heavier vehicles is more beneficial to the occupants of lighter vehicles than it is harmful to the occupants of the heavier vehicles. Mass reduction in lighter vehicles is more harmful to the occupants of lighter vehicles than it is beneficial to the occupants of the heavier vehicles.

To accurately capture the differing effect on lighter and heavier vehicles, the agency splits vehicles into lighter and heavier vehicle classifications in the analysis. However, this poses a challenge of creating statistically meaningful results. There is limited relevant crash data to use for the analysis. Each partition of the data reduces the number of observations per vehicle classification and crash type, and thus reduces the statistical robustness of the results. The methodology employed by the agency was designed to balance these competing forces as an optimal trade-off to accurately capture the impact of mass-reduction across vehicle curb weights and crash types while preserving the potential to identify robust estimates.

Comments on the NPRM (83 FR 42986, August 24, 2018) for the 2020 CAFE rule included suggestions that the sample of LTVs in the analysis should not include the medium- or heavy-duty (*i.e.*, truck-based vehicles with GVWR above 8,500 pounds) equivalents of light-duty vehicles in the sample (*e.g.*, Ford F-250 versus F-150, RAM 2500 versus RAM 1500, Chevrolet Suburban 2500 versus Chevrolet Suburban 1500), or Class 2b and 3 vehicles. For the proposal, NHTSA explored revising the analysis consistent with such comments. The process involved two key analytical steps: (1) Removing all case vehicles from the analysis whose GVWR exceeded 8,500 pounds; and (2) re-classifying all crash partners with GVWR above 8,500 pounds as heavy vehicles. The direct effects of these changes are: (1) The range of curb weights in the LTV sample is reduced, lowering the median curb weight from 5,014 pounds to 4,808 pounds; (2) the sample size of LTVs is reduced (the number of case LTVs under this alternative specification is approximately 18 percent lower than in the central analysis); and (3) the relative impact of crashes with LTVs on overall impacts on societal fatality rates decreases, while the corresponding impact of crashes with heavy vehicles increases.

The results from the exploratory analysis of this alternative approach are provided in Table III-41. The agency seeks comment on this alternative approach; public comment will inform the decision whether to incorporate the results into the CAFE Model. The primary functional change offered by the alternative approach is that the sample of vehicles classified as LTVs would be restricted to vehicles that would be subject to CAFE regulations. At the statistical level, the concerns raised in the agency’s response to comment on the 2018 CAFE NPRM remain. In particular, including Class 2b and 3 vehicles in the analysis to determine the relationship of vehicle mass on safety has the added benefit of improving correlation constraints. Notably, curb weight increases faster than footprint for large light trucks and Class 2b and 3 pickup trucks and SUVs, in part because the widths of vehicles are constrained more tightly (*i.e.*, due to lane widths) than their curb weights. Including data from Class 2b and 3 pickup truck and SUV fatal crashes provides data over a wider range of vehicle weights, which improves the ability to estimate the mass-crash fatality relationship. That is, by extending the footprint-curb weight-fatality data to include Class 2b and 3 trucks that are functionally and structurally similar to corresponding ½-ton models that are subject to CAFE regulation, the sample size and ranges of curb weights and footprint are improved. Sample size is a challenge for estimating relationships between curb weight and fatality risk for individual crash types in the main analysis; dividing the sample further or removing observations makes it increasingly difficult to identify meaningful estimates and the relationships that are present in the data, as shown in the sensitivity analysis below. For the proposal, the agency has determined that the benefit of the additional data points outweighs the concern that some of the vehicles used to determine the mass-safety coefficients are not regulated by CAFE vehicles.

The agency also explored three other alternative model specifications that are presented in Table III-41. The first alternative centers on aligning CUVs and minivans with the rest of the sample, by splitting these vehicles into two weight classes. The key factor restricting this change historically has been a low sample size for these vehicles; the exploratory analysis examined whether the current database (which, due to the range of CYs covered, contains a smaller share of CUVs and

³⁷⁰Puckett, S.M. and Kindelberger, J.C. (2016, June). Relationships between Fatality Risk, Mass, and Footprint in Model Year 2003–2010 Passenger Cars and LTVs—Preliminary Report. (Docket No. 2016–0068). Washington, DC: National Highway Traffic Safety Administration.

minivans than the current fleet) contains a sufficient sample size to evaluate two weight classes for CUVs and minivans. A complicating factor in this analysis is that minivans tend to have higher curb weights than other CUVs, adding statistical burden in identifying meaningful effects of mass on societal fatality rates after accounting for body type in the weight class with the fewest minivans (*i.e.*, lighter CUVs and minivans).

The second alternative centers on aligning passenger cars with the rest of the sample by including cars that are equipped with all-wheel drive (AWD). In previous analyses, passenger cars with AWD were excluded from the analysis because they represented a sufficiently low share of the vehicle fleet that statistical relationships between AWD status and societal

fatality risk were highly prone to being conflated with other factors associated with AWD status (*e.g.*, location, luxury vehicle status). However, the share of AWD passenger cars in the fleet has grown. Approximately one-quarter of the passenger cars in the database have AWD, compared to an approximately five-percent share in the MY 2000–2007 database. Furthermore, all other vehicle types in the analysis include AWD as an explanatory variable. Thus, the agency finds the inclusion of a considerable portion of the real-world fleet (*i.e.*, passenger cars with AWD) to be a meaningful consideration.

The third alternative is a minor procedural question: Whether to expand the CYs and MYs used to identify the distribution of fatalities across crash types. The timing of the safety databases places the years of the analysis used to

establish the distribution of fatalities by crash type firmly within the central years of the economic downturn of the late 2000s and early 2010s. During these years, travel demand was below long-term trends, resulting in fewer crashes. In turn, applying the same window of CYs and MYs to the identification of the distribution of fatalities across crash types results in notably fewer crashes to incorporate into the analysis. The agency conducted exploratory analysis on the question of whether to add CYs and MYs to the range of crashes used to identify the distribution of fatalities across crash types; this analysis was conducted in concert with the two alternatives discussed directly above. Results incorporating these three alternatives are presented in Table III–41.

Table III-41 – Fatality Increase (%) per 100-Pound Mass Reduction While Holding Footprint Constant with Alternative Model Specifications - MY 2004-2011, CY 2006-2012

Vehicle Class	Point Estimates, Fatalities Weighted Across MY 2008-2011 in CY 2008-2012 (Original Weights)	Point Estimates, Fatalities Weighted Across MY 2007-2011 in CY 2007-2012	Point Estimates, Fatalities Weighted Across MY 2006-2011 in CY 2006-2012	Point Estimates, Fatalities Weighted Across MY 2004-2011 in CY 2006-2012 (Full Sample)
Cars < 3,201 Pounds (including AWD)	1.12%	1.12%	1.11%	1.12%
Cars 3,201+ Pounds (including AWD)	0.89%	0.87%	0.84%	0.86%
LTVs < 4,808 Pounds (No Class 2b/3)	0.26%	0.26%	0.26%	0.29%
LTVs 4,808+ Pounds (No Class 2b/3)	-0.16%	-0.17%	-0.16%	-0.17%
CUVs and Minivans < 3,955 Pounds	0.20%	0.19%	0.18%	0.18%
CUVs and Minivans 3,955+ Pounds	-0.52%	-0.52%	-0.53%	-0.51%

Under the alternative specification excluding Class 2b and Class 3 truck-based vehicles as case vehicles, the median curb weight for LTVs is 4,808 pounds, or 206 pounds lighter than in the central analysis. When splitting CUVs and minivans into two weight classes, the median curb weight for the vehicles is 3,955 pounds. Under this alternative specification, where Class 2b and Class 3 truck-based crash partners are shifted from truck-based LTVs to heavy-duty vehicles, the median curb weight for LTV crash partners is 4,216

pounds, or 144 pounds lighter than in the central analysis.

Re-classifying Class 2b and Class 3 truck-based vehicles has a strong effect on the point estimate for heavier LTVs. Critically, removing the heaviest trucks as case vehicles yields a much smaller point estimate (reduction in societal fatality rates of between 0.16% and 0.17% per 100-pound mass reduction, versus 0.61% in the central analysis). This result is consistent with a relationship where a key share of the sensitivity of fatality risk is attributed to the mass of the heaviest vehicles in the

fleet (*i.e.*, supporting the role of mass dispersion in societal fatality rates). Importantly, the point estimate for lighter LTVs is not meaningfully different from the corresponding estimate in the central analysis (increase in societal fatality rates of between 0.26% and 0.29% per 100-pound mass reduction, versus 0.3% in the central analysis). Considered in concert, these results indicate that the most effective reductions in societal fatality rates via mass reduction in truck-based vehicles would arise not from lightweighting the heaviest vehicles subject to CAFE

regulation, but rather from lightweighting similar, medium- and heavy-duty vehicles.

Including passenger cars with AWD in the analysis has little effect on the point estimate for lighter passenger cars (increase in societal fatality rates of approximately 1.1% per 100-pound mass reduction, versus 1.2% in the central analysis). However, this revision has a strong effect on the point estimate for heavier passenger cars (increase in societal fatality rates of between 0.84% and 0.89% per 100-pound mass reduction, versus 0.42% in the central analysis). This result supports a hypothesis that, after taking AWD status into account, mass reduction in heavier passenger cars is a more important driver of societal fatality rates than previously estimated. Although this result could be spurious, estimated confidence bounds (presented below) indicate that accounting for AWD status reduces uncertainty in the point estimate. The agency seeks comment on the inclusion of passenger cars with AWD when estimating the effects of mass reduction on societal fatality rates.

Splitting CUVs and minivans into two vehicle classes yields point estimates that are consistent with the point estimate for the consolidated CUV-minivan vehicle class (an average decrease in societal fatality rates of approximately 0.16% to 0.18% per 100-pound mass reduction across the two vehicle classes, versus a decrease of 0.25% in the central analysis). However, sample sizes half as large in the two vehicle classes relative to the consolidated vehicle class lead to very large estimated confidence bounds, as shown below. Due to this uncertainty, The agency does not feel that the current databases contain a large enough sample of CUVs and minivans to split these vehicles into two classes in the analysis; however, this issue will be re-examined when the next iteration of the databases is complete.

Extending the range of CYs and MYs used to establish the distribution of fatalities across crash types has a negligible effect on the point estimates. Based on the narrow ranges of results in Table III–41, The agency finds evidence supporting a flexible approach in the choice of CYs and MYs used in this manner. All else being equal, extending the range helps to mitigate the potential for individual crash types with large estimated effects to drive spurious effects on overall estimates through unrepresentatively high estimated shares of overall fatalities. As a hedge in this direction, the agency applied the estimates from the alternative specification with two additional CYs

and MYs (*i.e.*, the second column from the right in Table III–41) when evaluating 95-percent confidence bounds for the alternative models considered here. The agency seeks comment on this approach to representing the distribution of fatalities across crash types.

A more detailed description of the mass-safety analysis can be found in Chapter 7 of the accompanying TSD.

2. Sales/Scrapage Impacts

The sales and scrapage responses to higher vehicle prices discussed in Section III.E.2 have important safety consequences and influence safety through the same basic mechanism, fleet turnover. In the case of the scrapage response, delaying fleet turnover keeps drivers in older vehicles which tend to be less safe than newer vehicles.³⁷¹ Similarly, the sales response slows the rate at which newer vehicles, and their associated safety improvements, enter the on-road population. The sales response also influences the mix of vehicles on the road—with more stringent CAFE standards leading to a higher share of light trucks sold in the new vehicle market, assuming all else is equal. This occurs because there is diminishing value to marginal improvements in fuel economy (there are fewer gallons to be saved), and as the difference in consumption between light trucks and passenger cars diminishes, the other attributes of the trucks will likely lead to increases in their market share—especially under lower gas prices. Light trucks have higher rates of fatal crashes when interacting with passenger cars and, as earlier discussed, different directional responses to mass reduction technology based on the existing mass and body style of the vehicle.

Any effects on fleet turnover (either from delayed vehicle retirement or deferred sales of new vehicles) will affect the distribution of both ages and model years present in the on-road fleet. Because each of these vintages carries with it inherent rates of fatal crashes, and newer vintages are generally safer than older ones, changing that distribution will change the total number of on-road fatalities under each regulatory alternative. Similarly, the dynamic fleet share model captures the

³⁷¹ See Passenger Vehicle Occupant Injury Severity by Vehicle Age and Model Year in Fatal Crashes, Traffic Safety Facts Research Note, DOT–HS–812–528, National Highway Traffic Safety Administration, April, 2018, and The Relationship Between Passenger Vehicle Occupant Injury Outcomes and Vehicle Age or Model Year in Police-Reported Crashes, Traffic Safety Facts Research Note, DOT–HS–812–937, National Highway Traffic Safety Administration, March, 2020.

changes in the fleet's composition of cars and trucks. As cars and trucks have different fatality rates, differences in fleet composition across the alternatives will affect fatalities.

At the highest level, the agency calculates the impact of the sales and scrapage effects by multiplying the VMT of a vehicle by the fatality risk of that vehicle. For this analysis, calculating VMT is rather simple: The agency uses the distribution of miles calculated in TSD Chapter 4.3. The trickier aspect of the analysis is creating fatality rate coefficients. The fatality risk measures the likelihood that a vehicle will be involved in a fatal accident per mile driven. The agency calculates the fatality risk of a vehicle based on the vehicle's model year, age, and style, while controlling for factors which are independent of the intrinsic nature of the vehicle, such as behavioral characteristics. Using this same approach, the agency designed separate models for fatalities, non-fatal injuries, and property damaged vehicles.

The fatality risk projections described above capture the historical evolution of safety. Given that modern technologies are proliferating faster than ever and offer greater safety benefits than traditional safety improvements, the agency augmented the fatality risk projections with knowledge about forthcoming safety improvements. The agency applied detailed empirical estimates of the market uptake and improving effectiveness of crash avoidance technologies to estimate their effect on the fleet-wide fatality rate, including explicitly incorporating both the direct effect of those technologies on the crash involvement rates of new vehicles equipped with them, as well as the “spillover” effect of those technologies on improving the safety of occupants of vehicles that are not equipped with these technologies.³⁷²

The agency's approach to measuring these impacts is to derive effectiveness rates for these advanced crash-avoidance technologies from safety technology literature. The agency then applies these effectiveness rates to specific crash target populations for

³⁷² These technologies included Forward Collision Warning (FCW), Crash Imminent Braking (CIB), Dynamic Brake Support (DBS), Pedestrian AEB (PAEB), Rear Automatic Braking, Semi-automatic Headlamp Beam Switching, Lane Departure Warning (LDW), Lane Keep Assist (LKA), and Blind Spot Detection (BSD). While Autonomous vehicles offer the possibility of significantly reducing or eventually even eliminating the effect of human error in crash causation, a contributing factor in roughly 94% of all crashes, there is insufficient information and certainty regarding autonomous vehicles eventual impact to include them in this analysis.

which the crash avoidance technology is designed to mitigate and adjusted to reflect the current pace of adoption of the technology, including the public commitment by manufacturers to install these technologies. The products of these factors, combined across all 6 advanced technologies, produce a fatality rate reduction percentage that is applied to the fatality rate trend model discussed above, which projects both vehicle and non-vehicle safety trends. The combined model produces a projection of impacts of changes in vehicle safety technology as well as behavioral and infrastructural trends. A much more detailed discussion of the methods and inputs used to make these projections of safety impacts from advanced technologies is included in Chapter 7 of the accompanying TSD.

3. Rebound Effect Impacts

The additional VMT demanded due to the rebound effect is accompanied by more exposure to risk, however, rebound miles are not imposed on consumers by regulation. They are a freely chosen activity resulting from reduced vehicle operational costs. As such, the agencies believe a large portion of the safety risks associated with additional driving are offset by the benefits drivers gain from added driving. The level of risk internalized by drivers is uncertain. This analysis assumes that consumers internalize 90 percent of this risk, which mostly offsets the societal impact of any added fatalities from this voluntary consumer

choice. Additional discussion of internalized risk is contained in TSD Chapter 7.4.

4. Value of Safety Impacts

Fatalities, nonfatal injuries, and property damage crashes are valued as a societal cost within the CAFE Model's cost and benefit accounting. Their value is based on the comprehensive value of a fatality, which includes lost quality of life and is quantified in the value of a statistical life (VSL) as well as economic consequences such as medical and emergency care, insurance administrative costs, legal costs, and other economic impacts not captured in the VSL alone. These values were derived from data in Blincoe et al. (2015), adjusted to 2018 dollars, and updated to reflect the official DOT guidance on the value of a statistical life. Nonfatal injury costs, which differ by severity, were weighted according to the relative incidence of injuries across the Abbreviated Injury Scale (AIS). To determine this incidence, the agency applied a KABCO³⁷³/maximum abbreviated injury scale (MAIS) translator to GES KABCO based injury counts from 2010 through 2015. This produced the MAIS based injury profile. This profile was used to weight nonfatal

³⁷³ The "KABCO" injury scale also can be used for establishing crash costs. This scale was developed by the National Safety Council (NSC) and is frequently used by law enforcement for classifying injuries: K—Fatal; A—Incapacitating injury; B—Non-incapacitating injury; C—Possible injury; and O—No injury.

injury unit costs derived from Blincoe et al., adjusted to 2018 economics and updated to reflect the official DOT guidance on the value of a statistical life. Property-damaged vehicle costs were also taken from Blincoe et al. and adjusted to 2018 economics. VSL does not affect property damage. This gives societal values of \$10.8 million for each fatality, \$132,000 for each nonfatal injury, and \$7,100 for each property damaged vehicle.

5. Impacts of the Proposal on Safety

Table III–42 through Table III–44 summarize the safety impacts of the proposed standards on safety broken down by factor. These impacts are summarized over the lifetimes of model year 1981 through 2029 vehicles for all light passenger vehicles (including passenger cars and light trucks). Economic impacts are shown separately under both 3% and 7% discount rates. Model years 1981 through 2029 were examined because they represent the model years that might be affected by shifts in fleet composition due to the impact of higher new vehicle prices on sales of new vehicles and retention of older vehicles. Earlier years will be affected by slower scrappage rates and we expect the impacts of these standards will be fully realized in vehicle designs by MY 2029.

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Table III-42 – Change in Safety Parameters from Alternative 0 (Baseline) for MY 1981-2029 for Total Fleet, 3% Percent Discount Rate, by Alternative

Alternative:	1	2	3
Fatalities			
Fatalities from Mass Changes	64	115	142
Fatalities from Rebound Effect	449	584	801
Fatalities from Sales/Scrappage	506	1,123	1,681
Total Changes in Fatalities	1,019	1,822	2,624
Fatality Costs (\$b)			
Fatality Costs from Mass Changes	0.4	0.8	1.0
Fatality Costs from Rebound Effect	3.0	3.9	5.4
Fatality Costs from Sales/Scrappage	4.4	9.8	14.8
Total - Fatality Costs (\$b)	7.8	14.5	21.1
Non-Fatal Crash Costs (\$b)			
Non-Fatal Crash Costs from Mass Changes	0.5	0.9	1.1
Non-Fatal Crash Costs from Rebound Effect	3.2	4.3	5.9
Non-Fatal Crash Costs from Sales/Scrappage	1.2	2.8	4.1
Total - Non-Fatal Crash Costs (\$b)	4.9	8.0	11.1
Property Damage Costs (\$b)			
Property Damage Costs from Mass Changes	0.1	0.2	0.2
Property Damage Costs from Rebound Effect	0.7	0.9	1.2
Property Damage Costs from Sales/Scrappage	0.2	0.5	0.7
Total - Property Damage Costs (\$b)	1.0	1.6	2.2
Total Crash Costs (\$b)			
Crash Costs from Mass Changes	1.0	1.9	2.3
Crash Costs from Rebound Effect	6.9	9.1	12.5
Crash Costs from Sales/Scrappage	5.8	13.0	19.6
Total - Societal Crash Costs (\$b)	13.7	24.0	34.4

Table III-43 – Change in Safety Parameters from Alternative 0 (Baseline) for MY 1981-2029 for Total Fleet, 7% Percent Discount Rate, by Alternative

Alternative:	1	2	3
Fatalities			
Fatalities from Mass Changes	64	115	142
Fatalities from Rebound Effect	449	584	801
Fatalities from Sales/Scrappage	506	1,123	1,681
Total Changes in Fatalities	1,019	1,822	2,624
Fatality Costs (\$b)			
Fatality Costs from Mass Changes	0.3	0.5	0.6
Fatality Costs from Rebound Effect	1.7	2.2	3.1
Fatality Costs from Sales/Scrappage	3.3	7.2	11.0
Total - Fatality Costs (\$b)	5.2	9.9	14.7
Non-Fatal Crash Costs (\$b)			
Non-Fatal Crash Costs from Mass Changes	0.3	0.6	0.7
Non-Fatal Crash Costs from Rebound Effect	2.0	2.7	3.7
Non-Fatal Crash Costs from Sales/Scrappage	1.0	2.3	3.5
Total - Non-Fatal Crash Costs (\$b)	3.3	5.6	7.9
Property Damage Costs (\$b)			
Property Damage Costs from Mass Changes	0.1	0.1	0.1
Property Damage Costs from Rebound Effect	0.4	0.6	0.8
Property Damage Costs from Sales/Scrappage	0.2	0.4	0.6
Total - Property Damage Costs (\$b)	0.7	1.1	1.5
Total Crash Costs (\$b)			
Crash Costs from Mass Changes	0.6	1.2	1.4
Crash Costs from Rebound Effect	4.1	5.5	7.5
Crash Costs from Sales/Scrappage	4.5	9.9	15.1
Total - Societal Crash Costs (\$b)	9.2	16.6	24.0

Table III-44 – Change in Non-Fatal Safety Parameters from Alternative 0 (Baseline) for MY 1981-2029 for Total Fleet, by Alternative

Alternative:	1	2	3
Non-Fatal Injuries			
Non-Fatal Injuries from Mass Changes	5,537	10,048	12,377
Non-Fatal Injuries from Rebound Effect	36,587	48,618	66,522
Non-Fatal Injuries from Sales/Scrappage	9,723	22,269	32,249
Total Changes in Non-Fatal Injuries	51,847	80,936	111,147
Property Damaged Vehicles			
Property Damaged Vehicles from Mass Changes	21,195	38,471	47,389
Property Damaged Vehicles from Rebound Effect	139,798	185,800	254,194
Property Damaged Vehicles from Sales/Scrappage	29,900	69,638	99,711
Total Changes in Property Damaged Vehicles	190,892	293,909	401,294

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As seen in the tables, all three safety factors—changes in mass, fleet turnover, and rebound—increase as the standards become more stringent. As expected, rebound fatalities grow at a constant rate as vehicles become more fuel efficient and are used more frequently. Mass reduction has a relatively minimal impact on safety and diminishes as stringency increases. This may point to either the fleet becoming more homogeneous and hence less mass disparate in crashes. Alternatively, the model may be capturing that there’s little room for more mass reductions in particular models. The slowing of fleet turnover due to higher vehicle prices has the largest impact of the three factors and accelerates with higher alternatives. Of course, if the agency’s assumptions overstate the rebound effect and/or slower fleet turnover, fatalities, injuries and property damage would be lower, and vice versa.

PRIA Chapter 5.5 discusses the results of the analysis in more detail and PRIA Chapter 5.6—Safety Impacts provides an overview of sensitivity analyses performed to isolate the uncertainty parameters of each of the three safety impacts.

IV. Regulatory Alternatives Considered in this NPRM

A. Basis for Alternatives Considered

Agencies typically consider regulatory alternatives in proposals as a way of evaluating the comparative effects of

different potential ways of accomplishing their desired goal. NEPA requires agencies to compare the potential environmental impacts of their proposed actions to those of a reasonable range of alternatives. Executive Orders 12866 and 13563, as well as OMB Circular A-4, also encourage agencies to evaluate regulatory alternatives in their rulemaking analyses.

Alternatives analysis begins with a “no-action” alternative, typically described as what would occur in the absence of any regulatory action. This proposal includes a no-action alternative, described below, and three “action alternatives.” The proposed standards may, in places, be referred to as the “preferred alternative,” which is NEPA parlance, but NHTSA intends “proposal” and “preferred alternative” to be used interchangeably for purposes of this rulemaking.

Regulations regarding implementation of NEPA require agencies to “rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.” This does not amount to a requirement that agencies evaluate the widest conceivable spectrum of alternatives. Rather, the range of alternatives must be reasonable and consistent with the purpose and need of the action.

The different regulatory alternatives are defined in terms of percent-increases in CAFE stringency from year to year. Readers should recognize that those year-over-year changes in stringency are not measured in terms of mile per gallon differences (as in, 1 percent more stringent than 30 miles per gallon in one year equals 30.3 miles per gallon in the following year), but rather in terms of shifts in the footprint functions that form the basis for the actual CAFE standards (as in, on a gallon per mile basis, the CAFE standards change by a given percentage from one model year to the next). Under some alternatives, the rate of change is the same from year to year, while under others, it differs, and under some alternatives, the rate of change is different for cars and for trucks. One action alternative is more stringent than the proposal, while one is less stringent than the proposal. The alternatives considered in this proposal represent a reasonable range of possible final agency actions.

B. Regulatory Alternatives and Proposed CAFE Standards for MYs 2024–2026

The regulatory alternatives for this proposal are presented here as the percent-increases-per-year that they represent. The sections that follow will present the alternatives as the literal coefficients which define standards curves increasing at the given percentage rates and will also further explain the basis for the alternatives selected.

Table IV-1 – Regulatory Alternatives Considered in this Proposal

Regulatory Alternative	Year-Over-Year Stringency Increases (Passenger Cars)			Year-Over-Year Stringency Increases (Light Trucks)		
	2024	2025	2026	2024	2025	2026
Alternative 0 (No Action)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Alternative 1	9.14%	3.26%	3.26%	11.02%	3.26%	3.26%
Alternative 2 (Preferred)	8%	8%	8%	8%	8%	8%
Alternative 3	10%	10%	10%	10%	10%	10%

As for past rulemaking analyses, NHTSA has analyzed each of the regulatory alternatives in a manner that estimates manufacturers' potential application of technology in response to the corresponding CAFE requirements and the estimated market demand for fuel economy, considering estimated fuel prices, estimated product development cadence, and the estimated availability, applicability, cost, and effectiveness of fuel-saving technologies. The analysis sometimes shows that specific manufacturers could increase CAFE levels beyond requirements in ways estimated to "pay buyers back" very quickly (*i.e.*, within 30 months) for the corresponding additional costs to purchase new vehicles through avoided fuel outlays. Consistent with the analysis published with the 2020 final rule, this analysis shows that if battery costs decline as projected while fuel prices increase as projected, BEVs should become increasingly attractive on this basis, such that the modeled application of

BEVs (and some other technologies) clearly outstrips regulatory requirements after the mid-2030s.

The analysis accompanying the 2020 final rule presented such results for CAFE standards as well as—separately—CO₂ standards. New in this proposal, DOT has modified the CAFE Model to account for the *combined* effect of both CAFE and CO₂ standards, simulating technology application decisions each manufacturer could possibly make when faced with both CAFE standards and CO₂ standards (and also estimated market demand for fuel economy). This capacity was exercised for purposes of creating the baseline against which alternatives were analyzed, but not for purposes of modeling compliance with both agencies' proposals. Also, new for this proposal, DOT has further modified the CAFE Model to account for the "Framework" agreements California has reached with BMW, Ford, Honda, Volkswagen, and Volvo, and for the ZEV mandate that California and the "Section 177" states have adopted. The

TSD elaborates on these new model capabilities. Generally speaking, the model treats each manufacturer as applying the following logic when making technology decisions:

1. What do I need to carry over from last year?
2. What should I apply more widely in order to continue sharing (of, *e.g.*, engines) across different vehicle models?
3. What new PHEVs or BEVs do I need to build in order to satisfy the ZEV mandates?
4. What further technology, if any, could I apply that would enable buyers to recoup additional costs within 30 months after buying new vehicles?
5. What additional technology, if any, should I apply in order to respond to CAFE and CO₂ standards?

All of the regulatory alternatives considered here include, for passenger cars, the following coefficients defining the combination of baseline Federal CO₂ standards and the California Framework agreement.

Table IV-2 – Passenger Car CO₂ Target Function Coefficients

	2022	2023	2024	2025	2026
<i>a</i> (g/mi)	159	156	154	151	149
<i>b</i> (g/mi)	217	214	210	207	203
<i>c</i> (g/mi per s.f.)	3.88	3.82	3.77	3.71	3.65
<i>d</i> (g/mi)	-0.1	-0.4	-0.6	-0.9	-1.2
<i>e</i> (s.f.)	41	41	41	41	41
<i>f</i> (s.f.)	56	56	56	56	56
<i>g</i> (g/mi)	151	146	140	135	130
<i>h</i> (g/mi)	207	199	192	185	178
<i>i</i> (g/mi per s.f.)	3.70	3.56	3.43	3.30	3.18
<i>j</i> (g/mi)	-0.4	-0.4	-0.4	-0.3	-0.3

Coefficients *a*, *b*, *c*, *d*, *e*, and *f* define the current Federal CO₂ standards for passenger cars. Analogous to

coefficients defining CAFE standards, coefficients *a* and *b* specify minimum and maximum passenger car CO₂ targets

in each model year. Coefficients *c* and *d* specify the slope and intercept of the linear portion of the CO₂ target function,

and coefficients *e* and *f* bound the region within which CO₂ targets are defined by this linear form. Coefficients *g*, *h*, *i*, and *j* define the CO₂ targets applicable to BMW, Ford, Honda,

Volkswagen, and Volvo, pursuant to the agreement these manufacturers have reached with California. Beyond 2026, the MY 2026 Federal standards apply to all manufacturers, including these five

manufacturers. The coefficients shown in Table IV–3 define the corresponding CO₂ standards for light trucks.

Table IV-3 – Light Truck CO₂ Target Function Coefficients

	2022	2023	2024	2025	2026
<i>a</i> (g/mi)	203	200	196	193	190
<i>b</i> (g/mi)	324	319	314	309	304
<i>c</i> (g/mi per s.f.)	4.44	4.37	4.31	4.23	4.17
<i>d</i> (g/mi)	20.6	20.2	19.6	19.6	19.0
<i>e</i> (s.f.)	41	41	41	41	41
<i>f</i> (s.f.)	74	74	74	74	74
<i>g</i> (g/mi)	188	181	175	168	162
<i>h</i> (g/mi)	322	310	299	288	277
<i>i</i> (g/mi per s.f.)	4.12	3.97	3.82	3.68	3.54
<i>j</i> (g/mi)	19.1	18.4	17.7	17.0	16.4

All of the regulatory alternatives considered here also include NHTSA’s estimates of ways each manufacturer could introduce new PHEVs and BEVs in response to ZEV mandates. As discussed in greater detail below, these

estimates force the model to convert specific vehicle model/configurations to either a BEV200, BEV300, or BEV400 at the earliest estimated redesign. These “ZEV Candidates” define an *incremental* response to ZEV mandates

(*i.e.*, beyond PHEV and BEV production through MY 2020) comprise the following shares of manufacturers’ MY 2020 production for the U.S. market as shown in Table IV–4.

Table IV-4 – ZEV “Candidates” as Share of MY 2020 Production

Manufacturer	BEV200	BEV300	BEV400
BMW		1.9%	
Daimler	2.6%		0.8%
FCA		1.1%	
Ford	0.1%	1.1%	
GM		1.0%	
Honda		1.8%	
Hyundai		1.3%	
Kia	1.7%	0.5%	
Jaguar – Land Rover	0.2%	1.4%	
Mazda	3.1%		
Mitsubishi	0.6%	1.2%	
Nissan		0.5%	
Subaru		2.2%	
Tesla			
Toyota	1.2%	0.7%	
Volvo	2.3%	0.7%	
VWA		1.5%	

For example, while Tesla obviously need not introduce additional BEVs to comply with ZEV mandates, our

analysis indicates Nissan could need to increase BEV offerings modestly to do so, and Mazda and some other

manufacturers may need to do considerably more than Nissan to introduce new BEV offerings.

This representation of CO₂ standards and ZEV mandates applies equally to all regulatory alternatives, and NHTSA's analysis applies the CAFE Model to examine each alternative treating each manufacturer as responding jointly to the entire set of requirements. This is distinct from model application of BEVs for compliance purposes under the compliance simulations of the different action alternatives which inform decision-makers regarding potential effects of the standards.

Chapter 1 of the TSD contains extensive discussion of the development

of the No-Action Alternative, and explains the reasons for and effect of apparent "over-compliance" with the No-Action Alternative, which reduces costs and benefits attributable to the proposed CAFE standards and other action alternatives. NHTSA seeks comment broadly on that discussion and whether and how to change its approach to developing the No-Action Alternative for the final rule. NHTSA also specifically seeks comment on whether and how to add to the No-Action Alternative for the final rule an estimation of GHG standards that

California and the Section 177 states might separately enforce if California's waiver of CAA preemption was re-established.

1. No-Action Alternative

The No-Action Alternative (also sometimes referred to as "Alternative 0") applies the CAFE target curves set in 2020 for MYs 2024–2026, which raised stringency by 1.5 percent per year for both passenger cars and light trucks.

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Table IV-5 – Characteristics of No-Action Alternative – Passenger Cars

	2024	2025	2026
<i>a (mpg)</i>	51.78	52.57	53.37
<i>b (mpg)</i>	38.74	39.33	39.93
<i>c (gpm per s.f.)</i>	0.000433	0.000427	0.000420
<i>d (gpm)</i>	0.00155	0.00152	0.00150

Table IV-6 – Characteristics of No-Action Alternative – Light Trucks

	2024	2025	2026
<i>a (mpg)</i>	41.55	42.18	42.82
<i>b (mpg)</i>	26.82	27.23	27.64
<i>c (gpm per s.f.)</i>	0.000484	0.000477	0.000469
<i>d (gpm)</i>	0.00423	0.00417	0.00410

These equations are presented graphically in Figure IV-1 and Figure IV-2, where the x-axis represents

vehicle footprint and the y-axis represents fuel economy, showing that in "CAFE space," targets are higher in

fuel economy for smaller footprint vehicles and lower for larger footprint vehicles.

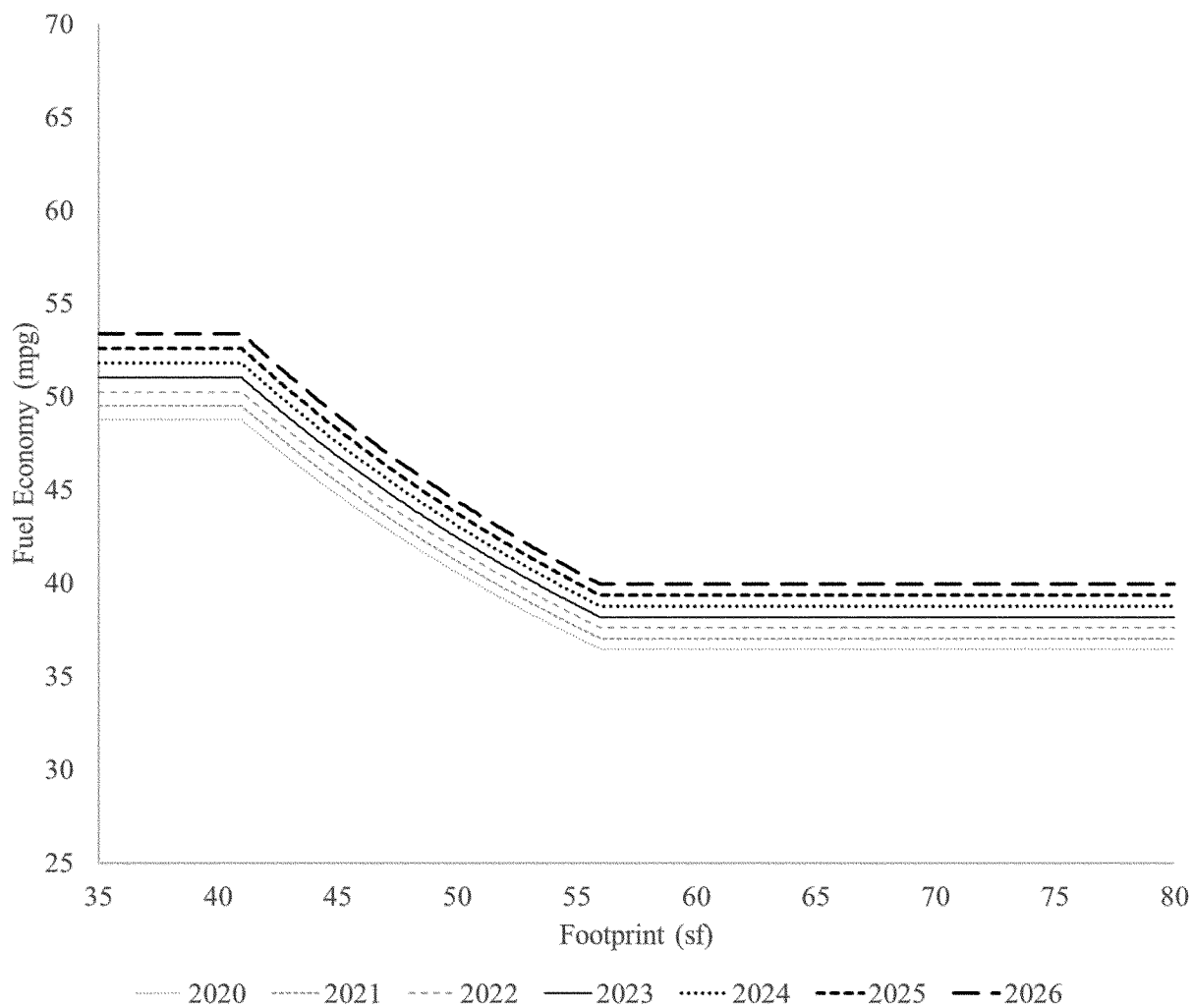


Figure IV-1 – No-Action Alternative, Passenger Car Fuel Economy Target Curves

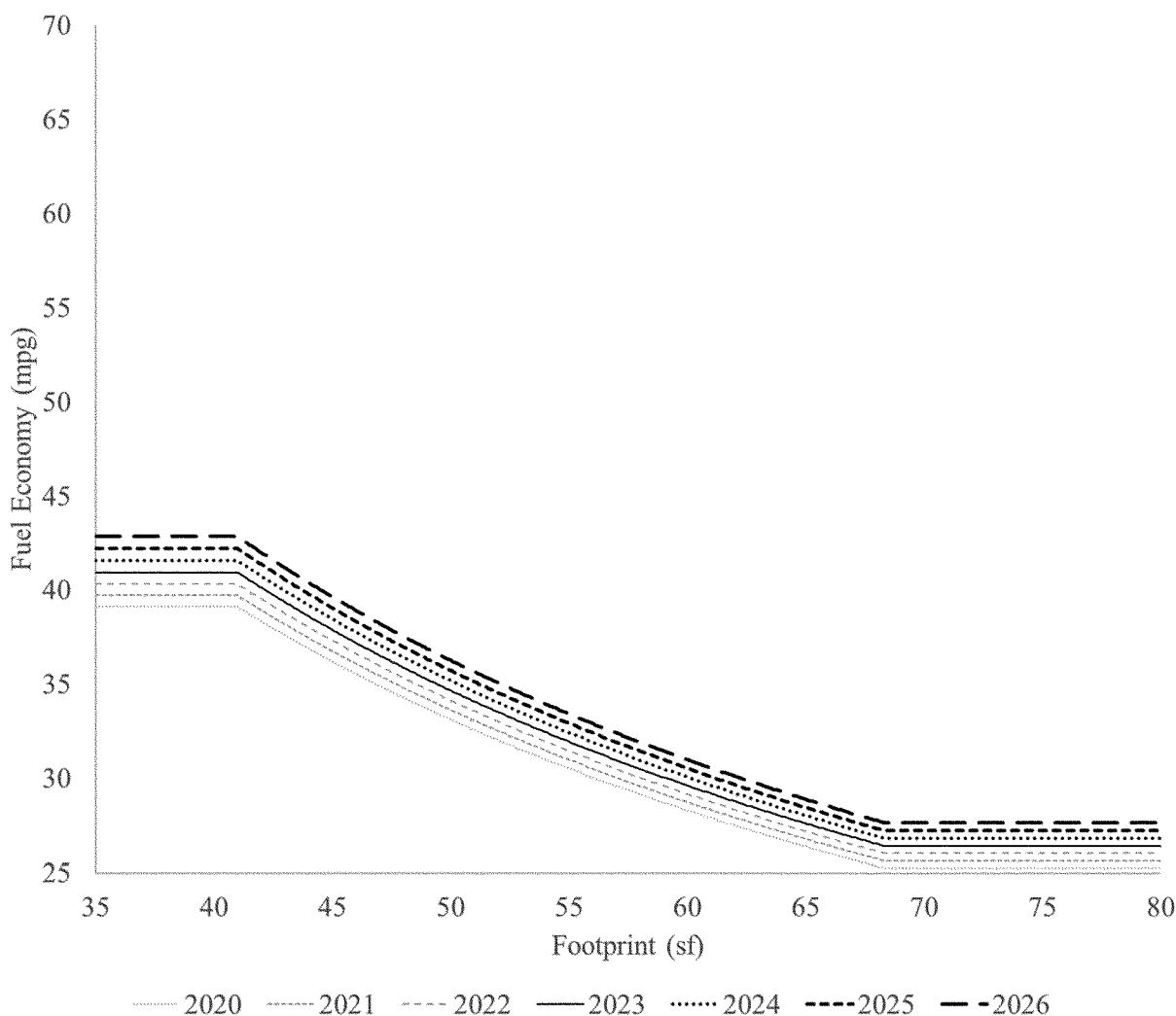


Figure IV-2 – No-Action Alternative, Light Truck Fuel Economy Target Curves

NHTSA must also set a minimum standard for domestically manufactured passenger cars, which is often referred to as the “MDPCS.” Any time NHTSA

establishes or changes a passenger car standard for a model year, the MDPCS must also be evaluated or re-evaluated and established accordingly, but for

purposes of the No-Action alternative, the MDPCS is as it was established in the 2020 final rule, as shown in Table IV-7.

Table IV-7 – No-Action Alternative - Minimum Domestic Passenger Car Standard

2024	2025	2026
41.8 mpg	42.4 mpg	43.1 mpg

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As the baseline against which the Action Alternatives are measured, the No-Action Alternative also includes several other actions that NHTSA believes will occur in the absence of further regulatory action. First, NHTSA has included California’s ZEV mandate as part of the No-Action Alternative. NHTSA has already proposed to rescind

the 2019 “SAFE I” rule,³⁷⁴ and EPA has reopened consideration of whether to grant California a waiver to consider its ZEV mandate,³⁷⁵ although California does not currently possess a waiver of preemption under the CAA and NHTSA regulations currently purport to preempt the California ZEV program. Although

neither of these actions has yet been finalized, it is reasonably foreseeable that manufacturers selling vehicles in California and in the Section 177 states could be required to comply with the ZEV mandate during the timeframe of this rulemaking. Second, NHTSA has included the agreements made between California and BMW, Ford, Honda, VWA, and Volvo, because these agreements by their terms are contracts,

³⁷⁴ 86 FR 25980 (May 12, 2021).

³⁷⁵ 86 FR 22421 (Apr. 28, 2021).

even though they were entered into voluntarily.³⁷⁶ NHTSA did so by including EPA’s baseline (*i.e.*, 2020) GHG standards in its analysis, and introducing more stringent GHG target functions during MYs 2022–2026, but treating only these five manufacturers as subject to these more stringent target functions. Because a significant portion of the market voluntarily adopted the California framework, presumably because the manufacturers who joined believed it could be met, and because that adoption is contractually binding once entered into, it is reasonable to assume that it will occur as expected during the rulemaking timeframe, and thus, reasonable to include in the No-Action Alternative. As in past analyses, NHTSA’s analysis further assumes that, beyond any technology applied in response to CAFE standards, EPA GHG standards, California/OEM agreements, and ZEV mandates applicable in California and the Section 177 states, manufacturers could also make any additional fuel economy improvements estimated to reduce owners’ estimated average fuel outlays during the first 30 months of vehicle operation by more than the estimated increase in new vehicle price.

NHTSA accomplished much of this through expansion of the CAFE Model after the prior rulemaking. The previous

version of the model had been extended to apply to GHG standards as well as CAFE standards but had not been published in a form that simulated simultaneous compliance with both sets of standards. As discussed at greater length in the current CAFE Model documentation, the updated version of the model simulates all the following simultaneously:

1. Compliance with CAFE standards
2. Compliance with GHG standards applicable to all manufacturers
3. Compliance with alternative GHG standards applicable to a subset of manufacturers
4. Compliance with ZEV mandates
5. Further fuel economy improvements applied if sufficiently cost-effective for buyers

Inclusion of these actions in the No-Action Alternative means that they are necessarily included in each of the Action Alternatives. That is, the impacts of all the alternatives evaluated in this proposal are against the backdrop of these State and voluntary actions by automakers. This is important to remember, because it means that automakers will be taking actions to improve fuel economy even in the absence of new CAFE standards, and that costs and benefits attributable to those actions are therefore *not*

attributable to possible future CAFE standards.

2. Alternative 1

Alternative 1 would increase CAFE stringency for MY 2024 by 9.14% for passenger cars and 11.02% for light trucks and increase stringency in MYs 2025 and 2026 by 3.26% per year for both passenger cars and light trucks. NHTSA calculates that the stringency of Alternative 1 in each of MYs 2024–2026 is equivalent to the average stringency of the California framework agreement applied to all manufacturers in those model years. NHTSA calculated the stringency values using a spreadsheet, shown in TSD Chapter 1, assuming manufacturers would achieve a one percent reduction in stringency each model year under the California framework through the application of ZEV vehicle multipliers. The spreadsheet applies a normalized stringency value of 100 percent in MY 2021 for both CO₂ standards and CAFE standards.

Informed by these calculations, NHTSA defined Alternative 1 by applying the CAFE equivalent stringency increases in MYs 2024–2026, resulting in the coefficients listed in Table IV–8 and Table IV–9.

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Table IV-8 – Characteristics of Alternative 1 – Passenger Cars

	2024	2025	2026
<i>a (mpg)</i>	56.15	58.04	60.00
<i>b (mpg)</i>	42.00	43.41	44.88
<i>c (gpm per s.f.)</i>	0.000400	0.000387	0.000374
<i>d (gpm)</i>	0.00141	0.00136	0.00132

Table IV-9 – Characteristics of Alternative 1 – Light Trucks³⁷⁷

	2024	2025	2026
<i>a (mpg)</i>	46.17	47.73	49.34
<i>b (mpg)</i>	27.73	28.67	29.63
<i>c (gpm per s.f.)</i>	0.000436	0.000422	0.000408
<i>d (gpm)</i>	0.00377	0.00365	0.00353

These equations are represented graphically in Figure IV–4 and Figure IV–4.

³⁷⁶ See <https://ww2.arb.ca.gov/news/framework-agreements-clean-cars>.

³⁷⁷ For this and other action alternatives, readers may note that the cutpoint for large trucks is further to the right than in the 2020 final rule. The 2020

final rule (and its preceding NPRM) did not contain an adjustment to the right cutpoint that had been finalized in 2012. Because comments were not received to the NPRM, the lack of adjustment was finalized. Considering the question again for this

proposal, NHTSA believes that moving the cutpoint to the right for large trucks (consistent with the intent and requirements in 2012) is reasonable, given the rate of increase in stringency for this proposal.

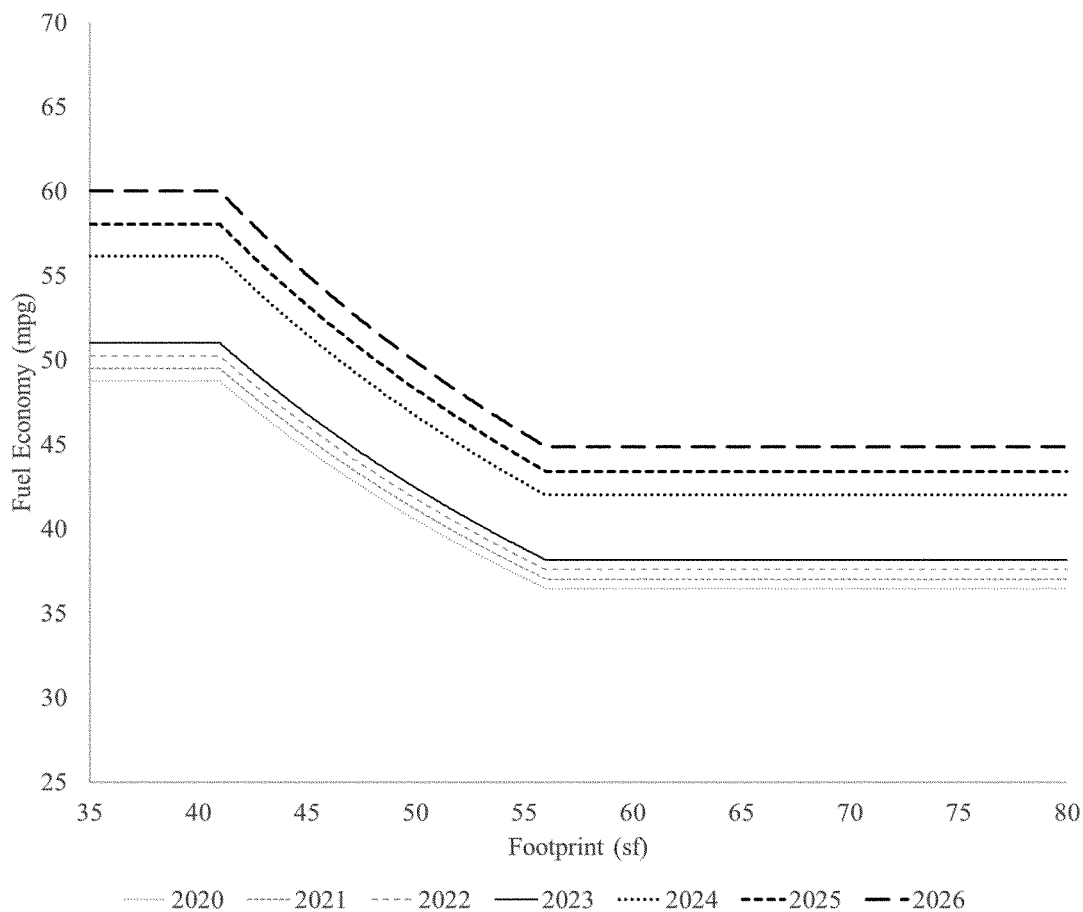


Figure IV-3 – Alternative 1, Passenger Car Fuel Economy, Target Curves

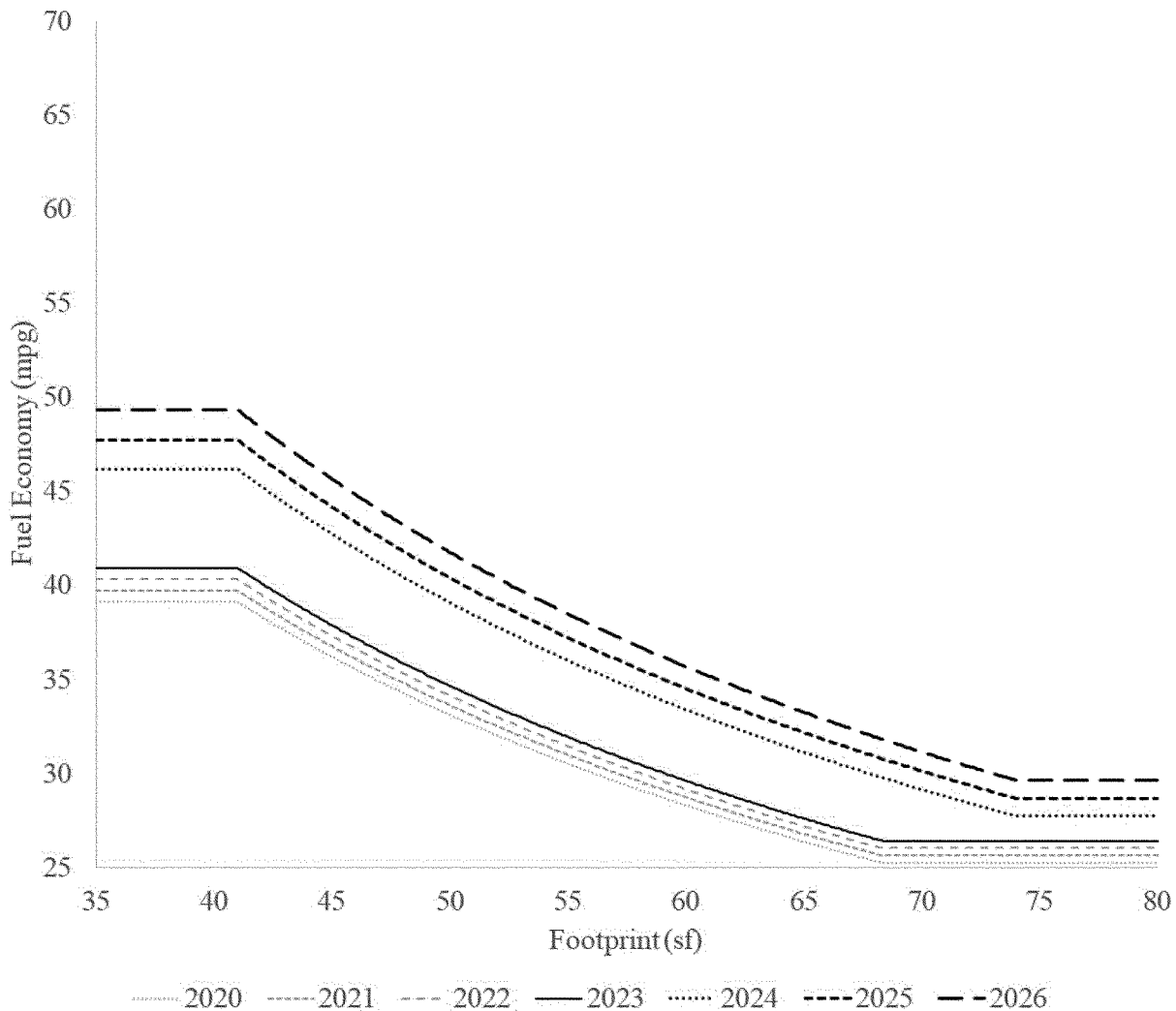


Figure IV-4 – Alternative 1, Light Truck Fuel Economy, Target Curves

Under this alternative, the MDPCS is as shown in Table IV-10.

Table IV-10 – Alternative 1 - Minimum Domestic Passenger Car Standard

2024	2025	2026
44.9 mpg	46.5 mpg	48.0 mpg

NHTSA considered this alternative as a way to evaluate the effects of industry-wide CAFE standards approximately harmonized with the California framework agreement applied to signatory OEMs’ production for the U.S. market.³⁷⁸ The fact that five major

³⁷⁸ CAFE standards defining this alternative reflect the fact that EPCA does not provide a basis for CAFE standards to include “multipliers” applicable to PHEV and/or BEV production volumes, as well as the fact that EPCA’s treatment

manufacturers voluntarily bound themselves to the framework levels, not just for MYs 2024–2026 but for MYs 2021–2026, is a relevant data point in terms of their technological feasibility and economic practicability for the fleet as a whole. NHTSA seeks comment on whether Alternative 1 (as defined by the rate of increase and the curve

of BEV energy consumption is different from the “0 grams/mile” treatment for purposes of determining compliance with GHG emissions standards.

coefficients) appropriately captures its stated goal of approximating the fuel savings that would occur under an industry-wide application of fuel economy standards harmonized with the California framework, or whether changes might be appropriate for the final rule. NHTSA asks that commenters explain the specific technical basis for any requested changes, as well as the basis for determining that the resultant CAFE standards could meet EPCA’s

requirement that NHTSA select the maximum feasible standard for each fleet in each model year.

3. Alternative 2

Alternative 2 would increase CAFE stringency at 8 percent per year, which NHTSA calculates would result in total lifetime fuel savings from vehicles

produced during MYs 2021–2029 similar to total lifetime fuel savings that would occur if the fuel economy standards harmonized with California framework agreement had applied to all manufacturers during MYs 2021–2026.

Table IV-11 – Characteristics of Alternative 2 – Passenger Cars

	2024	2025	2026
a (mpg)	55.44	60.26	65.50
b (mpg)	41.48	45.08	49.00
c (gpm per s.f.)	0.000405	0.000372	0.000343
d (gpm)	0.00144	0.00133	0.00122

Table IV-12 – Characteristics of Alternative 2 – Light Trucks

	2024	2025	2026
a (mpg)	44.48	48.35	52.56
b (mpg)	26.74	29.07	31.60
c (gpm per s.f.)	0.000452	0.000416	0.000382
d (gpm)	0.00395	0.00364	0.00334

Under this alternative, the MDPCS is as shown in Table IV-13.

Table IV-13 – Alternative 2 - Minimum Domestic Passenger Car Standard

2024	2025	2026
44.4 mpg	48.2 mpg	52.4 mpg

NHTSA considered this alternative as a way to evaluate the effects of CAFE standards that sought to achieve the fuel savings that would be achieved if fuel economy standards harmonized with the California framework agreement had been applied to all vehicle manufacturers from its beginning the time the framework was agreed. As for Alternative 1, the fact that five major manufacturers voluntarily bound themselves to these levels, not just for MYs 2024–2026 but for MYs 2021–2026, is a relevant data point in terms of their technological feasibility and economic

practicability for the fleet as a whole.³⁷⁹ NHTSA seeks comment on whether Alternative 2 (as defined by the rate of increase and the curve coefficients) appropriately captures its stated goal of representing the fuel savings achievement that would be achieved if fuel economy standards harmonized with the California framework agreement were applied to all companies at a national level over MYs 2021–2026, or whether changes might be appropriate for the final rule. NHTSA asks that commenters explain the specific technical basis for any

requested changes, as well as the basis for determining that the resultant CAFE standards could meet EPCA's requirement that NHTSA select the maximum feasible standard for each fleet in each model year.

As another possibility, NHTSA could modify Alternative 2 by increasing the stringency of CAFE standards by 10 percent between model years 2025 and 2026, rather than by 8 percent. Shown graphically, this possibility would look as shown in Figure IV-5.

³⁷⁹ Section VI discusses economic practicability in more detail, including NHTSA's long-standing interpretation that economic practicability need not

mean that the standards are comfortably achievable for every single manufacturer individually, as long

as they appear economically practicable for the fleet as a whole.

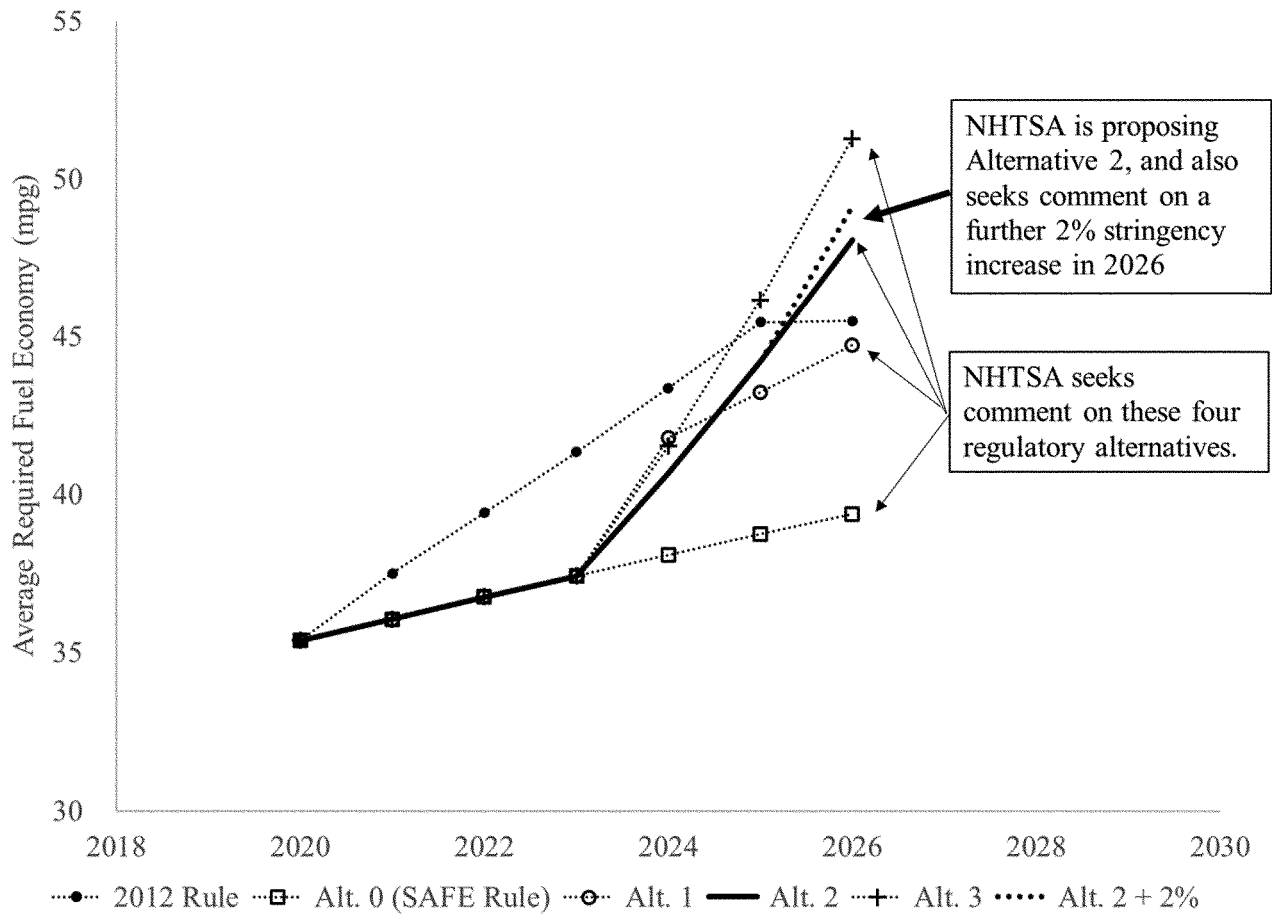


Figure IV-5 – Graphic Representation of Possible Other Alternative

NHTSA seeks comment on this option as well as on Alternative 2.

4. Alternative 3

Alternative 3 would increase CAFE stringency at 10 percent per year, which NHTSA calculates would result in total

lifetime fuel savings from vehicles produced during MYs 2021–2029 similar to total lifetime fuel savings that would have occurred if NHTSA had promulgated final CAFE standards for MYs 2021–2025 at the augural levels

announced in 2012 and, in addition, if NHTSA had also promulgated MY 2026 standards that reflected a continuation of that average rate of stringency increase (4.48% for passenger cars and 4.54% for light trucks).

Table IV-14 – Characteristics of Alternative 3 – Passenger Cars

	2024	2025	2026
a (mpg)	56.67	62.97	69.96
b (mpg)	42.40	47.11	52.34
c (gpm per s.f.)	0.000396	0.000356	0.000321
d (gpm)	0.00141	0.00127	0.00114

Table IV-15 – Characteristics of Alternative 3 – Light Trucks

	2024	2025	2026
a (mpg)	45.47	50.53	56.14
b (mpg)	27.34	30.38	33.75
c (gpm per s.f.)	0.000442	0.000398	0.000358
d (gpm)	0.00387	0.00348	0.00313

These equations are represented graphically in Figure IV-6 and Figure IV-7.

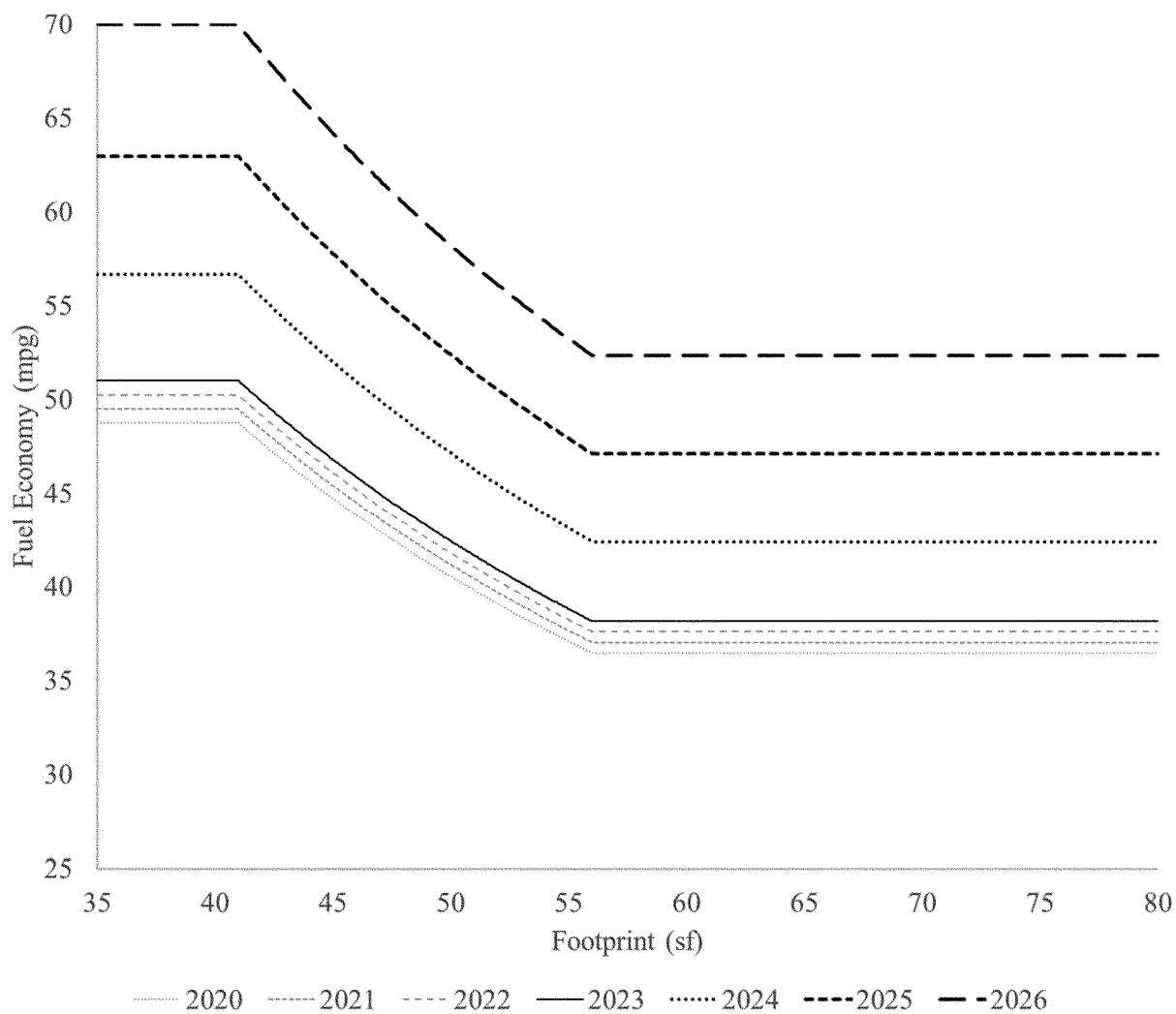


Figure IV-6 – Alternative 3, Passenger Car Fuel Economy, Target Curves

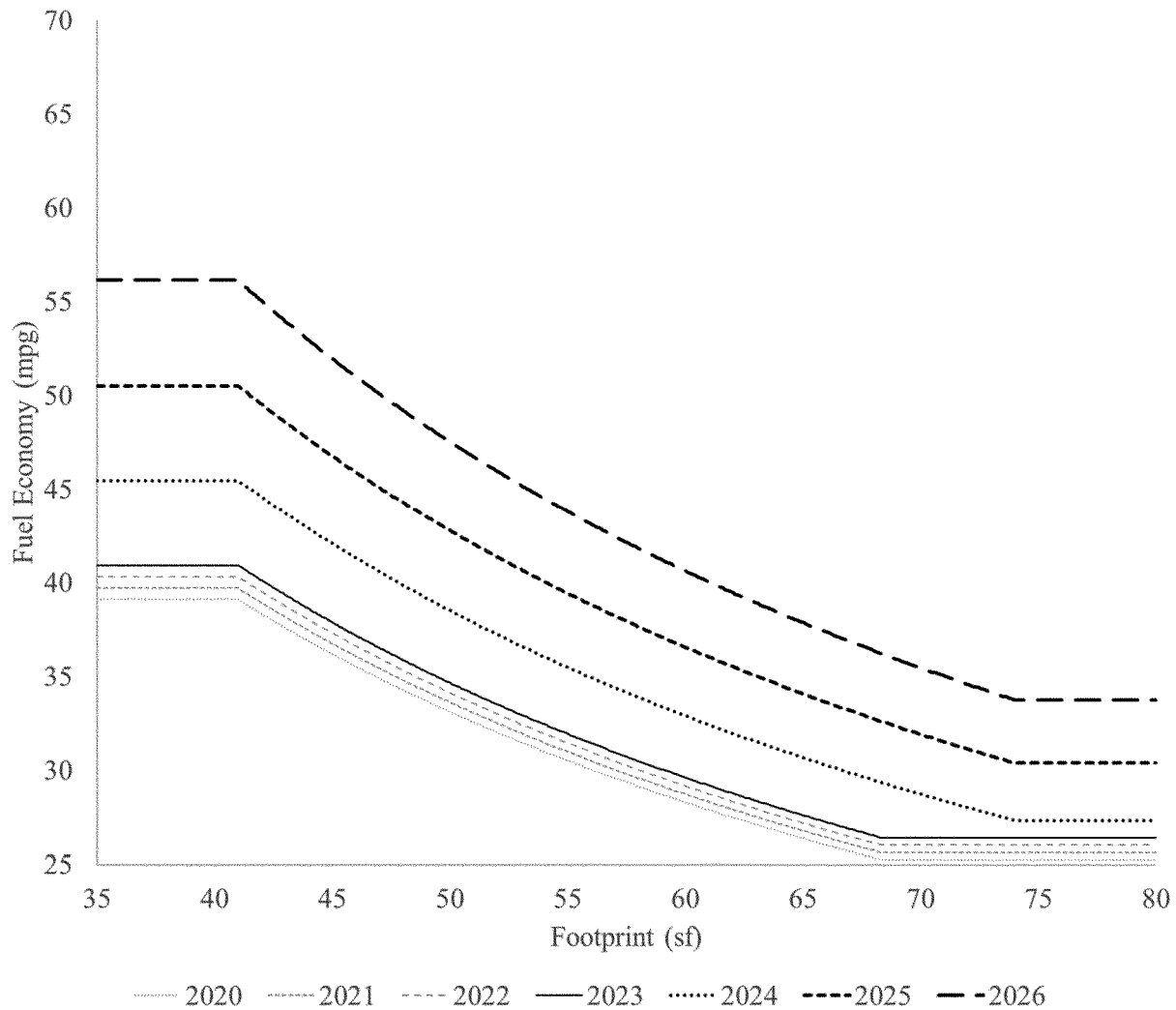


Figure IV-7 – Alternative 3, Light Truck Fuel Economy, Target Curves

Under this alternative, the MDPCS is as follows in Table IV-16.

Table IV-16 – Alternative 3 – Minimum Domestic Passenger Car Standard

2024	2025	2026
45.4 mpg	50.4 mpg	56.0 mpg

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NHTSA considered this alternative as a way to evaluate the effects of CAFE standards that would return to a fuel consumption trajectory exemplified by the standards announced in 2012. NHTSA seeks comment on whether Alternative 3 (as defined by the rate of increase and the curve coefficients) appropriately captures this goal, or whether changes might be appropriate for the final rule. NHTSA asks that commenters explain the specific

technical basis for any requested changes, as well as the basis for determining that the resultant CAFE standards could meet EPCA’s requirement that NHTSA select the maximum feasible standard for each fleet in each model year. While NHTSA believes that this alternative may be beyond maximum feasible based on the information currently before us, as discussed in more detail in Section VI, all alternatives remain under

consideration for the final rule. Moreover, because Alternative 3 produces significant social benefits, NHTSA seeks comment on whether to adopt a more stringent increase from MY 2025 to MY 2026, as described above, that would parallel the year over year increase Alternative 3 analyzes.

V. Effects of the Regulatory Alternatives**A. Effects on Vehicle Manufacturers**

Each of the regulatory alternatives NHTSA has considered would increase the stringency of both passenger car and light truck CAFE standards in each of model years 2024–2026. To estimate the potential impacts of each of these alternatives, NHTSA has, as for all recent rulemakings, assumed that

standards would continue unchanged after the last model year (in this case, 2026) to be covered by newly issued standards. It is possible that the size and composition of the fleet (*i.e.*, in terms of distribution across the range of vehicle footprints) could change over time, affecting the average fuel economy requirements under both the passenger car and light truck standards, and for

the overall fleet. If fleet changes differ from NHTSA's projections, average requirements could, therefore, also differ from NHTSA's projections. At this time, NHTSA estimates that, under each of the regulatory alternatives, average fuel economy requirements could increase as summarized in the following three tables.

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Table V-1 – Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Total)

Model Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Alternative 0 (Baseline)	43.3	43.9	44.6	45.2	45.9	46.6	47.3	47.3	47.3	47.3
Alternative 1	43.3	43.9	44.6	45.2	49.8	51.5	53.2	53.2	53.2	53.2
Alternative 2	43.3	43.9	44.6	45.2	49.2	53.4	58.1	58.1	58.1	58.1
Alternative 3	43.3	43.9	44.6	45.2	50.2	55.8	62.0	62.0	62.0	62.0

Table V-2 – Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Total)

Model Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Alternative 0 (Baseline)	31.0	31.5	31.9	32.4	32.9	33.5	33.9	33.9	33.9	33.9
Alternative 1	31.0	31.5	31.9	32.4	36.4	37.7	39.0	39.0	39.0	39.0
Alternative 2	31.0	31.5	31.9	32.4	35.1	38.2	41.5	41.5	41.5	41.5
Alternative 3	31.0	31.5	31.9	32.4	35.9	39.9	44.3	44.3	44.3	44.3

Table V-3 – Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Total)

Model Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Alternative 0 (Baseline)	35.4	36.0	36.8	37.4	38.1	38.7	39.4	39.4	39.5	39.5
Alternative 1	35.4	36.0	36.8	37.4	41.8	43.2	44.7	44.8	44.8	44.9
Alternative 2	35.4	36.0	36.8	37.4	40.7	44.2	48.1	48.1	48.2	48.2
Alternative 3	35.4	36.0	36.8	37.4	41.5	46.2	51.3	51.3	51.3	51.4

Manufacturers do not always comply exactly with each CAFE standard in each model year. To date, some manufacturers have tended to regularly exceed one or both requirements. Many manufacturers make use of EPCA's provisions allowing CAFE compliance credits to be applied when a fleet's CAFE level falls short of the corresponding requirement in a given model year. Some manufacturers have paid civil penalties (*i.e.*, fines) required under EPCA when a fleet falls short of a standard in a given model year and the

manufacturer cannot provide compliance credits sufficient to address the compliance shortfall. As discussed in the accompanying PRIA and TSD, NHTSA simulates manufacturers' responses to each alternative given a wide range of input estimates (*e.g.*, technology cost and efficacy, fuel prices), and, per EPCA, setting aside the potential that any manufacturer would respond to CAFE standards in model years 2024–2026 by applying CAFE compliance credits or introducing new models of alternative fuel vehicles.

Many of these inputs are subject to uncertainty and, in any event, as in all CAFE rulemakings, NHTSA's analysis merely illustrates one set of ways manufacturers could potentially respond to each regulatory alternative. At this time, NHTSA estimates that manufacturers' responses to standards defining each alternative could lead average fuel economy levels to increase through model year 2029 as summarized in the following three tables. Changes are shown to occur in MY 2023 even though NHTSA is not explicitly

proposing to regulate that model year because NHTSA anticipates that

manufacturers could make changes as early as that model year to affect future

compliance positions (*i.e.*, multi-year planning).

Table V-4 – Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Total)

Model Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Alternative 0 (Baseline)	41.7	43.6	46.6	48.3	50.4	51.5	52.4	52.8	53.0	53.4
Alternative 1	41.7	43.6	46.6	49.3	52.6	54.6	55.8	56.3	56.7	57.0
Alternative 2	41.7	43.6	46.6	49.7	53.9	57.1	59.6	60.5	61.3	61.4
Alternative 3	41.7	43.6	46.6	50.1	55.3	59.4	62.9	64.1	65.3	65.5

Table V-5 – Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Total)

Model Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Alternative 0 (Baseline)	30.2	31.5	33.1	34.4	35.5	36.0	37.0	37.2	37.4	37.7
Alternative 1	30.2	31.5	33.1	34.6	36.6	37.5	38.7	39.2	39.5	39.8
Alternative 2	30.2	31.5	33.1	34.8	36.5	37.9	40.2	40.7	41.1	41.4
Alternative 3	30.2	31.5	33.1	34.9	37.4	39.1	41.8	42.5	43.0	43.2

Table V-6 – Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Total)

Model Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Alternative 0 (Baseline)	34.3	35.9	38.2	39.8	41.3	42.1	43.2	43.5	43.8	44.2
Alternative 1	34.3	35.9	38.2	40.3	42.8	44.1	45.5	46.0	46.4	46.8
Alternative 2	34.3	35.9	38.2	40.5	43.2	45.1	47.6	48.3	48.9	49.2
Alternative 3	34.3	35.9	38.2	40.7	44.2	46.6	49.7	50.6	51.4	51.7

While these increases in average fuel economy account for estimated changes in the composition of the fleet (*i.e.*, the relative shares of passenger cars and light trucks), they result almost wholly from the projected application of fuel-saving technology. As mentioned above, NHTSA’s analysis merely illustrates one set of ways manufacturers could

potentially respond to each regulatory alternative. Manufacturers’ actual responses will almost assuredly differ from NHTSA’s current estimates.

At this time, NHTSA estimates that manufacturers’ application of advanced gasoline engines (*i.e.*, gasoline engines with cylinder deactivation, turbocharging, high or variable compression ratios) could increase

through MY 2029 under the no-action alternative and through at least MY 2024 under each of the action alternatives. However, NHTSA also estimates that in MY 2024, reliance on advanced gasoline engines could begin to decline under the more stringent action alternatives, as manufacturers shift toward electrification.

Table V-7 – Estimated Advanced Gasoline Engine Penetration Rate, Passenger Car Fleet for Manufacturer (Total)

Model Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Alternative 0 (Baseline)	53%	56%	61%	59%	64%	62%	61%	62%	61%	65%
Alternative 1	53%	56%	61%	59%	63%	62%	64%	64%	65%	69%
Alternative 2	53%	56%	61%	59%	66%	63%	62%	62%	62%	62%
Alternative 3	53%	56%	61%	58%	65%	58%	55%	52%	52%	52%

Table V-8 – Estimated Advanced Gasoline Engine Penetration Rate, Light Truck Fleet for Manufacturer (Total)

Model Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Alternative 0 (Baseline)	55%	55%	56%	56%	57%	59%	61%	61%	63%	64%
Alternative 1	55%	55%	56%	57%	57%	57%	58%	57%	57%	56%
Alternative 2	55%	55%	56%	56%	56%	54%	53%	52%	52%	52%
Alternative 3	55%	55%	56%	56%	55%	53%	48%	46%	45%	45%

Table V-9 – Estimated Advanced Gasoline Engine Penetration Rate, Total Fleet for Manufacturer (Total)

Model Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Alternative 0 (Baseline)	54%	55%	58%	58%	60%	60%	61%	62%	62%	65%
Alternative 1	54%	55%	58%	58%	60%	59%	61%	60%	61%	62%
Alternative 2	54%	55%	58%	58%	61%	58%	57%	57%	57%	57%
Alternative 3	54%	55%	58%	57%	60%	55%	51%	49%	48%	48%

The aforementioned estimated shift to electrification under the more stringent regulatory alternatives is the most pronounced for hybrid-electric vehicles (i.e., “mild” ISG HEVs and “strong” P2 and Power-Split HEVs).

Table V-10 – Estimated Hybrid Electric Vehicle (HEV) Penetration Rate, Passenger Car Fleet for Manufacturer (Total)

Model Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Alternative 0 (Baseline)	4%	4%	4%	4%	7%	7%	8%	8%	8%	8%
Alternative 1	4%	4%	4%	4%	7%	9%	9%	10%	11%	11%
Alternative 2	4%	4%	4%	4%	8%	10%	11%	12%	13%	13%
Alternative 3	4%	4%	4%	5%	11%	17%	20%	21%	23%	23%

Table V-11 – Estimated Hybrid Electric Vehicle (HEV) Penetration Rate, Light Truck Fleet for Manufacturer (Total)

Model Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Alternative 0 (Baseline)	6%	9%	10%	12%	15%	15%	17%	17%	17%	17%
Alternative 1	6%	9%	10%	11%	20%	22%	26%	26%	28%	28%
Alternative 2	6%	9%	10%	12%	16%	19%	27%	27%	29%	30%
Alternative 3	6%	9%	10%	13%	19%	21%	29%	30%	32%	32%

Table V-12 – Estimated Hybrid Electric Vehicle (HEV) Penetration Rate, Total Fleet for Manufacturer (Total)

Model Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Alternative 0 (Baseline)	5%	7%	7%	8%	11%	11%	13%	13%	13%	13%
Alternative 1	5%	7%	7%	8%	14%	16%	18%	18%	20%	20%
Alternative 2	5%	7%	7%	8%	12%	15%	19%	20%	21%	21%
Alternative 3	5%	7%	7%	9%	15%	19%	24%	26%	28%	28%

Under the more stringent action alternatives, NHTSA estimates that

manufacturers could increase production of plug-in hybrid electric

vehicles (PHEVs) well over current rates.

Table V-13 – Estimated Plug-In Hybrid Electric Vehicle (PHEV) Penetration Rate, Passenger Car Fleet for Manufacturer (Total)

Model Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Alternative 0 (Baseline)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%
Alternative 1	1%	1%	1%	1%	2%	2%	3%	3%	3%	3%
Alternative 2	1%	1%	1%	1%	2%	5%	8%	8%	8%	8%
Alternative 3	1%	1%	1%	1%	2%	7%	10%	10%	10%	10%

Table V-14 – Estimated Plug-In Hybrid Electric Vehicle (PHEV) Penetration Rate, Light Truck Fleet for Manufacturer (Total)

Model Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Alternative 0 (Baseline)	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Alternative 1	0%	0%	0%	0%	2%	2%	2%	2%	2%	2%
Alternative 2	0%	0%	0%	0%	2%	4%	7%	7%	7%	7%
Alternative 3	0%	0%	0%	0%	4%	8%	12%	12%	12%	11%

Table V-15 – Estimated Plug-In Hybrid Electric Vehicle (PHEV) Penetration Rate, Total Fleet for Manufacturer (Total)

Model Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Alternative 0 (Baseline)	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Alternative 1	0%	0%	0%	0%	2%	2%	3%	3%	3%	2%
Alternative 2	0%	0%	0%	0%	2%	4%	7%	7%	7%	7%
Alternative 3	0%	0%	0%	0%	3%	8%	11%	11%	11%	11%

For this NPRM and accompanying PRIA, NHTSA’s analysis excludes the introduction of new alternative fuel vehicle (AFV) models during MY 2024–2026 as a response to CAFE standards.³⁸⁰ However, NHTSA’s

analysis does consider the potential that manufacturers might respond to CAFE standards by introducing new BEV models outside of MYs 2024–2026, and NHTSA’s analysis does account for the potential that ZEV mandates could lead

manufacturers to introduce new BEV models even during MYs 2024–2026. Also accounting for shifts in fleet mix, NHTSA projects increased production of BEVs through MY 2029.

³⁸⁰ The SEIS does not make this analytical exclusion.

Table V-16 – Estimated Battery Electric Vehicle (BEV) Penetration Rate, Passenger Car Fleet for Manufacturer (Total)

Model Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Alternative 0 (Baseline)	4%	5%	6%	7%	7%	8%	8%	8%	8%	9%
Alternative 1	4%	5%	6%	8%	9%	9%	9%	10%	10%	10%
Alternative 2	4%	5%	6%	9%	9%	10%	10%	10%	11%	11%
Alternative 3	4%	5%	6%	9%	10%	10%	10%	11%	12%	12%

Table V-17 – Estimated Battery Electric Vehicle (BEV) Penetration Rate, Light Truck Fleet for Manufacturer (Total)

Model Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Alternative 0 (Baseline)	0%	0%	1%	1%	2%	2%	2%	2%	2%	3%
Alternative 1	0%	0%	1%	2%	2%	2%	2%	2%	2%	3%
Alternative 2	0%	0%	1%	2%	2%	2%	3%	3%	3%	3%
Alternative 3	0%	0%	1%	2%	2%	3%	3%	3%	3%	3%

Table V-18 – Estimated Battery Electric Vehicle (BEV) Penetration Rate, Total Fleet for Manufacturer (Total)

Model Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Alternative 0 (Baseline)	2%	2%	3%	4%	4%	5%	5%	5%	5%	6%
Alternative 1	2%	2%	3%	5%	5%	6%	6%	6%	6%	6%
Alternative 2	2%	2%	3%	5%	6%	6%	6%	6%	7%	7%
Alternative 3	2%	2%	3%	6%	6%	6%	6%	7%	7%	8%

The PRIA provides a wider-ranging summary of NHTSA's estimates of manufacturers' potential application of fuel-saving technologies (including other types of technologies, such as advanced transmissions, aerodynamic improvements, and reduced vehicle mass) in response to each regulatory alternative. Appendices I and II of the accompanying PRIA provide much more detailed and comprehensive results, and the underlying CAFE Model output files provide all information, including the specific combination of technologies estimated to be applied to every specific vehicle model/configuration in each of model years 2020–2050.³⁸¹

NHTSA's analysis shows manufacturers' regulatory costs for CAFE standards, CO₂ standards, and ZEV mandates increasing through MY 2029, and (logically) increasing more under the more stringent alternatives. Accounting for fuel-saving technologies estimated to be added under each regulatory alternative (including air conditioning improvements and other off-cycle technologies), and also accounting for CAFE fines that NHTSA estimates some manufacturers could elect to pay rather than achieving full compliance with CAFE standards in some model years, NHTSA estimates that relative to the continued application of MY 2020 technologies,

manufacturers' *cumulative* costs during MYs 2023–2029 could total \$121b under the no-action alternative, and \$166b, \$208b, and \$251b under alternatives 1, 2, and 3, respectively. The table below shows how these costs are estimated to vary among manufacturers, accounting for differences in the quantities of vehicles produced for sale in the U.S. Appendices I and II of the accompanying PRIA present results separately for each manufacturer's passenger car and light truck fleets in each model year under each regulatory alternative, and the underlying CAFE Model output files also show results specific to manufacturers' domestic and imported car fleets.

³⁸¹ See Appendices I and II of the accompanying PRIA and the CAFE Model output files.

Table V-19 – Cumulative Costs (\$b) During MYs 2023-2029

Manufacturer	Alternative 0	Alternative 1	Alternative 2	Alternative 3
BMW	4	4	5	6
Daimler	5	6	6	7
Stellantis (FCA)	18	21	23	25
Ford	18	22	27	33
General Motors	18	34	39	48
Honda	10	10	15	22
Hyundai	5	8	11	14
Kia	4	6	9	11
Jaguar - Land Rover	1	2	2	2
Mazda	3	4	5	5
Mitsubishi	1	1	1	2
Nissan	6	9	22	24
Subaru	6	9	10	10
Tesla	0	0	0	0
Toyota	12	19	22	29
Volvo	2	2	2	3
Volkswagen	9	8	9	10
Industry Total	121	166	208	251

As discussed in the TSD, these estimates reflect technology cost inputs that, in turn, reflect a “markup” factor that includes manufacturers’ profits. In

other words, if costs to manufacturers’ are reflected in vehicle price increases as in the past, NHTSA estimates that the average costs to new vehicle purchasers

could increase through MY 2029 as summarized in Table V-20 through Table V-22.

Table V-20 – Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Total)

Model Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Alternative 0 (Baseline)	265	369	586	694	873	1,008	1,076	1,058	1,028	1,001
Alternative 1	265	369	586	896	1,242	1,455	1,550	1,507	1,473	1,426
Alternative 2	265	369	586	1,055	1,521	1,968	2,264	2,198	2,157	2,073
Alternative 3	265	369	586	1,147	1,748	2,327	2,733	2,649	2,607	2,506

Table V-21 – Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Total)

Model Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Alternative 0 (Baseline)	155	365	633	833	1,056	1,153	1,257	1,260	1,251	1,240
Alternative 1	155	365	633	888	1,456	1,616	1,748	1,715	1,717	1,684
Alternative 2	155	365	633	933	1,413	1,795	2,210	2,159	2,134	2,086
Alternative 3	155	365	633	980	1,760	2,255	2,810	2,730	2,687	2,619

Table V-22 – Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Total)

Model Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Alternative 0 (Baseline)	203	367	611	768	969	1,083	1,169	1,160	1,140	1,120
Alternative 1	203	367	611	892	1,354	1,539	1,653	1,614	1,598	1,557
Alternative 2	203	367	611	991	1,464	1,877	2,236	2,177	2,145	2,080
Alternative 3	203	367	611	1,058	1,754	2,289	2,773	2,692	2,649	2,565

Table V-23 shows how these costs could vary among manufacturers, suggesting that disparities could

decrease as the stringency of standards increases.

Table V-23 – Average Manufacturer Per-Vehicle Costs by Alternative

Manufacturer	Alternative 0	Alternative 1	Alternative 2	Alternative 3
BMW	1,604	1,644	2,126	2,607
Daimler	1,583	2,062	2,412	2,741
Stellantis (FCA)	1,527	1,887	2,185	2,484
Ford	1,331	1,488	2,021	2,609
General Motors	1,056	2,014	2,591	3,160
Honda	965	972	1,515	2,107
Hyundai	846	1,516	2,320	2,859
Kia	850	1,295	2,006	2,595
Jaguar - Land Rover	1,168	1,829	2,137	2,479
Mazda	1,523	1,819	2,416	2,829
Mitsubishi	587	1,115	1,720	2,124
Nissan	737	1,134	2,679	3,147
Subaru	1,058	1,568	1,699	1,802
Tesla	47	47	47	47
Toyota	859	1,394	1,583	2,181
Volvo	1,867	2,578	2,855	3,201
Volkswagen	2,459	2,408	2,547	2,937
Industry Average	1,120	1,557	2,080	2,565

NHTSA estimates that although projected fuel savings under the more stringent regulatory alternatives could tend to increase new vehicles sales, this tendency could be outweighed by the opposing response to higher prices, such that new vehicle sales could

decline slightly under the more stringent alternatives. The magnitude of these fuel savings and vehicle price increases depends on manufacturer compliance decisions, especially technology application. In the event that manufacturers select technologies with

lower prices and/or higher fuel economy improvements, vehicle sales effects could differ. For example, in the case of the “unconstrained” SEIS results, manufacturer costs across alternatives are lower.

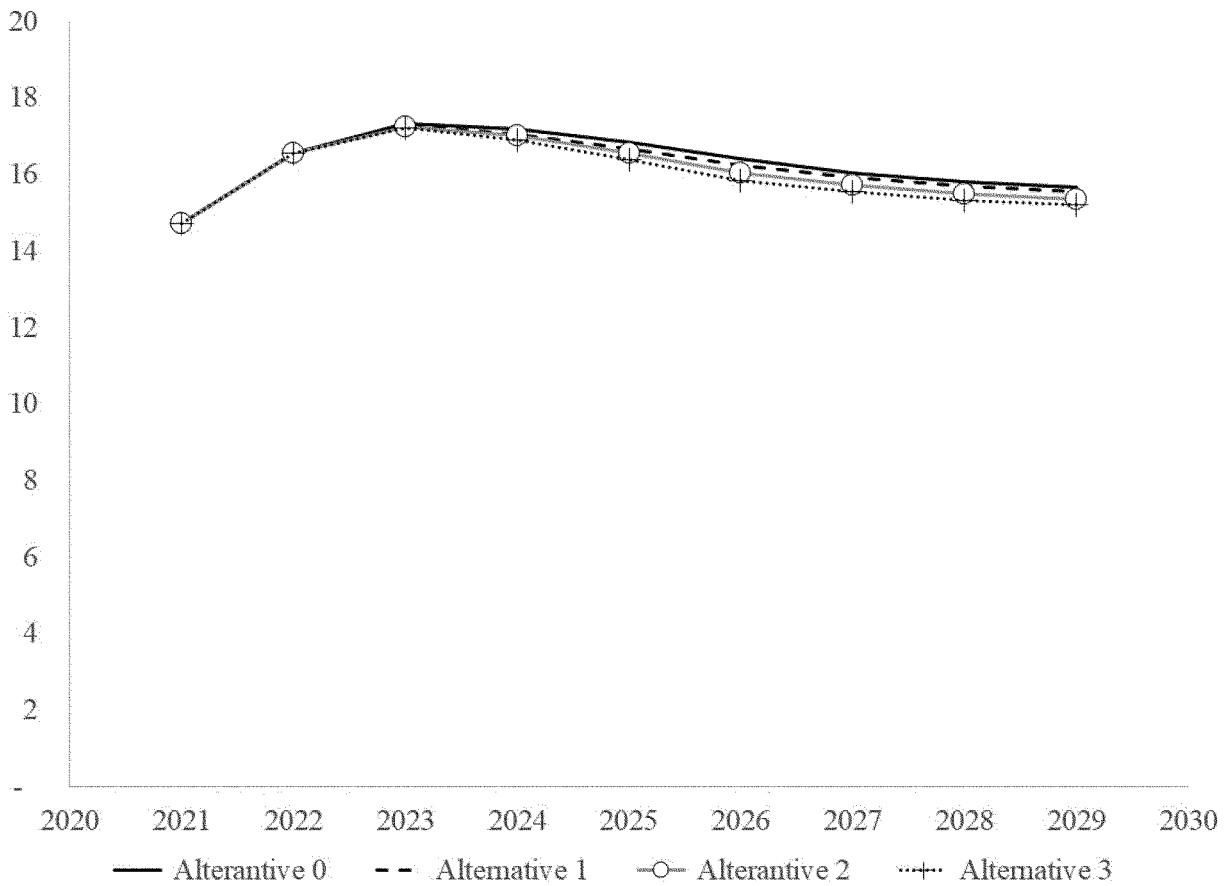


Figure V-1 – Estimated Annual New Vehicles Sales (Millions)

The TSD discusses NHTSA’s approach to estimating new vehicle sales, including NHTSA’s estimate that new vehicle sales could recover from 2020’s aberrantly low levels.

While these slight reductions in new vehicles sales tend to slightly reduce projected automobile industry labor, NHTSA estimates that the cost increases could reflect an underlying increase in

employment to produce additional fuel-saving technology, such that automobile industry labor could about the same under each of the four regulatory alternatives.

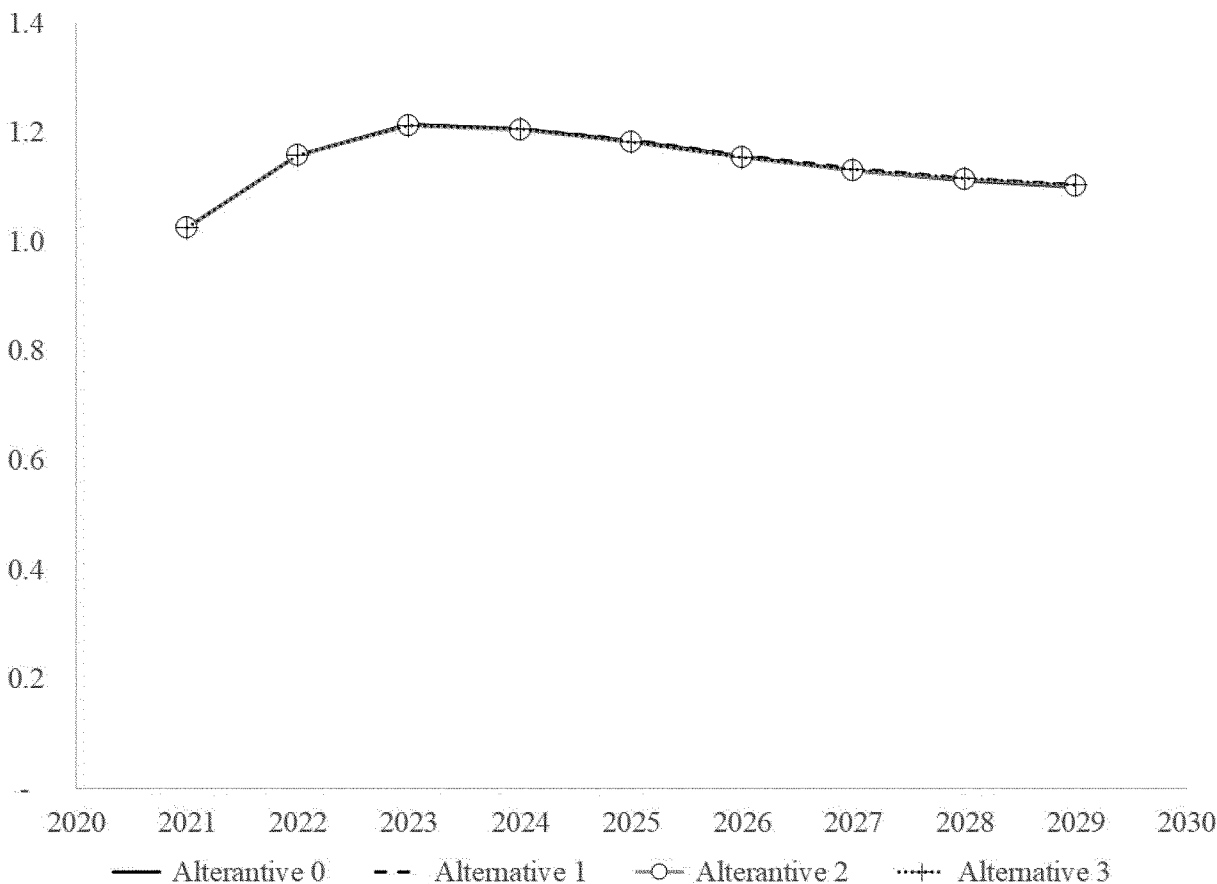


Figure V-2 – Estimated Automobile Industry Labor (as Millions of Full-Time-Equivalent Jobs)

The accompanying TSD discusses NHTSA’s approach to estimating automobile industry employment, and the accompanying RIA (and its Appendices I and II) and CAFE Model output files provide more detailed results of NHTSA’s analysis.

B. Effects on New Car and Truck Buyers
 As discussed above, NHTSA estimates that the average fuel economy and purchase cost of new vehicles could increase between 2020 and 2029 and increase more quickly under each of the action alternatives than under the baseline No-Action Alternative. On one hand, buyers could realize the benefits

of increase fuel economy: Spending less on fuel. On the other, buyers could pay more for new vehicles, for some costs tied directly to vehicle value (e.g., sales taxes and collision insurance). Table V-24 reports sales-weighted MSRP values for the No-Action Alternative and relative increases in MSRP for the three regulatory alternatives.

Table V-24 – Sales-Weighted MSRP and Incremental Costs Under the Regulatory Alternatives by Regulatory Class, Undiscounted 2018\$

Model Year	Light Truck				Passenger Car			
	Alt. 0	Relative to Alt. 0			Alt. 0	Relative to Alt. 0		
		Alt. 1	Alt. 2	Alt. 3		Alt. 1	Alt. 2	Alt. 3
2024	42,300	400	350	700	31,220	360	640	870
2025	42,400	460	640	1,100	31,360	440	950	1,300
2026	42,500	490	950	1,550	31,440	460	1,170	1,630
2027	42,500	460	900	1,470	31,430	440	1,120	1,550
2028	42,490	470	890	1,440	31,410	430	1,100	1,540
2029	42,480	450	850	1,380	31,390	410	1,040	1,460

Table V-25 – Average Per-Vehicle Consumer Benefits and Costs – Passenger Cars and Light Trucks, Undiscounted 2018\$

	MY 2029				MY 2039			
	Alt. 0	Relative to Alt. 0			Alt. 0	Relative to Alt. 0		
		Alt. 1	Alt. 2	Alt. 3		Alt. 1	Alt. 2	Alt. 3
Consumer Costs								
Insurance cost	5,190	73	157	232	5,128	60	116	166
Financing cost	4,153	59	125	186	4,103	48	93	132
Taxes and fees	2,016	28	61	90	1,992	23	45	64
Regulatory cost	1,120	437	960	1,444	924	324	645	934
Foregone consumer sales surplus	0	1	7	17	0	0	1	3
Maintenance and repair cost	0	0	0	0	0	0	0	0
Implicit opportunity cost	0	0	0	0	0	0	0	0
Total consumer costs	12,478	598	1,310	1,970	12,147	456	899	1,299
Consumer Benefits								
Retail fuel outlay	19,703	-738	-1,186	-1,688	19,727	-818	-1,622	-2,351
Refueling time cost	1,046	-1	-2	-15	1,191	15	89	181
Drive value	693	125	160	219	779	137	162	204
Total consumer benefits	21,442	864	1,347	1,922	21,696	940	1,694	2,373
Net benefits	8,964	266	37	-48	9,550	484	795	1,074

Table V-25 through Table V-27 presents projected consumer costs and benefits along with net benefits for model year 2029 and 2039 vehicles under the proposed alternatives. Results are shown in 2018 dollars, without discounting and with benefits and costs

discounted at annual rates of 3% and 7%. The TSD and PRA accompanying this NPRM discuss underlying methods, inputs, and results in greater detail, and more detailed tables and underlying results are contained in the accompanying CAFE Data Book and

CAFE Model output files. For all of the action alternatives, avoided outlays for fuel purchases account for most of the projected benefits to consumers, and increases in the cost to purchase new vehicles account for most of the projected costs.

Table V-26 – Average Per-Vehicle Consumer Benefits and Costs – Passenger Cars and Light Trucks, Discounted at 3% 2018\$

	MY 2029				MY 2039			
	Alt. 0	Relative to Alt. 0			Alt. 0	Relative to Alt. 0		
		Alt. 1	Alt. 2	Alt. 3		Alt. 1	Alt. 2	Alt. 3
Consumer Costs								
Insurance cost	4,353	61	131	195	4,301	50	97	139
Financing cost	3,874	55	117	173	3,828	45	86	124
Taxes and fees	2,016	28	61	90	1,992	23	45	64
Regulatory cost	1,120	437	960	1,444	924	324	645	934
Foregone consumer sales surplus	0	1	7	17	0	0	1	3
Maintenance and repair cost	0	0	0	0	0	0	0	0
Implicit opportunity cost	0	0	0	0	0	0	0	0
Total consumer costs	11,362	582	1,276	1,920	11,044	443	874	1,263
Consumer Benefits								
Retail fuel outlay	15,510	-581	-937	-1,332	15,652	-648	-1,287	-1,866
Refueling time cost	834	0	-1	-12	951	13	72	145
Drive value	546	97	125	171	622	108	128	161
Total consumer benefits	16,890	679	1,063	1,516	17,226	743	1,343	1,882
Net benefits	5,527	96	-213	-404	6,182	300	469	619

Table V-27 – Average Per-Vehicle Consumer Benefits and Costs – Passenger Cars and Light Trucks, Discounted at 7% 2018\$

	MY 2029				MY 2039			
	Alt. 0	Relative to Alt. 0			Alt. 0	Relative to Alt. 0		
		Alt. 1	Alt. 2	Alt. 3		Alt. 1	Alt. 2	Alt. 3
Consumer Costs								
Insurance cost	3,619	51	109	162	3,576	42	81	115
Financing cost	3,555	50	107	159	3,512	41	79	113
Taxes and fees	2,016	28	61	90	1,992	23	45	64
Regulatory cost	1,120	437	960	1,444	924	324	645	934
Foregone consumer sales surplus	0	1	7	17	0	0	1	3
Maintenance and repair cost	0	0	0	0	0	0	0	0
Implicit opportunity cost	0	0	0	0	0	0	0	0
Total consumer costs	10,310	568	1,244	1,873	10,004	431	851	1,230
Consumer Benefits								
Retail fuel outlay	12,001	-449	-726	-1,032	12,217	-503	-1,001	-1,453
Refueling time cost	654	0	-1	-9	747	10	56	115
Drive value	422	75	96	132	489	84	100	126
Total consumer benefits	13,077	524	823	1,173	13,453	578	1,045	1,464
Net benefits	2,767	-44	-421	-700	3,449	147	194	234

BILLING CODE 4910-59-C*C. Effects on Society*

Table V-28 and Table V-29 describe the costs and benefits of increasing CAFE standards in each alternative, as well as the party to which they accrue. Manufacturers are directly regulated under the program and incur additional production costs when they apply technology to their vehicle offerings in order to improve their fuel economy. In this analysis, we assume that those costs are fully passed through to new car and

truck buyers, in the form of higher prices. Other assumptions are possible, but we do not currently have data to support attempting to model cross-subsidization. We also assume that any civil penalties—paid by manufacturers for failing to comply with their CAFE standards—are passed through to new car and truck buyers and are included in the sales price. However, those civil penalties are paid to the U.S. Treasury, where they currently fund the general business of Government. As such, they are a transfer from new vehicle buyers

to all U.S. citizens, who then benefit from the additional Federal revenue. While they are calculated in the analysis, and do influence consumer decisions in the marketplace, they do not contribute to the calculation of net benefits (and are omitted from the tables below).

While incremental maintenance and repair costs would accrue to buyers of new cars and trucks affected by more stringent CAFE standards, we do not carry these costs in the analysis. They are difficult to estimate for emerging

technologies but represent real costs (and benefits in the case of alternative fuel vehicles that may require less frequent maintenance events). They may be included in future analyses as data become available to evaluate lifetime maintenance costs. This analysis assumes that drivers of new vehicles internalize 90 percent of the risk associated with increased exposure to crashes when they engage in additional travel (as a consequence of the rebound effect).

Private benefits are dominated by the value of fuel savings, which accrue to new car and truck buyers at retail fuel prices (inclusive of Federal and state taxes). In addition to saving money on fuel purchases, new vehicle buyers also benefit from the increased mobility that results from the lower cost of driving their vehicle (higher fuel economy reduces the per-mile cost of travel) and fewer refueling events. The additional travel occurs as drivers take advantage of lower operating costs to increase mobility, and this generates benefits to those drivers—equivalent to the cost of operating their vehicles to travel those miles, the consumer surplus, and the offsetting benefit that represents 90 percent of the additional safety risk from travel.

In addition to private benefits and costs, there are purely external benefits and costs that can be attributed to increases in CAFE standards. These are benefits and costs that accrue to society more generally, rather than to the specific individuals who purchase a new vehicle that was produced under more stringent CAFE standards. Of the external costs, the largest is the loss in fuel tax revenue that occurs as a result of falling fuel consumption. While drivers of new vehicles (purchased in years where CAFE stringency is increasing) save fuel costs at retail prices, the rest of U.S. road users experience a welfare loss, in two ways. First, the revenue generated by fuel taxes helps to maintain roads and bridges, and improve infrastructure more generally, and that loss in fuel tax revenue is a social cost. And second, the additional driving that occurs as new vehicle buyers take advantage of lower per-mile fuel costs is a benefit to those drivers, but the congestion (and road noise) created by the additional travel impose a social cost to all road users.

Among the purely external benefits created when CAFE standards are increased, the largest is the reduction in damages resulting from greenhouse gas emissions. The estimates in Table V–28

assume a social cost of GHG emissions based on a 2.5% discount rate, and those in Table V–29 assume a social cost of GHG emissions based on a 3% discount rate. The associated benefits related to reduced health damages from conventional pollutants and the benefit of improved energy security are both significantly smaller than the associated change in GHG damages across alternatives. As the tables also illustrate, the overwhelming majority of both costs and benefits are private costs and benefits that accrue to buyers of new cars and trucks, rather than external welfare changes that affect society more generally. This has been consistently true in CAFE rulemakings.

The choice of discount rate also affects the resulting benefits and costs. As the tables show, net social benefits are positive for Alternative 1 and 2 at a 3% discount rate, but only for Alternative 1 when applying a 7% discount rate to benefits and costs. Alternative 3 has negative net benefits under both discount rates. As mentioned above, the benefits of the regulatory alternatives, but especially Alternative 3, are concentrated in later years where a higher discount rate has a greater contracting effect.

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Table V-28 – Incremental Benefits and Costs Over the Lifetimes of Total Fleet Produced Through 2029 (2018\$ Billions), 3% Percent Discount Rate, by Alternative

Alternative:	1	2	3
Private Costs			
Technology Costs to Increase Fuel Economy	34.3	67.6	100.1
Increased Maintenance and Repair Costs	0.0	0.0	0.0
Sacrifice in Other Vehicle Attributes	0.0	0.0	0.0
Consumer Surplus Loss from Reduced New Vehicle Sales	0.1	0.6	1.3
Safety Costs Internalized by Drivers	6.2	8.2	11.2
Subtotal - Private Costs	40.6	76.4	112.6
External Costs			
Congestion and Noise Costs from Rebound-Effect Driving	7.3	10.1	13.5
Safety Costs Not Internalized by Drivers	7.5	15.8	23.2
Loss in Fuel Tax Revenue for the Highway Trust Fund	11.0	18.9	27.0
Subtotal - External Costs	25.8	44.8	63.7
Total Social Costs	66.4	121.2	176.3
Private Benefits			
Reduced Fuel Costs	47.9	73.0	103.8
Benefits from Additional Driving	12.3	15.3	20.8
Less Frequent Refueling	-0.5	-0.8	0.3
Subtotal - Private Benefits	59.7	87.5	124.9
External Benefits			
Reduction in Petroleum Market Externality	0.9	1.5	2.1
Reduced Climate Damages	20.3	32.0	45.6
Reduced Health Damages	1.7	0.4	0.3
Subtotal - External Benefits	22.9	33.9	48.0
Total Social Benefits	82.6	121.4	172.9
Net Social Benefits	16.1	0.3	-3.4

Table V-29 – Incremental Benefits and Costs Over the Lifetimes of Total Fleet Produced Through 2029 (2018\$ Billions), 7% Percent Discount Rate, by Alternative

Alternative:	1	2	3
Private Costs			
Technology Costs to Increase Fuel Economy	28.1	55.0	81.4
Increased Maintenance and Repair Costs	0.0	0.0	0.0
Sacrifice in Other Vehicle Attributes	0.0	0.0	0.0
Consumer Surplus Loss from Reduced New Vehicle Sales	0.1	0.5	1.1
Safety Costs Internalized by Drivers	3.7	4.9	6.8
Subtotal - Private Costs	31.9	60.4	89.3
External Costs			
Congestion and Noise Costs from Rebound-Effect Driving	4.8	6.8	9.3
Safety Costs Not Internalized by Drivers	5.5	11.6	17.3
Loss in Fuel Tax Revenue	7.0	11.9	17.0
Subtotal - External Costs	17.3	30.3	43.6
Total Social Costs	34.6	60.6	87.2
Private Benefits			
Reduced Fuel Costs	29.7	44.9	63.7
Benefits from Additional Driving	7.5	9.3	12.7
Less Frequent Refueling	-0.4	-0.6	0.0
Subtotal - Private Benefits	36.8	53.6	76.4
External Benefits			
Reduction in Petroleum Market Externality	0.5	0.9	1.3
Reduced Climate Damages	13.3	21.0	29.9
Reduced Health Damages	0.9	0.1	-0.1
Subtotal - External Benefits	14.8	22.0	31.2
Total Social Benefits	51.6	75.6	107.6
Net Social Benefits	2.3	-15.1	-25.2

The following tables show the costs and benefits associated with external effects to society. As seen in Table V-28 and Table V-29, the external benefits are composed of reduced climate damages (Table V-30 and Table V-31), reduced health damages (Table V-32

and Table V-33), and reduced petroleum market externalities (Table V-36). The external costs to society include congestion and noise costs (Table V-34 and Table V-35) and safety costs (Table V-37). We show the costs and benefits by model year (1981-2029),

in contrast to the tables above, which present incremental and net costs and benefits over the lifetimes of the entire fleet produced through 2029, beginning with model year 1981.

Table V-30 – Total and Incremental Costs of GHGs (2018\$, billions), MY 1981-2029, 2.5% Discount Rate, by Alternative

Model Year	1981 - 2023	2024	2025	2026	2027	2028	2029	Total
Alternative 0/Baseline (Totals)								
CO ₂	1,202.4	91.6	87.7	83.0	80.0	77.4	75.2	1,697.2
CH ₄	40.4	3.2	3.1	2.9	2.9	2.8	2.7	58.0
N ₂ O	15.5	1.0	1.0	0.9	0.9	0.9	0.9	21.1
Alternative 1 (Relative to Baseline)								
CO ₂	1.8	-3.0	-3.6	-3.7	-3.7	-3.7	-3.5	-19.4
CH ₄	0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.6
N ₂ O	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2
Alternative 2 (Relative to Baseline)								
CO ₂	4.5	-3.4	-5.2	-6.8	-6.7	-6.7	-6.3	-30.7
CH ₄	0.2	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-1.0
N ₂ O	0.1	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.3
Alternative 3 (Relative to Baseline)								
CO ₂	7.3	-5.2	-7.6	-9.8	-9.7	-9.7	-9.0	-43.8
CH ₄	0.3	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-1.4
N ₂ O	0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.4

Table V-30 and Table V-31 present the total costs of GHGs in the baseline scenario and the incremental costs relative to the baseline in the other three alternatives. Negative incremental values indicate a decrease in social costs

of GHGs, while positive incremental values indicate an increase in costs relative to the baseline for the given model year. The GHG costs follow a similar pattern in all three alternatives, decreasing across all model years, with

the largest reductions associated with 2025–2028 model years. The magnitude of CO₂ emissions is much higher than the magnitudes of CH₄ and N₂O emissions, which is why the total costs are so much larger for CO₂.

Table V-31 – Total and Incremental Costs of GHGs (2018\$, billions), MY 1981-2029, 3% Discount Rate, by Alternative

Model Year:	1981 - 2023	2024	2025	2026	2027	2028	2029	Total
Alternative 0/Baseline (Totals)								
CO ₂	796.4	60.2	57.6	54.4	52.4	50.6	49.0	1,120.5
CH ₄	30.3	2.4	2.3	2.2	2.1	2.1	2.0	43.3
N ₂ O	10.4	0.7	0.7	0.6	0.6	0.6	0.6	14.0
Alternative 1 (Relative to Baseline)								
CO ₂	1.2	-2.0	-2.4	-2.4	-2.4	-2.4	-2.3	-12.7
CH ₄	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.5
N ₂ O	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
Alternative 2 (Relative to Baseline)								
CO ₂	3.0	-2.2	-3.4	-4.5	-4.4	-4.4	-4.1	-20.1
CH ₄	0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.7
N ₂ O	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2
Alternative 3 (Relative to Baseline)								
CO ₂	4.8	-3.4	-5.0	-6.5	-6.3	-6.3	-5.9	-28.6
CH ₄	0.2	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-1.0
N ₂ O	0.1	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.3

The CAFE Model calculates health costs attributed to criteria pollutant

emissions of NO_x, SO_x, and PM_{2.5}, shown in Table V-32 and Table V-33.

These costs are directly related to the tons of each pollutant emitted from

various upstream and downstream sources, including on-road vehicles, electricity generation, fuel refining, and fuel transportation and distribution. See Chapter 4 of the SEIS and Chapter 5.4 of the TSD for further information regarding the calculations used to estimate health impacts, and more details about the types of health effects. The following section of the preamble, V.D, discusses the changes in tons of emissions themselves across rulemaking alternatives, while the current section

focuses on the changes in social costs associated with those emissions.

Criteria pollutant health costs (presented in Table V-32 and Table V-35) increase slightly in earlier model years (1981–2023), but those cost increases are offset by the decrease in health costs in later model years. In Table V-32 and Table V-33, the costs in alternatives 1–3 are shown in terms of percent of the baseline. For instance, the total decrease in SO_x costs in Alternative 2 is equivalent to 0.2% of

the total baseline SO_x costs. The changes across alternatives relative to the baseline are relatively minor, although some impacts in later model years are more significant (e.g., 7.5% decrease in PM_{2.5} in 2028, Alternative 3). Since the health cost value per ton of emissions differs by pollutant, the pollutants that incur the highest costs are not necessarily those with the largest amount of emissions.

Table V-32 – Totals and Percent Changes in Health Costs of Criteria Pollutants (2018\$, billions), MY 1981-2029, 3% Discount Rate, by Alternative

Model Year:	1981 - 2023	2024	2025	2026	2027	2028	2029	Total
Alternative 0/Baseline (Totals)								
NO _x	119.0	1.7	1.5	1.4	1.4	1.3	1.3	127.6
SO _x	168.7	11.6	11.0	10.3	9.8	9.3	8.9	229.7
PM _{2.5}	330.6	9.9	9.4	8.8	8.4	8.1	7.8	383.0
Alternative 1 (Relative to Baseline)								
NO _x	0.2%	-1.0%	-1.6%	-1.7%	-1.6%	-1.9%	-1.9%	0.1%
SO _x	0.2%	-1.7%	-2.5%	-2.6%	-2.6%	-2.9%	-2.9%	-0.5%
PM _{2.5}	0.2%	-2.1%	-2.6%	-2.8%	-2.8%	-2.9%	-2.8%	-0.2%
Alternative 2 (Relative to Baseline)								
NO _x	0.5%	-0.3%	-0.4%	0.1%	0.3%	0.2%	0.2%	0.5%
SO _x	0.4%	-1.3%	-2.1%	-2.2%	-2.0%	-2.2%	-2.1%	-0.2%
PM _{2.5}	0.5%	-2.3%	-3.7%	-5.0%	-4.9%	-5.1%	-4.9%	-0.1%
Alternative 3 (Relative to Baseline)								
NO _x	0.8%	-0.5%	-0.2%	0.0%	0.4%	0.3%	0.1%	0.7%
SO _x	0.7%	-2.0%	-2.6%	-3.2%	-2.9%	-3.0%	-3.0%	-0.2%
PM _{2.5}	0.8%	-3.5%	-5.5%	-7.4%	-7.3%	-7.5%	-7.3%	-0.2%

Table V-33 – Totals and Percent Changes in Health Costs of Criteria Pollutants (2018\$, billions), MY 1981-2029, 7% Discount Rate, by Alternative

Model Year:	1981 - 2023	2024	2025	2026	2027	2028	2029	Total
Alternative 0/Baseline (Totals)								
NO _x	91.1	1.1	1.0	0.9	0.8	0.7	0.7	96.2
SO _x	125.8	7.5	6.8	6.2	5.6	5.2	4.8	161.9
PM _{2.5}	246.6	6.1	5.5	5.0	4.6	4.3	3.9	276.0
Alternative 1 (Relative to Baseline)								
NO _x	0.2%	-1.0%	-1.6%	-1.7%	-1.7%	-2.0%	-2.0%	0.1%
SO _x	0.2%	-1.8%	-2.5%	-2.7%	-2.7%	-2.9%	-2.9%	-0.4%
PM _{2.5}	0.2%	-2.2%	-2.7%	-2.9%	-2.8%	-2.9%	-2.9%	-0.1%
Alternative 2 (Relative to Baseline)								
NO _x	0.4%	-0.4%	-0.6%	-0.1%	0.1%	-0.1%	-0.1%	0.4%
SO _x	0.4%	-1.4%	-2.2%	-2.3%	-2.1%	-2.2%	-2.1%	-0.2%
PM _{2.5}	0.4%	-2.3%	-3.7%	-5.0%	-4.9%	-5.0%	-4.8%	-0.1%
Alternative 3 (Relative to Baseline)								
NO _x	0.6%	-0.6%	-0.4%	-0.3%	0.0%	-0.1%	-0.3%	0.6%
SO _x	0.6%	-2.1%	-2.8%	-3.3%	-3.0%	-3.0%	-3.1%	-0.2%
PM _{2.5}	0.7%	-3.6%	-5.5%	-7.4%	-7.3%	-7.4%	-7.2%	-0.1%

NHTSA estimates social costs of congestion and noise across regulatory alternatives, throughout the lifetimes of model years 1981–2029. Congestion and noise are functions of VMT and fleet mix, and the differences between alternatives are due mainly to differences in VMT (see Section V.D).

Overall, congestion and noise costs increase relative to the baseline across all alternatives, but viewed from a model year perspective, the congestion and noise costs associated with later model years are negative relative to the baseline. It is important to note that the overall increases in congestion and

noise costs are relatively small when compared to the total congestion and noise costs in the baseline (No-Action Alternative). For further details regarding congestion and noise costs, see Chapter 6.2.3 of the TSD and Chapter 6.5 of the PRIA.

Table V-34 – Total and Incremental Congestion and Noise Costs (2018\$, billions), MY 1981-2029, 3% Discount Rate, by Alternative

Model Year:	1981 - 2023	2024	2025	2026	2027	2028	2029	Total
Alternative 0/Baseline (Totals)								
Congestion	4,003.4	347.5	331.3	314.3	298.9	285.9	274.8	5,856.1
Noise	28.5	2.5	2.3	2.2	2.1	2.0	1.9	41.6
Alternative 1 (Relative to the Baseline)								
Congestion	8.07	-0.83	-0.62	-0.42	0.10	0.38	0.59	7.28
Noise	0.06	-0.01	0.00	0.00	0.00	0.00	0.00	0.05
Alternative 2 (Relative to the Baseline)								
Congestion	17.61	-0.39	-1.61	-2.66	-1.61	-0.91	-0.44	9.98
Noise	0.13	0.00	-0.01	-0.02	-0.01	-0.01	0.00	0.07
Alternative 3 (Relative to the Baseline)								
Congestion	27.43	-0.92	-2.85	-4.42	-2.90	-1.88	-1.10	13.35
Noise	0.20	-0.01	-0.02	-0.03	-0.02	-0.01	-0.01	0.10

Table V-35 – Total and Incremental Congestion and Noise Costs (2018\$, billions), MY 2020-2029, 7% Discount Rate, by Alternative

Model Year:	1981 - 2023	2024	2025	2026	2027	2028	2029	Total
Alternative 0/Baseline (Totals)								
Congestion	3,276.3	242.6	222.8	203.5	186.4	171.7	158.9	4,462.3
Noise	23.3	1.7	1.6	1.4	1.3	1.2	1.1	31.7
Alternative 1 (Relative to the Baseline)								
Congestion	5.62	-0.63	-0.47	-0.32	0.03	0.21	0.33	4.77
Noise	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.04
Alternative 2 (Relative to the Baseline)								
Congestion	12.06	-0.39	-1.19	-1.81	-1.07	-0.58	-0.27	6.75
Noise	0.09	0.00	-0.01	-0.01	-0.01	0.00	0.00	0.05
Alternative 3 (Relative to the Baseline)								
Congestion	18.80	-0.83	-2.07	-2.98	-1.89	-1.17	-0.65	9.20
Noise	0.13	-0.01	-0.01	-0.02	-0.01	-0.01	0.00	0.07

The CAFE Model accounts for benefits of increased energy security by computing changes in social costs of petroleum market externalities. These social costs represent the risk to the U.S. economy incurred by exposure to price shocks in the global petroleum market that are not accounted for by oil prices and are a direct function of gallons of

fuel consumed. Chapter 6.2.4 of the accompanying TSD describes the inputs involved in calculating these petroleum market externality costs. Petroleum market externality costs decrease relative to the baseline under all alternatives, regardless of the discount rate used. This pattern occurs due to the decrease in gallons of fuel consumed

(see Section V.D) as the stringency of alternatives increases. Only the earlier model year cohorts (1981–2023) contribute to slight increases in petroleum market externality costs, but these are offset by the decreases from later model years.

Table V-36 – Total and Incremental Petroleum Market Externalities Costs (2018\$, billions), MY 1981-2029, by Alternative

Model Year:	1981-2020	2021-2023	2024-2026	2027-2029	
Discount rate	Alternative 0/Baseline (Totals)				
	3%	35.31	10.9	10.3	9.3
	7%	28.89	7.9	6.7	5.4
Alternative 1 (Relative to Baseline)					
	3%	0.08	-0.02	-0.45	-0.48
	7%	0.06	-0.02	-0.29	-0.28
Alternative 2 (Relative to Baseline)					
	3%	0.18	-0.02	-0.72	-0.94
	7%	0.13	-0.02	-0.47	-0.55
Alternative 3 (Relative to Baseline)					
	3%	0.28	-0.01	-1.06	-1.36
	7%	0.19	-0.01	-0.69	-0.80

NHTSA estimates various monetized safety impacts across regulatory alternatives, including costs of fatalities, non-fatal crash costs, and property

damage costs. Table V-37 presents these social costs across alternatives and discount rates. Safety effects are discussed at length in the PRIA

accompanying this NPRM (see Chapter 5 of the PRIA).

Table V-37 – Total Social Costs of Safety Impacts (2018\$, billions), MY 1981-2029, All Alternatives

	Alternative 1		Alternative 2		Alternative 3	
	3%	7%	3%	7%	3%	7%
Fatality Costs	7.8	5.2	14.5	9.9	21.1	14.7
Non-Fatal Crash Costs	4.9	3.3	8.0	5.6	11.1	7.9
Property Damage Crash Costs	1.0	0.7	1.6	1.1	2.2	1.5

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D. Physical and Environmental Effects

NHTSA calculates estimates for the various physical and environmental effects associated with the proposed standards. These include quantities of fuel and electricity consumption, tons of greenhouse gas (GHG) emissions and criteria pollutants, and health and safety impacts.

In terms of fuel and electricity usage, NHTSA estimates that the proposal would save about 50 billion gallons of gasoline and increase electricity consumption by about 275 TWh over the lives of vehicles produced prior to MY 2030, relative to the baseline standards (*i.e.*, the No-Action Alternative). From a calendar year perspective, NHTSA’s analysis also estimates total annual consumption of

fuel by the entire on-road fleet from calendar year 2020 through calendar year 2050. On this basis, gasoline and electricity consumption by the U.S. light-duty vehicle fleet evolves as shown in the following two graphs, each of which shows projections for the No-Action Alternative (Alternative 0, *i.e.*, the baseline), Alternative 1, Alternative 2 (the proposal), and Alternative 3.

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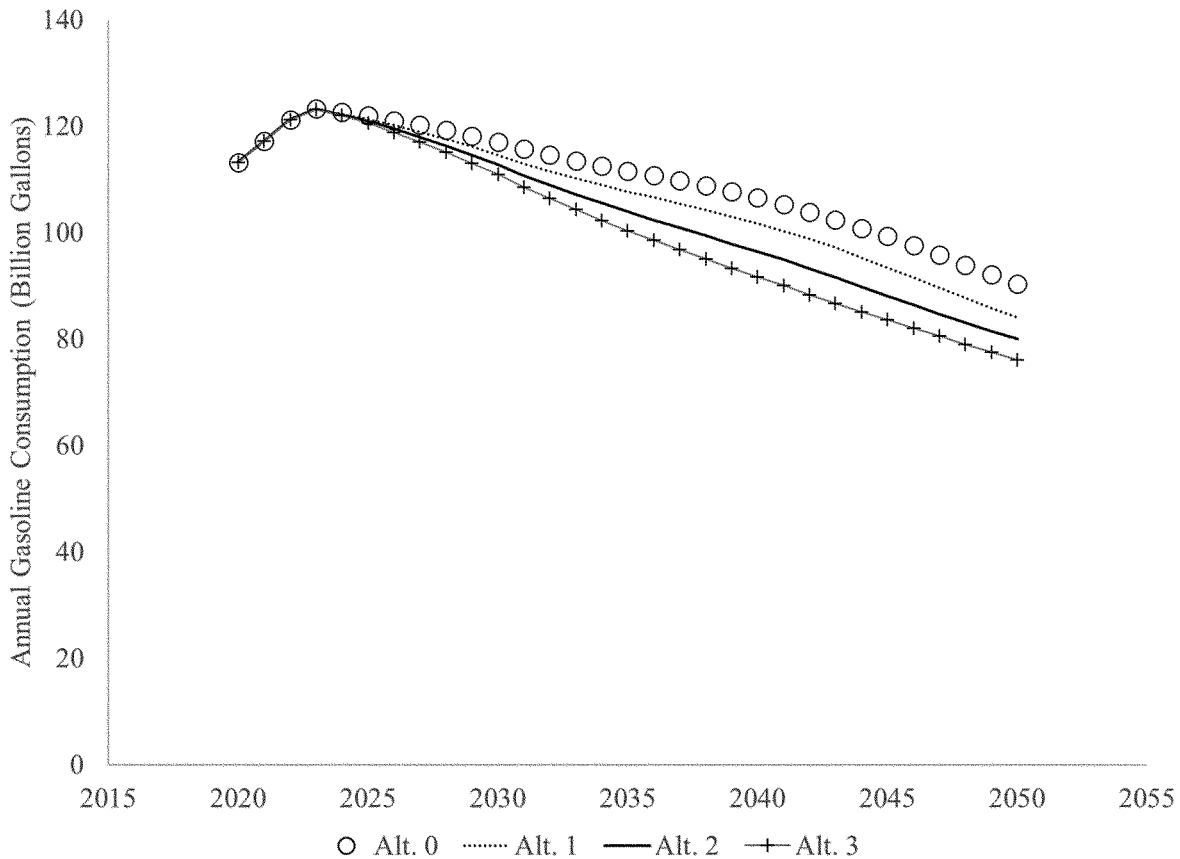


Figure V-3 – Estimated Annual Gasoline Consumption by Light-Duty On-Road Fleet

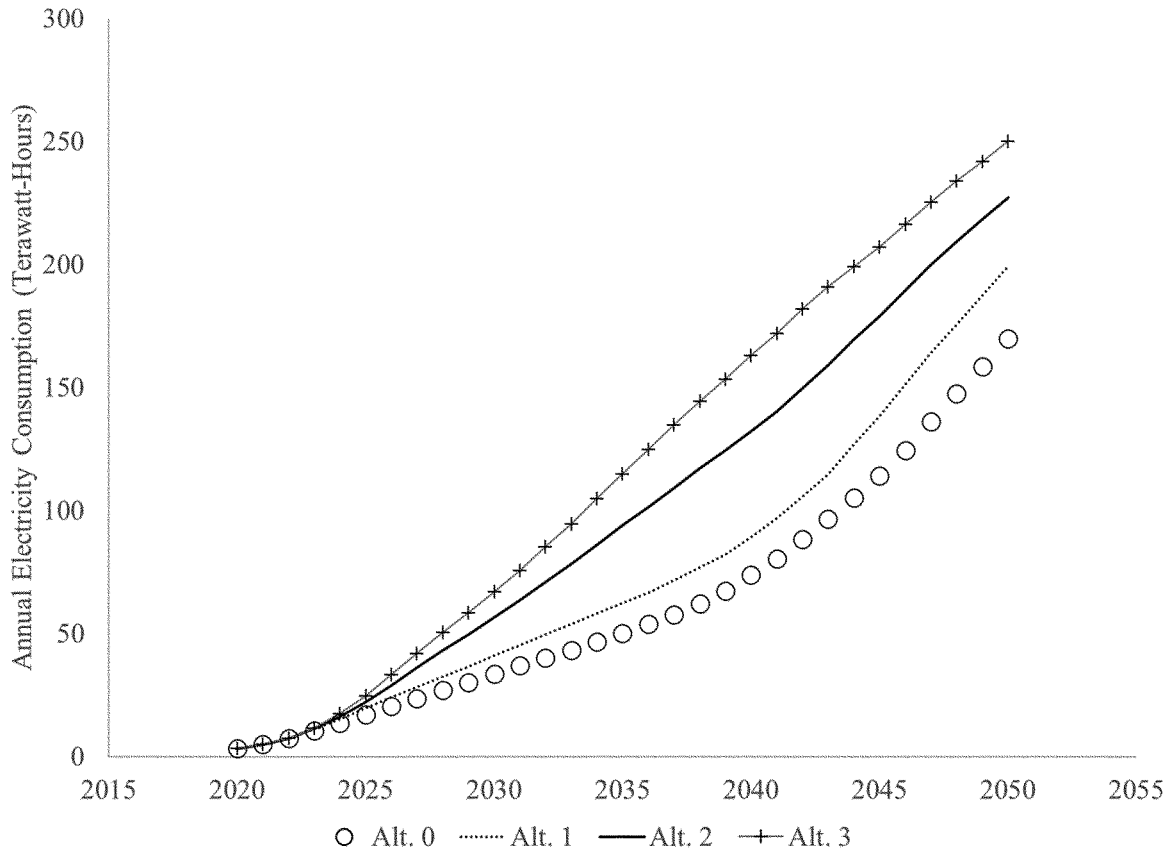


Figure V-4 – Estimated Electricity Consumption by Light-Duty On-Road Fleet

NHTSA estimates the greenhouse gas emissions (GHGs) attributable to the light-duty on-road fleet, from both vehicles and upstream energy sector processes (e.g., petroleum refining, fuel transportation and distribution, electricity generation). Overall, NHTSA estimates that the proposed rule would

reduce greenhouse gases by about 465 million metric tons of carbon dioxide (CO₂), about 500 thousand metric tons of methane (CH₄), and about 12 thousand tons of nitrous oxide (N₂O). The following three graphs (Figure V-5, Figure V-6, and Figure V-7) present NHTSA’s estimate of how emissions

from these three GHGs could evolve over the years. Note that these graphs include emissions from both vehicle and upstream processes. All three GHG emissions follow similar trends in the years between 2020–2050.

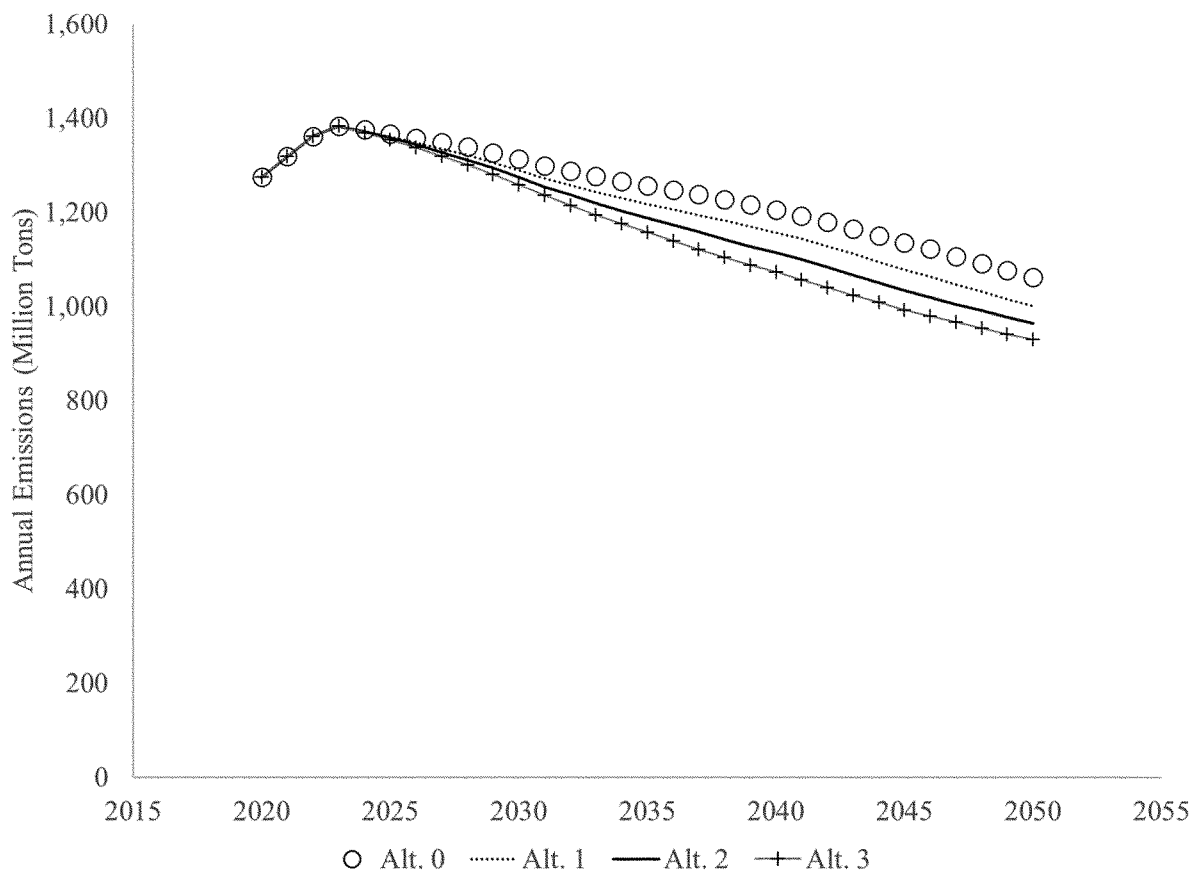


Figure V-5 – Estimated Annual CO₂ Emissions Attributable to Light-Duty On-Road Fleet

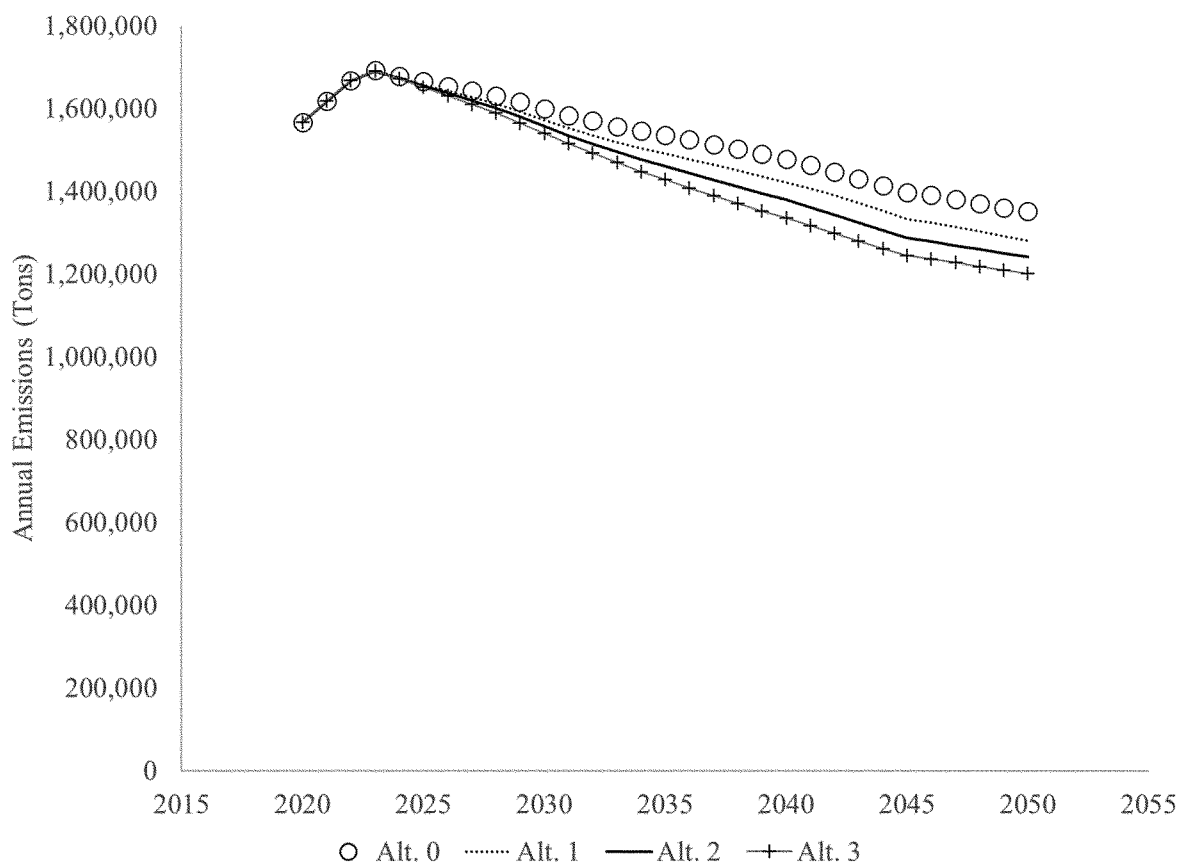


Figure V-6 – Estimated Annual CH₄ Emissions Attributable to Light-Duty On-Road Fleet

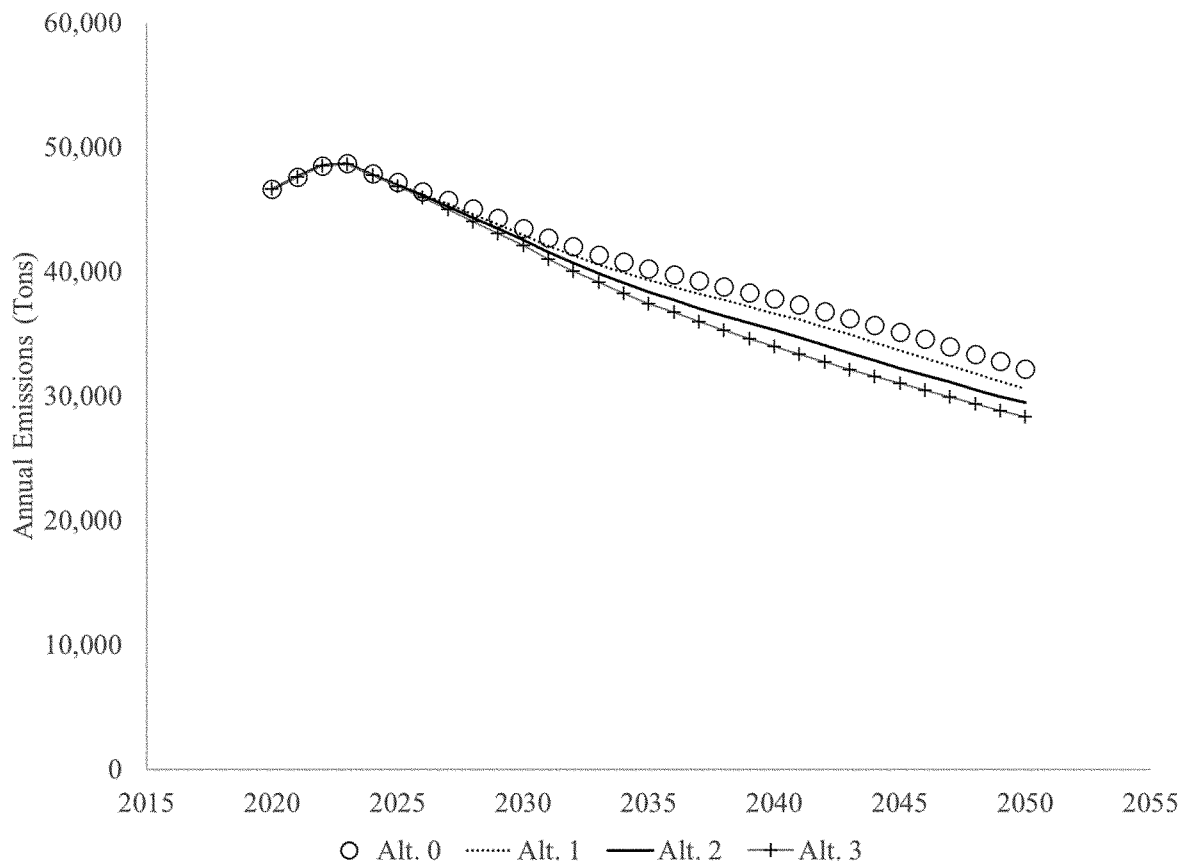


Figure V-7 – Estimated Annual N₂O Emissions Attributable to Light-Duty On-Road Fleet

The figures presented here are not the only estimates NHTSA has calculated regarding projected GHG emissions in future years. As discussed in Section II, the accompanying SEIS uses an “unconstrained” analysis as opposed to the “standard setting” analysis presented in this NPRM and PRIA. For more information regarding projected GHG emissions, as well as model-based estimates of corresponding impacts on several measures of global climate change, see the SEIS.

NHTSA also estimates criteria pollutant emissions resulting from vehicle and upstream processes attributable to the light-duty on-road fleet. NHTSA includes estimates for all

of the criteria pollutants for which EPA has issued National Ambient Air Quality Standards. Under each regulatory alternative, NHTSA projects a dramatic decline in annual emissions of carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxide (NO_x), and fine particulate matter (PM_{2.5}) attributable to the light-duty on-road fleet between 2020 and 2050. As exemplified in Figure V-8, emissions in any given year could be very nearly the same under each regulatory alternative.

On the other hand, as discussed in the PRIA and SEIS accompanying this NPRM, NHTSA projects that annual SO₂ emissions attributable to the light-duty on-road fleet could increase modestly

under the action alternatives, because, as discussed above, NHTSA projects that each of the action alternatives could lead to greater use of electricity (for PHEVs and BEVs). The adoption of actions—such as actions prompted by President Biden’s Executive order directing agencies to develop a Federal Clean Electricity and Vehicle Procurement Strategy—to reduce electricity generation emission rates beyond projections underlying NHTSA’s analysis (discussed in the TSD) could dramatically reduce SO₂ emissions under all regulatory alternatives considered here.³⁸²

³⁸² E.O. 14008, 86 FR 7619 (Feb. 1, 2021), <https://www.whitehouse.gov/briefing-room/presidential->

[actions/2021/01/27/executive-order-on-tackling-](https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-)

[the-climate-crisis-at-home-and-abroad/](https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/), accessed June 17, 2021.

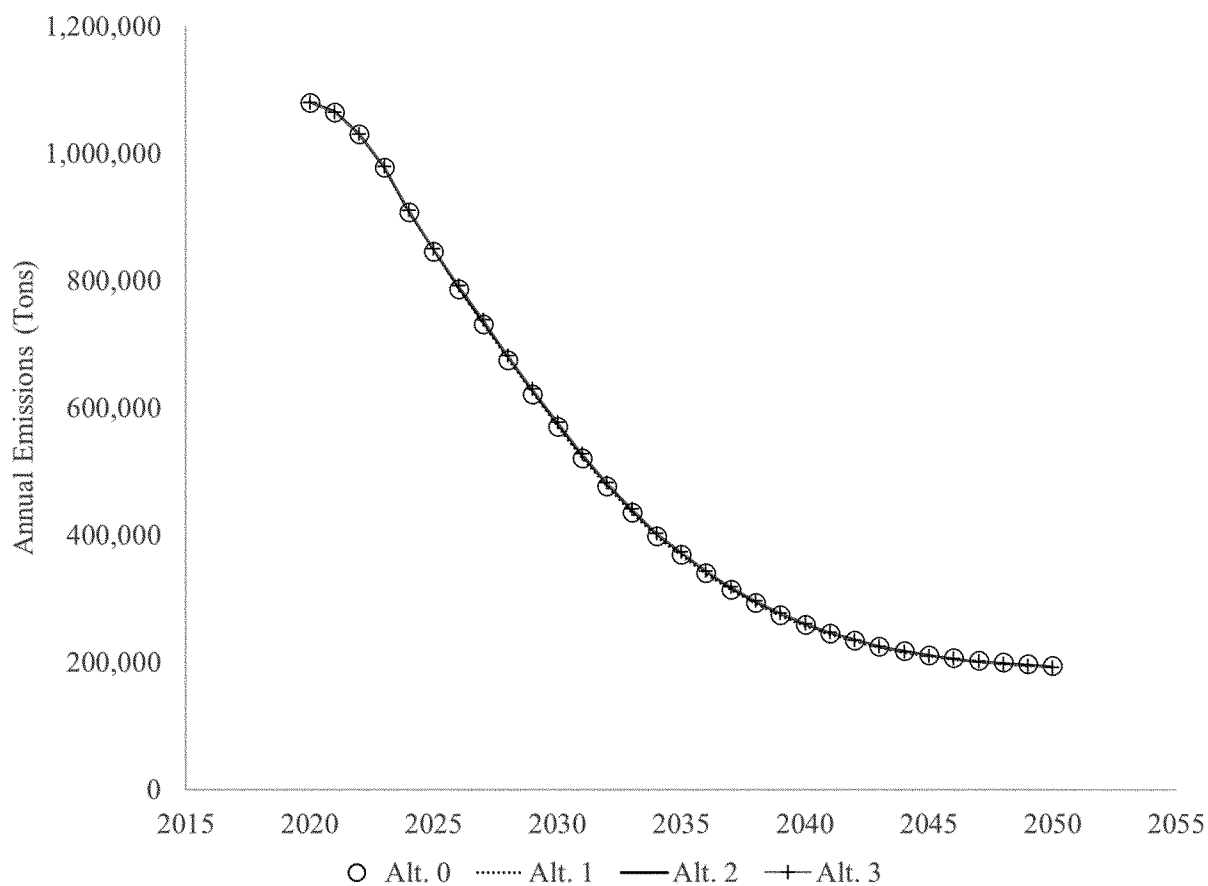


Figure V-8 – Estimated Annual NOx Emissions Attributable to Light-Duty On-Road Fleet

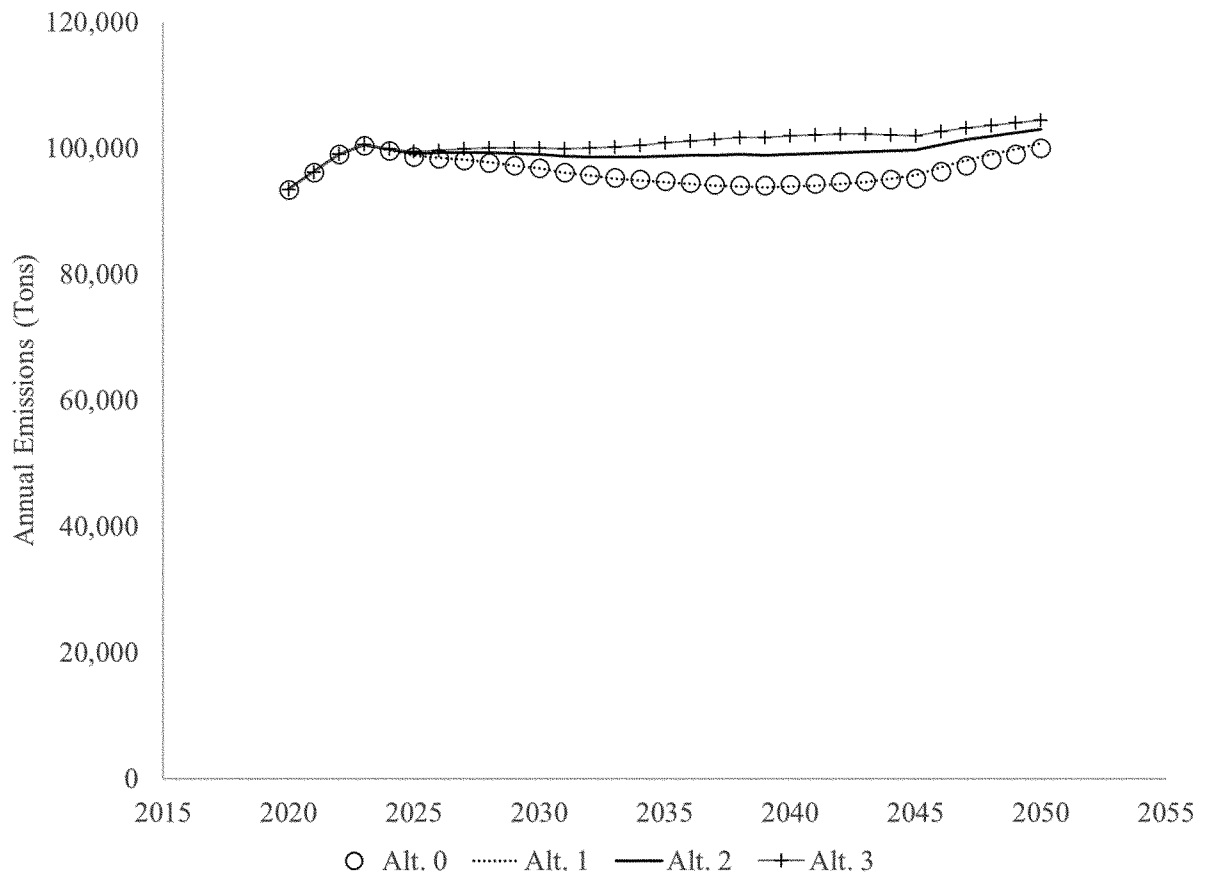


Figure V-9 – Estimated Annual SO₂ Emissions Attributable to Light-Duty On-Road Fleet

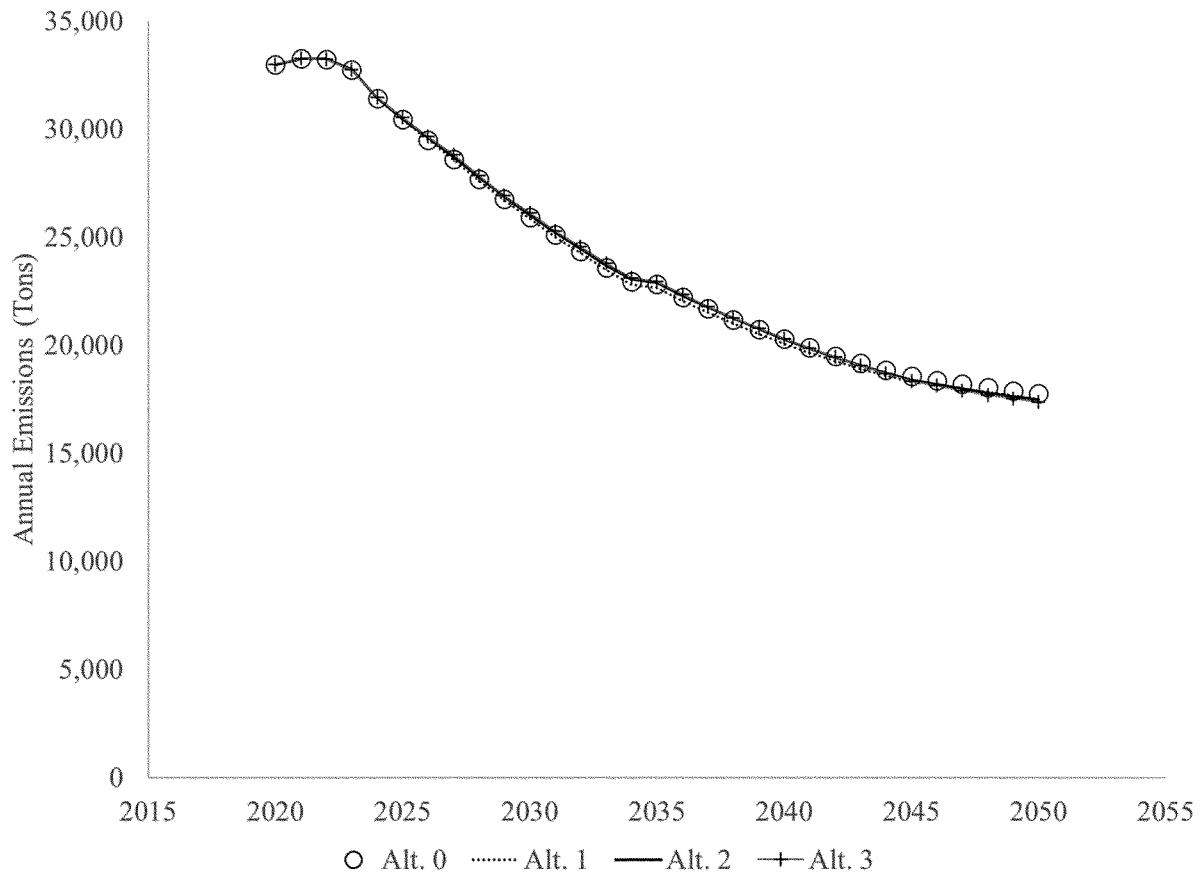


Figure V-10 – Estimated Annual PM_{2.5} Emissions Attributable to Light-Duty On-Road Fleet

Health impacts quantified by the CAFE Model include various instances of hospital visits due to respiratory problems, minor restricted activity days, non-fatal heart attacks, acute bronchitis, premature mortality, and other effects of criteria pollutant emissions on health.

Figure V-11 shows the differences in select health impacts relative to the baseline, across alternatives 1-3. These changes are split between calendar year decades, with the largest differences between the baseline and alternatives occurring between 2041-2050. The

magnitude of the differences relates directly to the changes in tons of criteria pollutants emitted. See Chapter 5.4 of the TSD for information regarding how the CAFE Model calculates these health impacts.

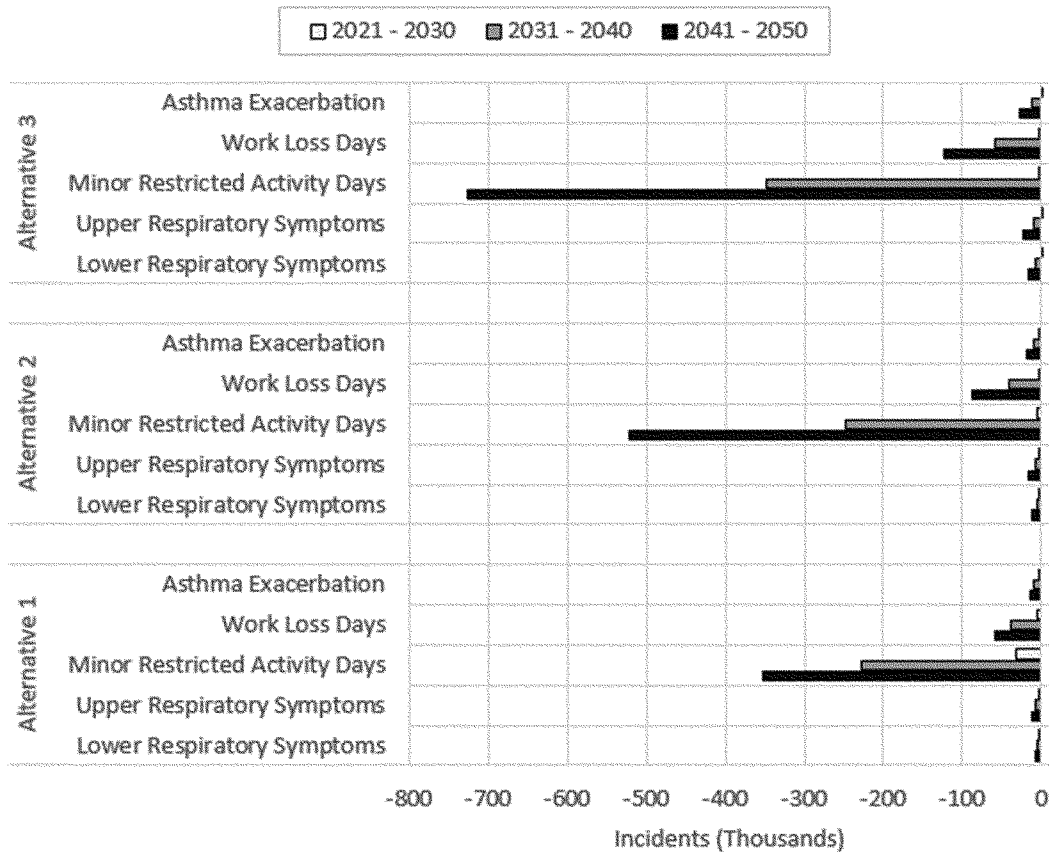


Figure V-11 – Changes in Cumulative Emission Health Impacts Relative to the Baseline

Lastly, NHTSA also quantifies safety impacts in its analysis. These include estimated counts of fatalities, non-fatal injuries, and property damage crashes occurring over the lifetimes of the light-duty on-road vehicles considered in the analysis. Chapter 5 in the PRIA accompanying this NPRM contains an in-depth discussion on the effects of the various alternatives on these safety measures, and TSD Chapter 7 contains information regarding the construction of the safety estimates.

E. Sensitivity Analysis

The analysis conducted to support this proposal consists of data, estimates, and assumptions, all applied within an analytical framework, the CAFE Model. Just like in all past CAFE rulemakings, NHTSA recognizes that many analytical inputs are uncertain, and some inputs are very uncertain. Of those uncertain inputs, some are likely to exert considerable influence over specific types of estimated impacts, and some are likely to do so for the bulk of the

analysis. Yet making assumptions in the face of that uncertainty is necessary, if we are going to try to analyze meaningfully the effects of something that will happen in the future—*i.e.*, the regulatory alternatives being considered, that represent different possible CAFE standards for MYs 2024–2026. To get a sense of the effect that these assumptions have on the analytical findings, we conducted additional model runs with alternative assumptions, which explored a range of potential inputs and the sensitivity of estimated impacts to changes in model inputs. Sensitivity cases in this analysis span assumptions related to technology applicability and cost, economic conditions, consumer preferences, externality values, and safety assumptions, among others.³⁸³ A sensitivity analysis can identify two critical pieces of information: *How big an influence* does each parameter exert on the analysis, and *how sensitive are the model results* to that assumption?

That said, influence is different from likelihood. NHTSA does not mean to suggest that any one of the sensitivity cases presented here is inherently more likely than the collection of assumptions that represent the reference case in the figures and tables that follow. Nor is this sensitivity analysis intended to suggest that only one of the many assumptions made is likely to prove off-base with the passage of time or new observations. It is more likely that, when assumptions are eventually contradicted by future observation (*e.g.*, deviations in observed and predicted fuel prices are nearly a given), there will be *collections* of assumptions, rather than individual parameters, that simultaneously require updating. For this reason, we do not interpret the sensitivity analysis as necessarily providing justification for alternative regulatory scenarios to be preferred. Rather, the analysis simply provides an indication of which assumptions are most critical, and the extent to which future deviations from central analysis

³⁸³In contrast to an uncertainty analysis, where many assumptions are varied simultaneously, the sensitivity analyses included here vary a single

assumption and provide information about the influence of each individual factor, rather than

suggesting that an alternative assumption would have justified a different preferred alternative.

assumptions could affect costs and benefits of this proposal.

Table V-38 lists and briefly describes the cases that we examined in the sensitivity analysis.

Table V-38 – Cases Included in Sensitivity Analysis

Sensitivity Case	Description
Reference case (RC)	Reference case with 2.5% SCC discount rate
RC w/ 7% social DR, 3% SC-GHG DR	Reference case with 3% SCC discount rate (DR) (for 7% social discount rate)
RC w/ 7% social DR, 5% SC-GHG DR	Reference case with 5% SCC discount rate
RC w/ 95th pctile SC-GHG DR	Reference case with 95th percentile SCC discount rate
2020 SCC	Social cost of carbon values at 2020 Final Rule levels
One-year redesign cadence	Vehicles redesigned every year
MR5/6 skip (>100k)	MR5 and MR6 skipped for platforms with 100k or more units
MR5/6 skip (>2k)	MR5 and MR6 skipped for platforms with 2k or more units
No MR5/6 skip	No MR5 or MR6 application applied without SKIP restriction
2020 Final Rule MR5/6 costs	Cost values for MR5 and MR6 at levels from 2020 Final Rule
No HCR skip	HCR engine applicable for all OEMs and technology classes
Flat AC/OC	No additional AC or OC credit accumulation after MY 2021 levels
Reduced MDPCS stringency	Minimum domestic passenger car standard reduced as described in Section VI of the preamble
60-month payback period	60-month payback period
Battery direct costs (-20%)	Battery direct manufacturing cost decreased by 20%, reference battery learning cost
Battery direct costs (+20%)	Battery direct manufacturing cost increased by 20%, reference battery learning cost
Battery learning costs (-20%)	Battery learning cost decreased by 20%, reference direct manufacturing cost
Battery learning costs (+20%)	Battery learning cost increased by 20%, reference direct manufacturing cost
Rebound (10%)	Ten percent rebound effect
Rebound (20%)	Twenty percent rebound effect
Mass-size-safety (low)	The lower bound of the 95% CI for all model coefficients
Mass-size-safety (high)	The upper bound of the 95% CI for all model coefficients
Crash avoidance (low effectiveness)	Lower-bound estimate of effectiveness for 6 current crash avoidance technologies at avoiding fatal, injury, and property damage
Crash avoidance (high effectiveness)	Upper-bound estimate of effectiveness for 6 current crash avoidance technologies at avoiding fatal, injury, and property damage
Sales-scrappage response (-20%)	Sales-scrappage elasticity decreased by 20%
Sales-scrappage response (+20%)	Sales-scrappage elasticity increased by 20%
Low GDP	Low economic growth (AEO2021)
High GDP	High economic growth (AEO2021)
Oil price (EIA low)	Input oil price series based on EIA low forecast
Oil price (Global Insight)	Input oil price series based on Global Insight forecast
Oil price (EIA high)	Input oil price series based on EIA high forecast

Complete results for the sensitivity cases are summarized in Chapter 7 of the accompanying PRIA, and detailed model inputs and outputs for curious

readers are available on NHTSA’s website.³⁸⁴ For purposes of this preamble, Figure V–12 below illustrates the relative change of the sensitivity

effect of selected inputs on the costs and benefits that we estimate for the proposal.

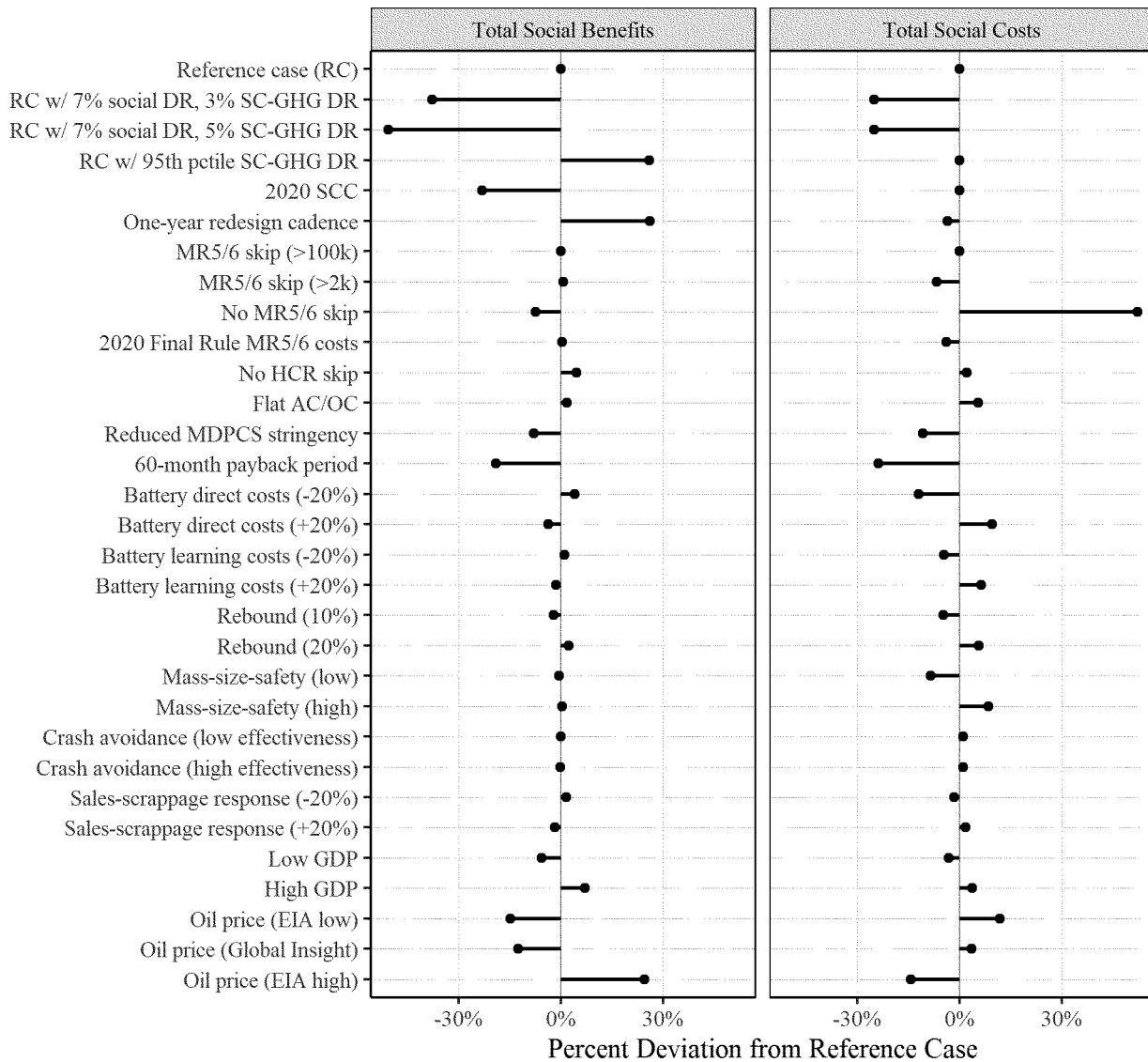


Figure V-12 – Relative Change in Total Costs and Total Benefits from Reference Case

While Figure V–12 does not show precise values, it gives us a sense of which inputs are ones for which a different assumption would have a much different effect on analytical findings, and which ones would not have much effect. Assuming a more-discounted or lower social cost of carbon would have a relatively large effect, as would assuming a different oil price, or doubling the assumed

“payback period.” Making very high levels of mass reduction unavailable in the modeling appears to have a (relatively) very large effect on costs, but this is to some extent an artifact of the “standard setting” runs used for the preamble and PRIA analysis, where electrification is limited due to statutory restrictions. On the other hand, assumptions about which there has been significant disagreement in the past, like

the rebound effect or the sales-scrappage response, appear to cause only relatively small changes in net benefits. Chapter 7 of the PRIA provides a much fuller discussion of these findings, and presents net benefits estimated under each of the cases included in the sensitivity analysis, including the subset for which impacts are summarized in Figure V–13.

³⁸⁴ <https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy>.

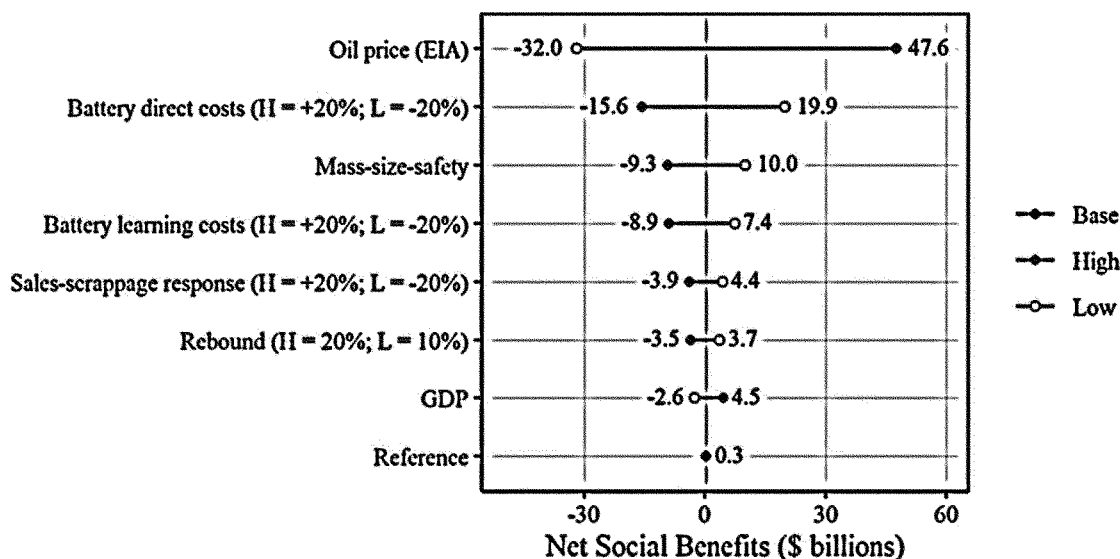


Figure V-13 – Relative Magnitude of Sensitivity Effect on Net Benefits

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The results presented in the earlier subsections of Section V and discussed in Section VI reflect the agency's best judgments regarding many different factors, and the sensitivity analysis discussed here is simply to illustrate the obvious, that differences in assumptions can lead to differences in analytical outcomes, some of which can be large and some of which may be smaller than expected. Policy-making in the face of future uncertainty is inherently complex. Section VI explains how NHTSA proposes to balance the statutory factors in light of the analytical findings, the uncertainty that we know exists, and our Nation's policy goals, to determine the CAFE standards that NHTSA tentatively concludes are maximum feasible for MYs 2024–2026.

VI. Basis for NHTSA's Tentative Conclusion That the Proposed Standards Are Maximum Feasible

In this section, NHTSA discusses the factors, data, and analysis that the agency has considered in the tentative selection of the proposed CAFE standards for MYs 2024–2026. The primary purpose of EPCA, as amended by EISA, and codified at 49 U.S.C. chapter 329, is energy conservation, and fuel economy standards help to conserve energy by requiring automakers to make new vehicles travel a certain distance on a gallon of fuel.³⁸⁵

³⁸⁵ While individual vehicles need not meet any particular mpg level, as discussed elsewhere in this preamble, fuel economy standards do require vehicle manufacturers' fleets to meet certain compliance obligations based on fuel economy

The goal of the CAFE standards is to conserve energy, while taking into account the statutory factors set forth at 49 U.S.C. 32902(f), as discussed below.

The provision at 49 U.S.C. 32902(f) states that when setting maximum feasible CAFE standards for new passenger cars and light trucks, the Secretary of Transportation³⁸⁶ "shall consider technological feasibility, economic practicability, the effect of other motor vehicle standards of the Government on fuel economy, and the need of the United States to conserve energy." In previous rulemakings, including the 2012 final rule issued during the Obama Administration and the recent 2020 final rule, NHTSA considered technological feasibility, including the availability of various fuel-economy-improving technologies to be applied to new vehicles in the timeframe of the standards depending on the ultimate stringency levels, and also considered economic practicability, including the differences between a range of regulatory alternatives in terms of effects on per-vehicle costs, the ability of both the industry and individual manufacturers to comply with standards at various levels, as well as effects on vehicle sales, industry employment, and consumer demand. NHTSA also considered how compliance with other motor vehicle standards of the Government might affect manufacturers' ability to meet CAFE standards represented by a range

levels target curves set forth by NHTSA in regulation.

³⁸⁶ By delegation, the NHTSA Administrator.

of regulatory alternatives, and how the need of the U.S. to conserve energy could be more or less addressed under a range of regulatory alternatives, in terms of considerations like costs to consumers, the national balance of payments, environmental implications like climate and smog effects, and foreign policy effects such as the likelihood that U.S. military and other expenditures could change as a result of more or less oil consumed by the U.S. vehicle fleet. These elements are discussed in detail throughout this analysis. As will be explained in greater detail below, while NHTSA is considering all of the same factors in proposing revised CAFE standards for MYs 2024–2026 that it considered in previous rulemakings, the agency's balancing of those factors has shifted, and NHTSA is therefore choosing to set CAFE standards at a different level from what both the 2012 final rule and the 2020 final rule set forth. Besides the factors specified in 32902(f), NHTSA has also historically considered the safety effects of potential CAFE standards, and additionally considers relevant case law.

NHTSA and EPA have coordinated in setting standards, and many of the factors that NHTSA considers to set maximum feasible standards complement factors that EPA considers under the Clean Air Act. The balancing of competing factors by both EPA and NHTSA are consistent with each agency's statutory authority and recognize the statutory obligations the Supreme Court pointed to in *Massachusetts v. EPA*. NHTSA also

considers the Ninth Circuit's decision in *Center for Biological Diversity v. NHTSA*, which remanded NHTSA's 2006 final rule establishing standards for MYs 2008–2011 light trucks and underscored that “the overarching purpose of EPCA is energy conservation.”³⁸⁷

This proposal contains a range of regulatory alternatives for MYs 2024–2026, from retaining the 1.5 percent annual increases set in 2020, up to a stringency increase of 10 percent annually. The analysis supported this range of alternatives based on factors relevant to NHTSA's exercise of its 32902(f) authority, such as fuel saved and emissions reduced, the technologies available to meet the standards, the costs of compliance for automakers and their abilities to comply by applying technologies, the impact on consumers with respect to cost, fuel savings, and vehicle choice, and effects on safety, among other things.

NHTSA's tentative conclusion, after consideration of the factors described below and information in the administrative record for this action, is that 8 percent increases in stringency for MYs 2024–2026 (Alternative 2 of this analysis) are maximum feasible. The Biden Administration is deeply committed to working aggressively to improve energy conservation, and higher standards appear increasingly likely to be economically practicable given almost-daily announcements by major automakers about forthcoming new high-fuel-economy vehicle models, as described below. Despite only one year having passed since the 2020 final rule, enough has changed in the U.S. and the world that revisiting the CAFE standards for MYs 2024–2026, and raising their stringency considerably, is both appropriate and reasonable.

The following sections discuss in more detail the statutory requirements and considerations involved in NHTSA's tentative determination of maximum feasible CAFE standards, and NHTSA's explanation of its balancing of factors for this tentative determination.

A. EPCA, as Amended by EISA

EPCA, as amended by EISA, contains a number of provisions regarding how NHTSA must set CAFE standards. DOT (by delegation, NHTSA)³⁸⁸ must establish separate CAFE standards for passenger cars and light trucks³⁸⁹ for

each model year,³⁹⁰ and each standard must be the maximum feasible that the Secretary (again, by delegation, NHTSA) believes the manufacturers can achieve in that model year.³⁹¹ In determining the maximum feasible levels of CAFE standards, EPCA requires that NHTSA consider four statutory factors: Technological feasibility, economic practicability, the effect of other motor vehicle standards of the Government on fuel economy, and the need of the United States to conserve energy.³⁹² In addition, NHTSA has the authority to consider (and typically does consider) other relevant factors, such as the effect of CAFE standards on motor vehicle safety and consumer preferences. The ultimate determination of what standards can be considered maximum feasible involves a weighing and balancing of factors, and the balance may shift depending on the information before NHTSA about the expected circumstances in the model years covered by the rulemaking. The agency's decision must also be guided by the overarching purpose of EPCA, energy conservation, while balancing these factors.³⁹³

Besides the requirement that the standards be maximum feasible for the fleet in question and the model year in question, EPCA/EISA also contain several other requirements, as follow.

1. Lead Time

EPCA requires that NHTSA prescribe new CAFE standards at least 18 months before the beginning of each model year.³⁹⁴ For amendments to existing standards (as this NPRM proposes), EPCA requires that if the amendments make an average fuel economy standard more stringent, at least 18 months of lead time must be provided.³⁹⁵ Thus, if the first year for which NHTSA is proposing to amend standards in this NPRM is MY 2024, NHTSA interprets this provision as requiring the agency to issue a final rule covering MY 2024 standards no later than April 2022.

2. Separate Standards for Cars and Trucks, and Minimum Standards for Domestic Passenger Cars

As mentioned above, EPCA requires NHTSA to set separate standards for passenger cars and light trucks for each

model year.³⁹⁶ NHTSA has long interpreted this requirement as preventing the agency from setting a single combined CAFE standard for cars and trucks together, based on the plain language of the statute. Congress originally required separate CAFE standards for cars and trucks to reflect the different fuel economy capabilities of those different types of vehicles, and over the history of the CAFE program, has never revised this requirement. Even as many cars and trucks have come to resemble each other more closely over time—many crossover and sport-utility models, for example, come in versions today that may be subject to either the car standards or the truck standards depending on their characteristics—it is still accurate to say that vehicles with truck-like characteristics such as 4-wheel drive, cargo-carrying capability, etc., currently consume more fuel per mile than vehicles without these characteristics.

EPCA, as amended by EISA, also requires another separate standard to be set for domestically-manufactured³⁹⁷ passenger cars. Unlike the generally-applicable standards for passenger cars and light trucks described above, the compliance obligation of the minimum domestic passenger car standard (MDPCS for brevity) is identical for all manufacturers. The statute clearly states that any manufacturer's domestically manufactured passenger car fleet must meet the greater of either 27.5 mpg on average, or 92 percent of the average fuel economy projected by the Secretary for the combined domestic and non-domestic passenger automobile fleets manufactured for sale in the United States by all manufacturers in the model year, which projection shall be published in the **Federal Register** when the standard for that model year is promulgated in accordance with 49 U.S.C. 32902(b).³⁹⁸

Since that requirement was promulgated, the “92 percent” has always been greater than 27.5 mpg, and foreseeably will continue to be so in the future. While NHTSA published 92 percent MDPCSs for MYs 2024–2026 at 49 CFR 531.5(d) as part of the 2020 final rule, the statutory language is clear that

³⁹⁶ 49 U.S.C. 32902(b)(1) (2007).

³⁹⁷ In the CAFE program, “domestically-manufactured” is defined by Congress in 49 U.S.C. 32904(b). The definition roughly provides that a passenger car is “domestically manufactured” as long as at least 75 percent of the cost to the manufacturer is attributable to value added in the United States, Canada, or Mexico, unless the assembly of the vehicle is completed in Canada or Mexico and the vehicle is imported into the United States more than 30 days after the end of the model year.

³⁹⁸ 49 U.S.C. 32902(b)(4) (2007).

³⁸⁷ 538 F.3d 1172 (9th Cir. 2008).

³⁸⁸ EPCA and EISA direct the Secretary of Transportation to develop, implement, and enforce fuel economy standards (see 49 U.S.C. 32901 *et seq.*), which authority the Secretary has delegated to NHTSA at 49 CFR 1.95(a).

³⁸⁹ 49 U.S.C. 32902(b)(1) (2007).

³⁹⁰ 49 U.S.C. 32902(a) (2007).

³⁹¹ *Id.*

³⁹² 49 U.S.C. 32902(f) (2007).

³⁹³ *Center for Biological Diversity v. NHTSA*, 538 F.3d 1172, 1197 (9th Cir. 2008) (“Whatever method it uses, NHTSA cannot set fuel economy standards that are contrary to Congress's purpose in enacting the EPCA—energy conservation.”).

³⁹⁴ 49 U.S.C. 32902(a) (2007).

³⁹⁵ 49 U.S.C. 32902(g)(2) (2007).

the MDPCS must be determined at the time an overall passenger car standards is promulgated and published in the **Federal Register**. Thus, any time NHTSA establishes or changes a passenger car standard for a model year, the MDPCS must also be evaluated or re-evaluated and established accordingly.

As in the 2020 final rule, NHTSA recognizes industry concerns that actual total passenger car fleet standards have differed significantly from past projections, perhaps more so when the agency has projected significantly into the future. In that final rule, because the compliance data showed that the standards projected in 2012 were consistently more stringent than the actual standards, by an average of 1.9 percent. NHTSA stated that this difference indicated that in rulemakings conducted in 2009 through 2012, NHTSA's and EPA's projections of passenger car vehicle footprints and production volumes, in retrospect, underestimated the production of larger passenger cars over the MYs 2011 to 2018 period.³⁹⁹

Unlike the passenger car standards and light truck standards which are vehicle-attribute-based and automatically adjust with changes in consumer demand, the MDPCS are *not* attribute-based, and therefore do not adjust with changes in consumer demand and production. They are

instead fixed standards that are established at the time of the rulemaking. As a result, by assuming a smaller-footprint fleet, on average, than what ended up being produced, the MYs 2011–2018 MDPCS ended up being more stringent and placing a greater burden on manufacturers of domestic passenger cars than was projected and expected at the time of the rulemakings that established those standards. In the 2020 final rule, therefore, NHTSA agreed with industry concerns over the impact of changes in consumer demand (as compared to what was assumed in 2012 about future consumer demand for greater fuel economy) on manufacturers' ability to comply with the MDPCS and in particular, manufacturers that produce larger passenger cars domestically. Some of the largest civil penalties for noncompliance in the history of the CAFE program have been paid for noncompliance with the MDPCS. NHTSA also expressed concern that consumer demand may shift even more in the direction of larger passenger cars if fuel prices continue to remain low. Sustained low oil prices can be expected to have real effects on consumer demand for additional fuel economy, and consumers may foreseeably be even more interested in 2WD crossovers and passenger-car-fleet SUVs (and less interested in smaller passenger cars) than they are at present.

Therefore, in the 2020 final rule, to help avoid similar outcomes in the 2021–2026 timeframe to what had happened with the MDPCS over the preceding model years, NHTSA determined that it was reasonable and appropriate to consider the recent projection errors as part of estimating the total passenger car fleet fuel economy for MYs 2021–2026. NHTSA therefore projected the total passenger car fleet fuel economy using the central analysis value in each model year, and applied an offset based on the historical 1.9 percent difference identified for MYs 2011–2018.

For this proposal, recognizing that we are proposing to increase stringency considerably over the baseline standards and that civil penalties have also recently increased, NHTSA remains concerned that the MDPCS may pose a significant challenge to certain manufacturers. To that end, NHTSA is proposing to retain the 1.9 percent offset for the MDPCS for MYs 2024–2026, which we have appropriately recalculated based on the current projections for passenger cars based on the current analysis fleet. Table VI–1 shows the calculation values used to determine the total passenger car fleet fuel economy value for each model year for the preferred alternative.

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Table VI-1 – Calculation of the Projected Total Passenger Car Fleet Standard and the Minimum Domestic Passenger Car Standard (92 Percent of the Total Passenger Car Standard) for the Preferred Alternative

	2024	2025	2026
Projected Total PC Fleet Standard – Central Analysis (mpg)	49.2	53.4	58.1
Offset: Average Historical Difference Between Regulatory Analyses and Actual Total PC Fleet Standard (percent)	-1.9	-1.9	-1.9
Offset: Average Historical Difference Between Regulatory Analyses and Actual Total PC Fleet Standard (mpg)	-0.92	-1.00	-1.08
Projected Total PC Standard Accounting for Historical Offset (mpg)	48.2	52.4	57.0
Minimum Domestic Passenger Car Standard = 92% of Projected Total PC Standard Accounting for Historical Offset (mpg)	44.4	48.2	52.4

Using this approach, the MDPCS under each regulatory alternative would thus be as shown in Table VI–2.

³⁹⁹ See 85 FR at 25127 (Apr. 30, 2020).

Table VI-2 – Proposed MDPCS for Each Regulatory Alternative, Calculated per 1.9 Percent Offset

Alternative	MY 2024	MY 2025	MY 2026
No Action	41.4	42.1	42.7
Alternative 1	44.9	46.5	48.0
Alternative 2 (Preferred)	44.4	48.2	52.4
Alternative 3	45.4	50.4	56.0

NHTSA is also seeking comment on another approach to offsetting the MDPCS. Recognizing that the analysis supporting this proposal does not attempt to project how vehicle footprints may change in the future, nor how that might affect the average fuel economy of passenger cars sold in the

U.S., NHTSA could instead attempt to make such a projection explicitly. Examination of the average footprints of passenger cars sold in the U.S. from 2008, when EPA began reporting footprint data, to 2020 indicates a clear and statistically significant trend of gradually increasing average footprint (Figure VI-1). The average annual increase in passenger car footprint,

estimated by ordinary least squares, indicates that the passenger car footprints increased by an average of 0.1206 square feet annually over the 2008–2020 period. The estimated average increase is statistically significant at the 0.000001 level, with a 95 percent confidence interval of (0.0929, 0.1483).

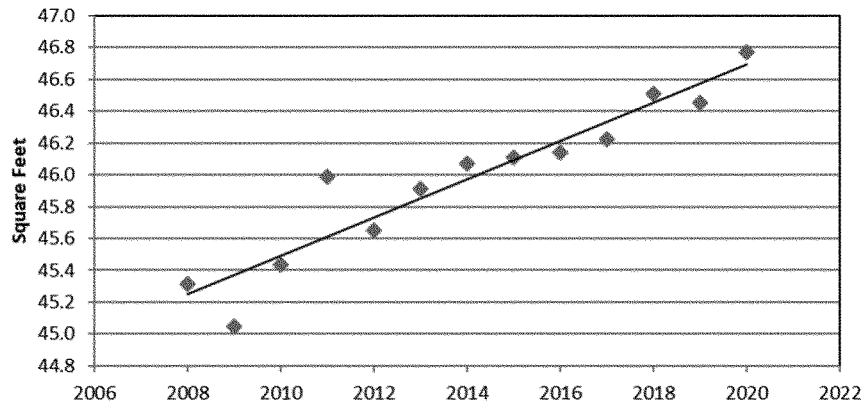


Figure VI-1 – Trend in Passenger Car Footprint, 2008-2020 (Source: EPA 2020 Automotive Trends Report)

The alternate method for calculating an offset to the MDPCS would be three steps, as follows:

1. Starting from the average footprint of passenger cars in 2020 as reported by EPA, add 0.1206 square feet per year through 2026.

2. Calculate the estimated fuel economy of passenger cars using the average projected footprint numbers calculated in step 1 and the footprint functions that are the passenger car standards for the corresponding model year, which then become “the

Secretary’s projected passenger car fuel economy numbers.”

3. Apply the 92 percent factor to calculate the MDPCS for 2024, 2025, and 2026.

The results of this approach are shown in Table VI-3.

Table VI-3 – Alternate Approach to Offsetting MDPCS, on Which NHTSA Seeks Comment

Alternative	MY 2024	MY 2025	MY 2026
No Action	41.6	42.2	42.7
Alternative 1	45.1	46.5	48.0
Alternative 2 (Preferred)	44.6	48.3	52.4
Alternative 3	45.5	50.5	56.0

Comparing all of these, Table VI-4 shows (1) the unadjusted 92 percent MDPCS for MYs 2024–2026, (2) the

proposed 1.9 percent-offset MDPCS for MYs 2024–2026, and (3) the alternate

approach offset MDPCS for MYs 2024–2026.

Table VI-4 – Comparing the Required mpg Levels for the MDPCS by Regulatory Alternative and Offset Approach

Alternative	MY 2024	MY 2025	MY 2026
No Action			
Unadjusted 92%	42.2	42.9	43.5
1.9% offset	41.4	42.1	42.7
Alternate approach offset	41.6	42.2	42.7
Alternative 1			
Unadjusted 92%	45.8	47.3	48.9
1.9% offset	44.9	46.5	48.0
Alternate approach offset	45.1	46.5	48.0
Alternative 2 (Preferred)			
Unadjusted 92%	45.2	49.2	53.4
1.9% offset	44.4	48.2	52.4
Alternate approach offset	44.6	48.3	52.4
Alternative 3			
Unadjusted 92%	50.2	55.8	62.0
1.9% offset	45.4	50.4	56.0
Alternate approach offset	45.5	50.5	56.0

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While the CAFE Model analysis underlying this proposal, the PRIA, and the Draft SEIS does not reflect an offset to the unadjusted 92 percent MDPCS, separate analysis that does reflect the change demonstrates that doing so does not change estimated impacts of any of the regulatory alternatives under consideration, despite the mpg values being slightly different as shown in Table VI-4.

NHTSA seeks comment on the discussion above. To be clear, the agency also seeks comment on whether to apply the MDPCS without any modifier.

3. Attribute-Based and Defined by a Mathematical Function

EISA requires NHTSA to set CAFE standards that are “based on 1 or more attributes related to fuel economy and express[ed] . . . in the form of a mathematical function.”⁴⁰⁰ Historically, NHTSA has based standards on vehicle footprint, and proposes to continue to do so for the reasons described in

Section III.B of this preamble and Chapter 1 of the accompanying TSD. As in previous rulemakings, NHTSA is proposing to define the standards in the form of a constrained linear function that generally sets higher (more stringent) targets for smaller-footprint vehicles and lower (less stringent) targets for larger-footprint vehicles. These footprint curves are discussed in more detail in Section III.B and TSD Chapter 1. NHTSA seeks comment in Section III.B both on the continued use of footprint as the relevant attribute and on the continued use of the constrained linear curve shapes.

4. Number of Model Years for Which Standards May Be Set at a Time

EISA also states that NHTSA shall “issue regulations under this title prescribing average fuel economy standards for at least 1, but not more than 5, model years.”⁴⁰¹ In this NPRM, NHTSA is proposing to set CAFE standards for three model years, MYs

2024–2026. This proposal fits squarely within the plain language of the statute.

5. Maximum Feasible Standards

As discussed above, EPCA requires NHTSA to consider four factors in determining what levels of CAFE standards would be maximum feasible. NHTSA presents in the sections below its understanding of the meanings of those four factors.

(a) Technological Feasibility

“Technological feasibility” refers to whether a particular method of improving fuel economy is available for deployment in commercial application in the model year for which a standard is being established. Thus, NHTSA is not limited in determining the level of new standards to technology that is already being applied commercially at the time of the rulemaking. For this proposal, NHTSA has considered a wide range of technologies that improve fuel economy, while considering the need to account for which technologies have already been applied to which vehicle model/configuration, as well as the need to estimate realistically the cost and fuel

⁴⁰⁰ 49 U.S.C. 32902(b)(3)(A) (2007).

⁴⁰¹ 49 U.S.C. 32902(b)(3)(B) (2007).

economy impacts of each technology as applied to different vehicle models/configurations. NHTSA has not, however, attempted to account for every technology that might conceivably be applied to improve fuel economy, nor does NHTSA believe it is necessary to do so given that many technologies address fuel economy in similar ways.⁴⁰²

NHTSA notes that the technological feasibility factor allows NHTSA to set standards that force the development and application of new fuel-efficient technologies, but this factor does not *require* NHTSA to do so.⁴⁰³ In the 2012 final rule, NHTSA stated that “[i]t is important to remember that technological feasibility must also be balanced with the other of the four statutory factors. Thus, while ‘technological feasibility’ can drive standards higher by assuming the use of technologies that are not yet commercial, ‘maximum feasible’ is also defined in terms of economic practicability, for example, which might caution the agency against basing standards (even fairly distant standards) *entirely* on such technologies.”⁴⁰⁴ NHTSA further stated that “. . . as the ‘maximum feasible’ balancing may vary depending on the circumstances at hand for the model year in which the standards are set, the extent to which technological feasibility is simply met or plays a more dynamic role may also shift.”⁴⁰⁵ For purposes of this proposal covering standards for MYs 2024–2026, NHTSA is certain that sufficient technology exists to meet the standards—even for the most stringent regulatory alternative. As will be discussed further below, for this proposal, the question is more likely rather, given that the technology exists, how much of it should be required to be added to new cars and trucks in order to conserve more energy, and how to balance that objective against the additional cost of adding that technology.

(b) Economic Practicability

“Economic practicability” has consistently referred to whether a standard is one “within the financial capability of the industry, but not so

⁴⁰² For example, NHTSA has not considered high-speed flywheels as potential energy storage devices for hybrid vehicles; while such flywheels have been demonstrated in the laboratory and even tested in concept vehicles, commercially-available hybrid vehicles currently known to NHTSA use chemical batteries as energy storage devices, and the agency has considered a range of hybrid vehicle technologies that do so.

⁴⁰³ See 77 FR at 63015 (Oct. 12, 2012).

⁴⁰⁴ *Id.*

⁴⁰⁵ *Id.*

stringent as to” lead to “adverse economic consequences, such as a significant loss of jobs or unreasonable elimination of consumer choice.”⁴⁰⁶ In evaluating economic practicability, NHTSA considers the uncertainty surrounding future market conditions and consumer demand for fuel economy alongside consumer demand for other vehicle attributes. There is not necessarily a bright-line test for whether a regulatory alternative is economically practicable, but there are several metrics that we discuss below that we find can be useful for making this assessment. In determining whether standards may or may not be economically practicable, NHTSA considers:

Application rate of technologies—whether it appears that a regulatory alternative would impose undue burden on manufacturers in either or both the near and long term in terms of how much and which technologies might be required. This metric connects to the next two metrics, as well.

Other technology-related considerations—related to the application rate of technologies, whether it appears that the burden on several or more manufacturers might cause them to respond to the standards in ways that compromise, for example, vehicle safety, or other aspects of performance that may be important to consumer acceptance of new products.

Cost of meeting the standards—even if the technology exists and it appears that manufacturers can apply it consistent with their product cadence, if meeting the standards will raise per-vehicle cost more than we believe consumers are likely to accept, which could negatively impact sales and employment in this sector, the standards may not be economically practicable. While consumer acceptance of additional new vehicle cost associated with more stringent CAFE standards is uncertain, NHTSA still finds this metric useful for evaluating economic practicability. Elsewhere in this preamble, we seek comment specifically on consumer valuation of fuel economy.

Sales and employment responses—as discussed above, sales and employment responses have historically been key to NHTSA’s understanding of economic practicability.

*Uncertainty and consumer acceptance*⁴⁰⁷ of technologies—considerations not accounted for

⁴⁰⁶ 67 FR 77015, 77021 (Dec. 16, 2002).

⁴⁰⁷ See, e.g., *Center for Auto Safety v. NHTSA* (CAS), 793 F.2d 1322 (D.C. Cir. 1986) (Administrator’s consideration of market demand as component of economic practicability found to be reasonable).

expressly in our modeling analysis, but important to an assessment of economic practicability given the timeframe of this rulemaking. Consumer acceptance can involve consideration of anticipated consumer responses not just to increased vehicle cost and consumer valuation of fuel economy, but also the way manufacturers may change vehicle models and vehicle sales mix in response to CAFE standards.

Over time, NHTSA has tried different methods to account for economic practicability. Many years ago, prior to the MYs 2005–2007 rulemaking under the non-attribute-based (fixed value) CAFE standards, NHTSA sought to ensure the economic practicability of standards in part by setting them at or near the capability of the “least capable manufacturer” with a significant share of the market, *i.e.*, typically the manufacturer whose fleet mix was, on average, the largest and heaviest, generally having the highest capacity and capability so as not to limit the availability of those types of vehicles to consumers. NHTSA rejected the “least capable manufacturer” approach several rulemakings ago and no longer believes that it is consistent with our root interpretation of economic practicability. Economic practicability focuses on the capability of the *industry* and seeks to avoid adverse consequences such as (*inter alia*) a significant loss of jobs or unreasonable elimination of consumer choice. If the overarching purpose of EPCA is energy conservation, it seems reasonable to expect that maximum feasible standards may be harder for some automakers than for others, and that they need not be keyed to the capabilities of the *least* capable manufacturer.

NHTSA has also sought to account for economic practicability by applying marginal cost-benefit analysis since the first rulemakings establishing attribute-based standards, considering both overall societal impacts and overall consumer impacts. Whether the standards maximize net benefits has thus been a significant, but not dispositive, factor in the past for NHTSA’s consideration of economic practicability. Executive Order 12866, as amended by Executive Order 13563, states that agencies should “select, in choosing among alternative regulatory approaches, those approaches that maximize net benefits . . .” In practice, however, agencies, including NHTSA, must consider that the modeling of net benefits does not capture all considerations relevant to economic practicability. Therefore, as in past rulemakings, NHTSA is considering net societal impacts, net consumer impacts,

and other related elements in the consideration of economic practicability. That said, it is well within the agency's discretion to deviate from the level at which modeled net benefits are maximized if the agency concludes that the level would not represent the maximum feasible level for future CAFE standards. Economic practicability is complex, and like the other factors must be considered in the context of the overall balancing and EPCA's overarching purpose of energy conservation.

(c) The Effect of Other Motor Vehicle Standards of the Government on Fuel Economy

"The effect of other motor vehicle standards of the Government on fuel economy" involves analysis of the effects of compliance with emission, safety, noise, or damageability standards on fuel economy capability and thus on average fuel economy. In many past CAFE rulemakings, NHTSA has said that it considers the adverse effects of other motor vehicle standards on fuel economy. It said so because, from the CAFE program's earliest years⁴⁰⁸ until recently, the effects of such compliance on fuel economy capability over the history of the CAFE program have been negative ones. For example, safety standards that have the effect of increasing vehicle weight thereby lower fuel economy capability, thus decreasing the level of average fuel economy that NHTSA can determine to be feasible. NHTSA has also accounted for EPA's "Tier 3" standards for criteria pollutants in its estimates of technology effectiveness in this proposal, and State emissions standards (like California's) that address the tailpipe NO_x, NMOG, and CO emissions that occur during cold start.⁴⁰⁹

⁴⁰⁸ 43 FR 63184, 63188 (Dec. 15, 1977). See also 42 FR 33534, 33537 (Jun. 30, 1977).

⁴⁰⁹ For most ICE vehicles on the road today, the majority of tailpipe NO_x, NMOG, and CO emissions occur during "cold start," before the three-way catalyst has reached the very high temperature (e.g., 900–1000 °F) at which point it is able to convert (through oxidation and reduction reactions) those emissions into less harmful derivatives. By limiting the amount of those emissions, tailpipe smog standards require the catalyst to be brought to temperature extremely quickly, so modern vehicles employ cold start strategies that intentionally release fuel energy into the engine exhaust to heat the catalyst to the right temperature as quickly as possible. The additional fuel that must be used to heat the catalyst is typically referred to as a "cold-start penalty," meaning that the vehicle's fuel economy (over a test cycle) is reduced because the fuel consumed to heat the catalyst did not go toward the goal of moving the vehicle forward. The Autonomie work employed to develop technology effectiveness estimates for this proposal accounts for cold-start penalties, as discussed in the Autonomie model documentation.

In other cases, the effect of other motor vehicle standards of the Government may be neutral, or positive. Since the Obama administration, NHTSA has considered the GHG standards set by EPA as "other motor vehicle standards of the Government." In the 2012 final rule, NHTSA stated that "To the extent the GHG standards result in increases in fuel economy, they would do so almost exclusively as a result of inducing manufacturers to install the same types of technologies used by manufacturers in complying with the CAFE standards."⁴¹⁰ NHTSA concluded in 2012 that "no further action was needed" because "the agency had already considered EPA's [action] and the harmonization benefits of the National Program in developing its own [action]."⁴¹¹ In the 2020 final rule, NHTSA reinforced that conclusion by explaining that a textual analysis of the statutory language made it clear that EPA's CO₂ standards applicable to light-duty vehicles are literally "other motor vehicle standards of the Government," because they are standards set by a Federal agency that apply to motor vehicles. NHTSA and EPA are obligated by Congress to exercise their own independent judgment in fulfilling their statutory missions, even though both agencies' regulations affect both fuel economy and CO₂ emissions. There are differences between the two agencies' programs that make NHTSA's CAFE standards and EPA's GHG standards not perfectly one-to-one (even besides the fact that EPA regulates other GHGs besides CO₂, EPA's CO₂ standards also differ from NHTSA's in a variety of ways, often because NHTSA is bound by statute to a certain aspect of CAFE regulation). NHTSA endeavors to create standards that meet our statutory obligations and still avoid requiring manufacturers to build multiple fleets of vehicles for the U.S. market.⁴¹² As in 2020, NHTSA has continued to do all of these things with this proposal.

Similarly, NHTSA has considered and accounted for California's ZEV mandate (and its adoption by the other Section 177 states) in developing the baseline for this proposal. As discussed above, NHTSA has not expressly accounted for California's GHG standards for the model years subject to this rulemaking in the baseline analysis for this proposal,⁴¹³ but seeks comment on this

⁴¹⁰ 77 FR 62624, 62669 (Oct. 15, 2012).

⁴¹¹ *Id.*

⁴¹² *Massachusetts v. EPA*, 549 U.S. 497, 532 (2007) ("[T]here is no reason to think that the two agencies cannot both administer their obligations and yet avoid inconsistency.")

⁴¹³ As discussed elsewhere, however, NHTSA has sought to account in the baseline for the California

approach for the final rule. NHTSA notes again that no final decision has yet been made on the CAA waiver for California.

(d) The Need of the U.S. To Conserve Energy

NHTSA has consistently interpreted "the need of the United States to conserve energy" to mean "the consumer cost, national balance of payments, environmental, and foreign policy implications of our need for large quantities of petroleum, especially imported petroleum."⁴¹⁴

(1) Consumer Costs and Fuel Prices

Fuel for vehicles costs money for vehicle owners and operators, so all else equal, consumers benefit from vehicles that need less fuel to perform the same amount of work. Future fuel prices are a critical input into the economic analysis of potential CAFE standards because they determine the value of fuel savings both to new vehicle buyers and to society; the amount of fuel economy that the new vehicle market is likely to demand in the absence of regulatory action; and they inform NHTSA about the "consumer cost . . . of our need for large quantities of petroleum." For this proposal, NHTSA relied on fuel price projections from the U.S. Energy Information Administration's (EIA) Annual Energy Outlook (AEO) for 2021. Federal government agencies generally use EIA's price projections in their assessment of future energy-related policies.

In previous CAFE rulemakings, discussions of fuel prices have always been intended to reflect the price of motor gasoline. However, a growing set of vehicle offerings that rely in part, or entirely, on electricity suggests that gasoline prices are no longer the only fuel prices relevant to evaluations of proposed CAFE standards. In the analysis supporting this proposal, NHTSA considers the energy consumption and resulting emissions from the entire on-road fleet, which already contains a number of plug-in hybrid and fully electric vehicles. Higher CAFE standards encourage manufacturers to improve fuel economy; concurrently, manufacturers will foreseeably seek to continue to maximize profit (or minimize compliance cost), and some reliance on electrification is a viable strategy for some manufacturers, even though NHTSA does not consider it in determining maximum feasible CAFE

Framework Agreement with BMW, Ford, Honda, VWA, and Volvo.

⁴¹⁴ 42 FR 63184, 63188 (Dec. 15, 1977).

stringency. Under the more stringent CAFE alternatives in this proposal, we see a greater reliance on electrification technologies in the analysis in the years following the explicitly-regulated model years, even though internal combustion engines continue to be the most common powertrain across the industry in the action years of this proposal.

While the current national average electricity price is significantly higher than that of gasoline, on an energy equivalent basis (\$/MMBtu),⁴¹⁵ electric motors convert energy into propulsion much more efficiently than internal combustion engines. This means that, even though the energy-equivalent prices of electricity are higher, electric vehicles still produce fuel savings for their owners. EIA also projects rising real gasoline prices over the next three decades, while projecting real electricity prices to remain relatively flat. As the reliance on electricity grows in the light-duty fleet, NHTSA will continue to monitor the trends in electricity prices and their implications for CAFE standards. Even if NHTSA is prohibited from considering electrification as a technology during the model years covered by the rulemaking, the consumer (and social) cost implications of manufacturers otherwise switching to electrification may remain relevant to the agency's considerations.

For now, gasoline is still the dominant fuel used in light-duty transportation. As such, consumers, and the economy more broadly, are subject to fluctuations in price that impact the cost of travel and, consequently, the demand for mobility. Over the last decade, the U.S. has become a stabilizing force in the global oil market and our reliance on imported petroleum has decreased steadily. The most recent Annual Energy Outlook, AEO 2021, projects the U.S. to be a net exporter of petroleum and other liquids through 2050 in the Reference Case. Over the last decade, EIA projections of real fuel prices have generally flattened in recognition of the changing dynamics of the oil market and slower demand growth, both in the U.S. and in developing markets. For example, the International Energy Agency projects that global demand for gasoline is unlikely to ever return to its 2019 level (before the pandemic).⁴¹⁶ However, vehicles are long-lived assets and the long-term price uncertainty of petroleum still represents a risk to consumers, albeit one that has

decreased in the last decade. Continuing to reduce the amount of money consumers spend on vehicle fuel thus remains an important consideration for the need of the U.S. to conserve energy.

(2) National Balance of Payments

NHTSA has consistently included consideration of the "national balance of payments" as part of the need of the U.S. to conserve energy because of concerns that importing large amounts of oil created a significant wealth transfer to oil-exporting countries and left the U.S. economically vulnerable.⁴¹⁷ As recently as 2009, nearly half the U.S. trade deficit was driven by petroleum,⁴¹⁸ yet this concern has been less critical in more recent CAFE actions, in part because other factors besides petroleum consumption have been playing a bigger role in the U.S. trade deficit.⁴¹⁹ While transportation demand is expected to increase as the economy recovers from the pandemic, it is foreseeable that the trend of trade in consumer goods and services continuing to dominate the national balance of payments, as compared to petroleum, will continue during the rulemaking timeframe.

That said, the U.S. continues to rely on oil imports, and NHTSA continues to recognize that reducing the vulnerability of the U.S. to possible oil price shocks remains important. This proposal aims to improve fleet-wide fuel efficiency and to help reduce the amount of petroleum consumed in the U.S., and therefore aims to improve this part of the U.S. balance of payments.

⁴¹⁷ For the earliest discussion of this topic, see 42 FR 63184, 63192 (Dec. 15, 1977) ("A major reason for this need [to reduce petroleum consumption] is that the importation of large quantities of petroleum creates serious balance of payments and foreign policy problems. The United States currently spends approximately \$45 billion annually for imported petroleum. But for this large expenditure, the current large U.S. trade deficit would be a surplus.").

⁴¹⁸ See, *Today in Energy: Recent improvements in petroleum trade balance mitigate U.S. trade deficit*, U.S. Energy Information Administration (July 21, 2014). Available at <https://www.eia.gov/todayinenergy/detail.php?id=17191> and in the docket for this rulemaking, NHTSA-2021-0053.

⁴¹⁹ Consumer products are the primary drivers of the trade deficit. In 2020, the U.S. imported \$2.4 trillion in consumer goods, versus \$116.4 billion of petroleum, which is the lowest amount since 2002. The 2020 goods deficit of \$904.9 billion was the highest on record, while the 2020 petroleum surplus of \$18.1 billion was the first annual surplus on record. See U.S. Census Bureau, "Annual 2020 Press Highlights," at [census.gov/foreign-trade/statistics/highlights/AnnualPressHighlights.pdf](https://www.census.gov/foreign-trade/statistics/highlights/AnnualPressHighlights.pdf), and available in the docket for this rulemaking. While 2020 was an unusual year for U.S. transportation demand, given the global pandemic, this is consistent with existing trends in which consumer products imports significantly outweigh oil imports.

(3) Environmental Implications

Higher fleet fuel economy reduces U.S. emissions of CO₂ as well as various other pollutants by reducing the amount of oil that is produced and refined for the U.S. vehicle fleet, but can also potentially increase emissions by reducing the cost of driving, which can result in increased vehicle miles traveled (*i.e.*, the rebound effect). Thus, the net effect of more stringent CAFE standards on emissions of each pollutant depends on the relative magnitudes of its reduced emissions in fuel refining and distribution and increases in its emissions from vehicle use. Fuel savings from CAFE standards also necessarily result in lower emissions of CO₂, the main greenhouse gas emitted as a result of refining, distribution, and use of transportation fuels.

NHTSA has considered environmental issues, both within the context of EPCA and the context of the National Environmental Policy Act (NEPA), in making decisions about the setting of standards since the earliest days of the CAFE program. As courts of appeal have noted in three decisions stretching over the last 20 years,⁴²⁰ NHTSA defined "the need of the United States to conserve energy" in the late 1970s as including, among other things, environmental implications. In 1988, NHTSA included climate change concepts in its CAFE NPRMs and prepared its first environmental assessment addressing that subject.⁴²¹ It cited concerns about climate change as one of the reasons for limiting the extent of its reduction of the CAFE standard for MY 1989 passenger cars.⁴²²

NHTSA also considers environmental justice issues as part of the environmental considerations under the need of the U.S. to conserve energy, per Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations" ⁴²³ and DOT Order 5610.2(c), "U.S. Department of Transportation Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." ⁴²⁴ The affected environment for environmental justice is nationwide, with a focus on areas that

⁴²⁰ CAS, 793 F.2d 1322, 1325 n. 12 (D.C. Cir. 1986); Public Citizen, 848 F.2d 256, 262-63 n. 27 (D.C. Cir. 1988) (noting that "NHTSA itself has interpreted the factors it must consider in setting CAFE standards as including environmental effects"); CBD, 538 F.3d 1172 (9th Cir. 2007).

⁴²¹ 53 FR 33080, 33096 (Aug. 29, 1988).

⁴²² 53 FR 39275, 39302 (Oct. 6, 1988).

⁴²³ 59 FR 629 (Feb. 16, 1994).

⁴²⁴ Department of Transportation Updated Environmental Justice Order 5610.2(c) (May 14, 2021).

⁴¹⁵ Source: AEO 2021, Table 3.

⁴¹⁶ International Energy Agency, Oil 2021, (p. 30), https://iea.blob.core.windows.net/assets/1fa45234-bac5-4d89-a532-768960f99d07/Oil_2021-PDF.pdf.

could contain minority and low-income communities who would most likely be exposed to the environmental and health effects of oil production, distribution, and consumption, or the impacts of climate change. This includes areas where oil production and refining occur, areas near roadways, coastal flood-prone areas, and urban areas that are subject to the heat island effect.

Numerous studies have found that some environmental hazards are more prevalent in areas where minority and low-income populations represent a higher proportion of the population compared with the general population. In terms of effects due to criteria pollutants and air toxics emissions, the body of scientific literature points to disproportionate representation of minority and low-income populations in proximity to a range of industrial, manufacturing, and hazardous waste facilities that are stationary sources of air pollution, although results of individual studies may vary. While the scientific literature specific to oil refineries is limited, disproportionate exposure of minority and low-income populations to air pollution from oil refineries is suggested by other broader studies of racial and socioeconomic disparities in proximity to industrial facilities generally. Studies have also consistently demonstrated a disproportionate prevalence of minority and low-income populations that are living near mobile sources of pollutants (such as roadways) and therefore are exposed to higher concentrations of criteria air pollutants in multiple locations across the United States. Lower-positioned socioeconomic groups are also differentially exposed to air pollution and differentially vulnerable to effects of exposure.

In terms of exposure to climate change risks, the literature suggests that across all climate risks, low-income communities, some communities of color, and those facing discrimination are disproportionately affected by climate events. Communities overburdened by poor environmental quality experience increased climate risk due to a combination of sensitivity and exposure. Urban populations experiencing inequities and health issues have greater susceptibility to climate change, including substantial temperature increases. Some communities of color facing cumulative exposure to multiple pollutants also live in areas prone to climate risk. Indigenous peoples in the United States face increased health disparities that cause increased sensitivity to extreme heat and air pollution. Together, this

information indicates that climate impacts disproportionately affect minority and low-income populations because of socioeconomic circumstances, histories of discrimination, and inequity. Furthermore, high temperatures can exacerbate poor air quality, further compounding the risk to overburdened communities. Finally, health-related sensitivities in low-income and minority populations increase risk of damaging impacts from poor air quality under climate change, underscoring the potential benefits of improving air quality to communities overburdened by poor environmental quality.

In the SEIS, Chapters 3, 4, 5, and 8 discuss the connections between oil production, distribution, and consumption, and their health and environmental impacts.

All of the action alternatives considered in this proposal reduce carbon dioxide emissions and, thus, the effects of climate change, as compared to the baseline. Effects on criteria pollutants and air toxics emissions are somewhat more complicated, for a variety of reasons, as discussed in Section VI.C, although over time and certainly over the lifetimes of the vehicles that would be subject to this proposal, these emissions are currently forecast to fall significantly.

As discussed above, while the majority of light-duty vehicles will continue to be powered by internal combustion engines in the near- to mid-term under all regulatory alternatives, the more stringent alternatives do appear in the analysis to lead to greater electrification in the mid- to longer-term. While NHTSA is prohibited from considering electric vehicles in determining maximum feasible CAFE levels, electric vehicles (which appear both in the agency's baseline and which may be produced in model years following the period of regulation as an indirect effect of more stringent standards, or in response to other standards or to market demand) produce few to zero tailpipe emissions, and thus contribute meaningfully to the decarbonization of the transportation sector, in addition to having environmental, health, and economic development benefits, although these benefits may not yet be equally distributed across society. They also present new environmental (and social) questions, like those associated with reduced tailpipe emissions, upstream electricity production, minerals extraction for battery components, and ability to charge an electric vehicle. The upstream environmental effects of extraction and refining for petroleum

are well-recognized; minerals extraction and refining can also have significant downsides. As one example of documentation of these effects, the United Nations Conference on Trade and Development issued a report in July 2020 describing acid mine drainage and uranium-laced dust associated with cobalt mines in the DRC, along with child labor concerns; considerable groundwater consumption and dust issues that harm miners and indigenous communities in the Andes; issues with fine particulate matter causing human health effects and soil contamination in regions near graphite mines; and so forth.⁴²⁵ NHTSA's SEIS discusses these and other effects (such as production and end-of-life issues) in more detail, and NHTSA will continue to monitor these issues going forward insofar as CAFE standards may increase electrification levels even if NHTSA does not expressly consider electrification in setting those standards, because NHTSA does not control what technologies manufacturers use to meet those standards, and because NHTSA is required to consider the environmental effects of its standards under NEPA.

NHTSA carefully considered the environmental effects of this proposal, both quantitative and qualitative, as discussed in the SEIS and in Sections VI.C and VI.D.

(4) Foreign Policy Implications

U.S. consumption and imports of petroleum products impose costs on the domestic economy that are not reflected in the market price for crude petroleum or in the prices paid by consumers for petroleum products such as gasoline. These costs include (1) higher prices for petroleum products resulting from the effect of U.S. oil demand on world oil prices; (2) the risk of disruptions to the U.S. economy caused by sudden increases in the global price of oil and its resulting impact of fuel prices faced by U.S. consumers, and (3) expenses for maintaining the strategic petroleum reserve (SPR) to provide a response option should a disruption in commercial oil supplies threaten the U.S. economy, to allow the U.S. to meet part of its International Energy Agency obligation to maintain emergency oil stocks, and to provide a national defense fuel reserve. Reducing U.S. consumption of crude oil or refined petroleum products (by reducing motor

⁴²⁵ UNCTAD, "Commodities at a Glance: Special issue on strategic battery raw materials," No. 13, Geneva, 2020, at 46. Available at https://unctad.org/system/files/official-document/ditccom2019d5_en.pdf and in the docket for this rulemaking, NHTSA-2021-0053.

Table VI-5 – Lithium-ion Battery Materials Mining Production, 2018⁴³³

Lithium-ion Battery Material Ores and Concentrates	Countries with Largest Mining Production (Share of Global Total)	U.S. Mining Production (Share of Global Total)
Lithium	Australia (60 percent), Chile (19 percent), China (9 percent), Argentina (7 percent)	USITC staff estimates less than 1 percent
Cobalt	Democratic Republic of Congo (64 percent), Cuba (4 percent), Russia (4 percent), Australia (3 percent)	Less than 0.5 percent
Graphite (natural)	China (68 percent), Brazil (10 percent), India (4 percent)	0 percent
Nickel	Indonesia (24 percent), Philippines (15 percent), Russia (9 percent)	Less than 1 percent

Of these sources, the USITC notes that while “lithium has generally not faced political instability risks,” “Because of the [Democratic Republic of Congo’s] ongoing political instability, as well as poor labor conditions, sourcing cobalt faces significant geopolitical challenges.”⁴³⁴ Nickel is also used extensively in stainless steel production, and much of what is produced in Indonesia and the Philippines is exported to China for stainless steel manufacturing.⁴³⁵ Obtaining graphite for batteries does not currently pose geopolitical obstacles, but the USITC notes that Turkey has great potential to become a large graphite producer, which would make stability there a larger concern.⁴³⁶

For materials processing and refining, China is the largest importer of unprocessed lithium, which it then transforms into processed or refined lithium,⁴³⁷ the leading producer of refined cobalt (with Finland a distant second),⁴³⁸ one of the leading producers of primary nickel products (along with Indonesia, Japan, Russia, and Canada) and one of the leading refiners of nickel into nickel sulfate, the chemical compound used for cathodes in lithium-ion batteries,⁴³⁹ and one of the leading processors of graphite intended for use in lithium-ion batteries as well.⁴⁴⁰ In all regions, increasing attention is being given to vertical integration in the lithium-ion battery industry from

material extraction, mining and refining, battery materials, cell production, battery systems, reuse, and recycling. The United States is lagging in upstream capacity; although the U.S. has some domestic lithium deposits, it has very little capacity in mining and refining any of the key raw materials. As mentioned elsewhere, however, there can be benefits and drawbacks in terms of environmental consequences associated with increased mining, refining, and battery production.

China and the European Union (EU) are also major consumers of lithium-ion batteries, along with Japan, Korea, and others. Lithium-ion batteries are used not only in light-duty vehicles, but in many ubiquitous consumer goods, and are likely to be used eventually in other forms of transportation as well. Thus, securing sufficient batteries to enable large-scale shifts to electrification in the U.S. light-duty vehicle fleet may face new issues as vehicle companies compete with other new sectors. NHTSA will continue to monitor these issues going forward.

President Biden has already issued an Executive Order on “America’s Supply Chains,” aiming to strengthen the resilience of America’s supply chains, including those for automotive batteries.⁴⁴¹ Reports are to be developed within one year of issuance of the Executive Order, and NHTSA will monitor these findings as they develop.

(e) Factors That NHTSA Is Prohibited From Considering

EPCA also provides that in determining the level at which it should set CAFE standards for a particular

model year, NHTSA may not consider the ability of manufacturers to take advantage of several EPCA provisions that facilitate compliance with CAFE standards and thereby reduce the costs of compliance.⁴⁴² NHTSA cannot consider compliance credits that manufacturers earn by exceeding the CAFE standards and then use to achieve compliance in years in which their measured average fuel economy falls below the standards. NHTSA also cannot consider the use of alternative fuels by dual fueled automobiles, nor the fuel economy (*i.e.*, the availability) of dedicated alternative fueled automobiles—including battery-electric vehicles—in any model year. EPCA encourages the production of alternative fuel vehicles by specifying that their fuel economy is to be determined using a special calculation procedure that results in those vehicles being assigned a higher equivalent fuel economy level than they actually achieve.

The effect of the prohibitions against considering these statutory flexibilities in setting the CAFE standards is that the flexibilities remain voluntarily-employed measures. If NHTSA were instead to assume manufacturer use of those flexibilities in setting new standards (as NHTSA does in the “EIS analysis,” but not the “standard setting analysis”), compliance with higher standards would appear more cost-effective and, potentially, more feasible, which would thus effectively require manufacturers to use those flexibilities if NHTSA determined that standards should be more stringent. By keeping NHTSA from including them in our stringency determination, the provision ensures that those statutory credits

⁴³³ *Id.*, citing U.S. Geological Survey, Mineral Commodity Summaries, Feb. 2019.

⁴³⁴ *Id.* at 8, 9.

⁴³⁵ *Id.* at 9.

⁴³⁶ *Id.*

⁴³⁷ *Id.*

⁴³⁸ *Id.* at 10.

⁴³⁹ *Id.*

⁴⁴⁰ *Id.*

⁴⁴¹ Executive Order 14017, “America’s Supply Chains,” Feb. 24, 2021. 86 FR 11849 (Mar. 1, 2021).

⁴⁴² 49 U.S.C. 32902(h).

remain true compliance flexibilities. However, the flip side of the effect described above is that preventing NHTSA from assuming use of dedicated alternative fuel vehicles for compliance makes it more difficult for the CAFE program to facilitate a complete transition of the U.S. light-duty fleet to full electrification.

In contrast, for the non-statutory fuel economy improvement value program that NHTSA developed by regulation, NHTSA does not consider these fuel economy adjustments subject to the 32902(h) prohibition on considering flexibilities. The statute is very clear as to which flexibilities are not to be considered. When the agency has introduced additional flexibilities such as A/C efficiency and “off-cycle” technology fuel improvement values, NHTSA has considered those technologies as available in the analysis. Thus, this analysis includes assumptions about manufacturers’ use of those technologies, as detailed in Chapter 3.8 of the accompanying TSD.

NHTSA notes that one of the recommendations in the 2021 NAS Report was for Congress to “amend the statute to delete the [32902(h)] prohibition on considering the fuel economy of dedicated alternative fueled vehicles in setting CAFE standards.”⁴⁴³ Recognizing that changing statutory text is Congress’ affair and not NHTSA’s, the committee further recommended that if Congress does not change the statute, NHTSA should consider adding another attribute to the fuel economy standard function, like “the expected market share of ZEVs in the total U.S. fleet of new light-duty vehicles—such that the standards increase as the share of ZEVs in the total U.S. fleet increases.”⁴⁴⁴ NHTSA discusses this recommendation further in Section III.B.

While NHTSA does not consider the prohibited items in its standard-setting analysis or for making its tentative decision about what levels of standards would be maximum feasible, NHTSA notes that it is informed by the “EIS” analysis presented in the PRIA. The EIS analysis does not contain these restrictions, and therefore accounts for credit availability and usage, and manufacturers’ ability to employ alternative fueled vehicles, for purpose of conformance with E.O. 12866 and NEPA regulations. Under the EIS analysis, compliance generally appears less costly. For example, this EIS analysis shows manufacturers’ costs averaging about \$1,070 in MY 2029

under the proposed standards, as compared to the \$1,175 shown by the standard setting analysis. Again, however, for purposes of tentatively determining maximum feasible CAFE levels, NHTSA considers only the standard setting analysis shown in the NPRM, consistent with Congress’ direction.

(f) Other Considerations in Determining Maximum Feasible CAFE Standards

NHTSA has historically considered the potential for adverse safety effects in setting CAFE standards. This practice has been upheld in case law.⁴⁴⁵ In this proposal, NHTSA has considered the safety effects discussed in Section V of this preamble and in Chapter 5 of the accompanying PRIA. NHTSA discusses its consideration of these effects in Section VI.D.

B. Administrative Procedure Act

The Administrative Procedure Act governs agency rulemaking generally and provides the standard of judicial review for agency actions. To be upheld under the “arbitrary and capricious” standard of judicial review under the APA, an agency rule must be rational, based on consideration of the relevant factors, and within the scope of the authority delegated to the agency by statute. The agency must examine the relevant data and articulate a satisfactory explanation for its action including a “rational connection between the facts found and the choice made.”⁴⁴⁶

Statutory interpretations included in an agency’s rule are subject to the two-step analysis of *Chevron, U.S.A. v. Natural Resources Defense Council*.⁴⁴⁷ Under step one, where a statute “has directly spoken to the precise question at issue,” *id.* at 842, the court and the agency “must give effect to the

unambiguously expressed intent of Congress.”⁴⁴⁸ If the statute is silent or ambiguous regarding the specific question, the court proceeds to step two and asks “whether the agency’s answer is based on a permissible construction of the statute.”⁴⁴⁹ The APA also requires that agencies provide notice and comment to the public when proposing regulations,⁴⁵⁰ as NHTSA is doing in this proposal.

NHTSA recognizes that this proposal, like the 2020 final rule, is reconsidering standards previously promulgated. NHTSA, like any other Federal agency, is afforded an opportunity to reconsider prior views and, when warranted, to adopt new positions. Indeed, as a matter of good governance, agencies *should* revisit their positions when appropriate, especially to ensure that their actions and regulations reflect legally sound interpretations of the agency’s authority and remain consistent with the agency’s views and practices. As a matter of law, “an Agency is entitled to change its interpretation of a statute.”⁴⁵¹

Nonetheless, “[w]hen an Agency adopts a materially changed interpretation of a statute, it must in addition provide a ‘reasoned analysis’ supporting its decision to revise its interpretation.”⁴⁵²

“Changing policy does not, on its own, trigger an especially ‘demanding burden of justification.’”⁴⁵³ Providing a reasoned explanation “would ordinarily demand that [the Agency] display awareness that it *is* changing position.”⁴⁵⁴ Beyond that, however, “[w]hen an agency changes its existing position, it ‘need not always provide a more detailed justification than what would suffice for a new policy created on a blank slate.’”⁴⁵⁵ While the agency “must show that there are good reasons for the new policy,” the agency “need not demonstrate to a court’s satisfaction that the reasons for the new policy are

⁴⁴⁸ *Id.* at 843.

⁴⁴⁹ *Id.*

⁴⁵⁰ 5 U.S.C. 553.

⁴⁵¹ *Phoenix Hydro Corp. v. FERC*, 775 F.2d 1187, 1191 (D.C. Cir. 1985).

⁴⁵² *Alabama Educ. Ass’n v. Chao*, 455 F.3d 386, 392 (D.C. Cir. 2006) (quoting Motor Vehicle Mfrs. Ass’n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 57 (1983)); see also *Encino Motorcars, LLC v. Navarro*, 136 S.Ct. 2117, 2125 (2016) (“Agencies are free to change their existing policies as long as they provide a reasoned explanation for the change.”) (citations omitted).

⁴⁵³ See *Mingo Logan Coal Co. v. EPA*, 829 F.3d 710, 718 (D.C. Cir. 2016) (quoting *Ark Initiative v. Tidwell*, 816 F.3d 119, 127 (D.C. Cir. 2016)).

⁴⁵⁴ *FCC v. Fox Television Stations, Inc.* 556 U.S. 502, 515 (2009) (emphasis in original) (“An agency may not, for example, depart from a prior policy *sub silentio* or simply disregard rules that are still on the books.”).

⁴⁵⁵ *Encino Motorcars, LLC*, 136 S.Ct. at 2125–26 (quoting *Fox Television Stations, Inc.* 556 U.S. at 515).

⁴⁴³ 2021 NAS Report, Summary Recommendation 5.

⁴⁴⁴ *Id.*

⁴⁴⁶ *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168 (1962).

⁴⁴⁷ 467 U.S. 837 (1984).

better than the reasons for the old one.”⁴⁵⁶ “[I]t suffices that the new policy is permissible under the statute, that there are good reasons for it, and that the Agency *believes* it to be better, which the conscious change of course adequately indicates.”⁴⁵⁷ For instance, “evolving notions” about the appropriate balance of varying policy considerations constitute sufficiently good reasons for a change in position.⁴⁵⁸ Moreover, it is “well within an Agency’s discretion” to change policy course even when no new facts have arisen: Agencies are permitted to conduct a “reevaluation of which policy would be better in light of the facts,” without “rely[ing] on new facts.”⁴⁵⁹

To be sure, providing “a more detailed justification” is appropriate in some cases. “Sometimes [the agency] must [provide a more detailed justification than what would suffice for a new policy created on a blank slate]—when, for example, its new policy rests upon factual findings that contradict those which underlay its prior policy; or when its prior policy has engendered serious reliance interests that must be taken into account.”⁴⁶⁰ This preamble, and the accompanying TSD and PRIA, all provide extensive detail on the agency’s updated analysis, and Section VI.D contains the agency’s explanation of how the agency has considered that analysis and other relevant information in tentatively determining that the proposed CAFE standards are maximum feasible for MYs 2024–2026 passenger cars and light trucks.

C. National Environmental Policy Act

As discussed above, EPCA requires NHTSA to determine the level at which to set CAFE standards for each model year by considering the four factors of technological feasibility, economic practicability, the effect of other motor vehicle standards of the Government on fuel economy, and the need of the United States to conserve energy. The National Environmental Policy Act (NEPA) directs that environmental considerations be integrated into that process.⁴⁶¹ To explore the potential environmental consequences of this

rulemaking action, NHTSA has prepared a Supplemental Environmental Impact Statement (“SEIS”) for this proposal.⁴⁶² The purpose of an EIS is to “provide full and fair discussion of significant environmental impacts and [to] inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.”⁴⁶³

When preparing an EIS, NEPA requires an agency to compare the potential environmental impacts of its proposed action and a reasonable range of alternatives. In the SEIS, NHTSA analyzed a No Action Alternative and three action alternatives. The alternatives represent a range of potential actions the agency could take, and they are described more fully in Section IV of this preamble, Chapter 1 of the TSD, and Chapter 2 of the PRIA. The environmental impacts of these alternatives, in turn, represent a range of potential environmental impacts that could result from NHTSA’s setting maximum feasible fuel economy standards for passenger cars and light trucks.

To derive the direct and indirect impacts of the action alternatives, NHTSA compared each action alternative to the No Action Alternative, which reflects baseline trends that would be expected in the absence of any further regulatory action. More specifically, the No Action Alternative in the SEIS assumed that the CAFE standards set in the 2020 final rule for MYs 2021–2026 passenger cars and light trucks would remain in effect. In addition, the No Action Alternative also includes several other actions that NHTSA believes will occur in the absence of further regulatory action, as discussed in more detail in Section IV above: (1) California’s ZEV mandate; (2) the “Framework Agreements” between California and BMW, Ford, Honda, VWA, and Volvo, which NHTSA implemented by including EPA’s baseline GHG standards (*i.e.*, those set in the 2020 final rule) and introducing more stringent GHG target functions for those manufacturers; and (3) the assumption that manufacturers will also make any additional fuel economy improvements estimated to reduce owners’ estimated average fuel outlays during the first 30 months of vehicle operation by more than the estimated

increase in new vehicle price. The No Action Alternative provides a baseline against which to compare the environmental impacts of other alternatives presented in the SEIS.⁴⁶⁴

For the SEIS, NHTSA analyzed three action alternatives, Alternatives 1 through 3, which ranged from increasing CAFE stringency for MY 2024 by 9.14 percent for passenger cars and 11.02 percent for light trucks, and increase stringency in MYs 2025 and 2026 by 3.26 percent per year for both passenger cars and light trucks (Alternative 1) to increasing CAFE stringency for each year, for each fleet, at 10 percent per year (Alternative 3). The range of action alternatives, as well as the No Action Alternative, encompass a spectrum of possible standards NHTSA could determine was maximum feasible based on the different ways the agency could weigh EPCA’s four statutory factors. Throughout the SEIS, estimated impacts were shown for all of these action alternatives, as well as for the No Action Alternative. For a more detailed discussion of the environmental impacts associated with the alternatives, see Chapters 3–6 of the SEIS, as well as Section V of this preamble.

NHTSA’s SEIS describes potential environmental impacts to a variety of resources, including fuel and energy use, air quality, climate, land use and development, hazardous materials and regulated wastes, historical and cultural resources, noise, and environmental justice. The SEIS also describes how climate change resulting from global greenhouse gas emissions (including CO₂ emissions attributable to the U.S. light-duty transportation sector under the alternatives considered) could affect certain key natural and human resources. Resource areas are assessed qualitatively and quantitatively, as appropriate, in the SEIS, and the findings of that analysis are summarized here.⁴⁶⁵

⁴⁶⁴ See 40 CFR 1502.2(e), 1502.14(d). CEQ has explained that “[T]he regulations require the analysis of the no action alternative even if the agency is under a court order or legislative command to act. This analysis provides a benchmark, enabling decision makers to compare the magnitude of environmental effects of the action alternatives [See 40 CFR 1502.14(c).] . . . Inclusion of such an analysis in the EIS is necessary to inform Congress, the public, and the President as intended by NEPA. [See 40 CFR 1500.1(a).]” Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations, 46 FR 18026 (Mar. 23, 1981).

⁴⁶⁵ The impacts described in this section come from NHTSA’s SEIS, which is being publicly issued simultaneously with this NPRM. As described above, the SEIS is based on “unconstrained” modeling rather than “standard setting” modeling.

Continued

⁴⁵⁶ Fox Television Stations, Inc., 556 U.S. at 515 (emphasis in original).

⁴⁵⁷ *Id.* (emphasis in original).

⁴⁵⁸ *N. Am.’s Bldg. Trades Unions v. Occupational Safety & Health Admin.*, 878 F.3d 271, 303 (D.C. Cir. 2017) (quoting the agency’s rule).

⁴⁵⁹ *Nat’l Ass’n of Home Builders v. EPA*, 682 F.3d 1032, 1037–38 (D.C. Cir. 2012).

⁴⁶⁰ See Fox Television Stations, Inc., 556 U.S. at 515 (2009).

⁴⁶¹ NEPA is codified at 42 U.S.C. 4321–47. The Council on Environmental Quality (CEQ) NEPA implementing regulations are codified at 40 CFR parts 1500–08.

⁴⁶² Because this proposal revises CAFE standards established in the 2020 final rule, NHTSA chose to prepare a SEIS to inform that amendment of the MYs 2024–2026 standards. See the SEIS for more details.

⁴⁶³ 40 CFR 1502.1.

As the stringency of the alternatives increases, total U.S. passenger car and light truck fuel consumption for the period of 2020 to 2050 decreases. Total light-duty vehicle fuel consumption from 2020 to 2050 under the No Action Alternative is projected to be 3,510 billion gasoline gallon equivalents (GGE). Light-duty vehicle fuel consumption from 2020 to 2050 under the action alternatives is projected to range from 3,409 billion GGE under Alternative 1 to 3,282 billion GGE under Alternative 3. Under Alternative 2, light-duty vehicle fuel consumption from 2020 to 2050 is projected to be 3,344 billion GGE. All of the action alternatives would decrease fuel consumption compared to the No-Action Alternative, with fuel consumption decreases that range from 100 billion GGE under Alternative 1 to 227 billion GGE under Alternative 3.

The relationship between stringency and criteria and air toxics pollutant emissions is less straightforward, reflecting the complex interactions among the tailpipe emissions rates of the various vehicle types (passenger cars and light trucks, ICE vehicles and EVs, older and newer vehicles, etc.), the technologies assumed to be incorporated by manufacturers in response to CAFE standards, upstream emissions rates, the relative proportions of gasoline, diesel, and electricity in total fuel consumption, and changes in VMT from the rebound effect. In general, emissions of criteria and toxic air pollutants increase very slightly in the short term, and then decrease dramatically in the longer term, across all action alternatives, with some exceptions. In addition, the action alternatives would result in decreased incidence of PM_{2.5}-related health impacts in most years and alternatives due to the emissions decreases. Decreases in adverse health outcomes include decreased incidences of premature mortality, acute bronchitis, respiratory emergency room visits, and work-loss days.

The air quality analysis in the SEIS identified the following impacts on criteria air pollutants.

NHTSA conducts modeling both ways in order to reflect the various statutory requirements of EPCA/EISA and NEPA. The preamble employs the "standard setting" modeling in order to aid the decision-maker in avoiding consideration of the prohibited items in 49 U.S.C. 32902(h) in determining maximum feasible standards, but as a result, the impacts reported here may differ from those reported elsewhere in this preamble. However, NHTSA considers the impacts reported in the SEIS, in addition to the other information presented in this preamble, the TSD, and the PRIA, as part of its decision-making process.

For all criteria pollutants in 2025, emissions increase slightly under the action alternatives compared to the No-Action Alternative. The emission increases generally get larger (although they are still small) from Alternative 1 through Alternative 3 (the most stringent alternative in terms of required miles per gallon). This temporary increase is largely due to new vehicle prices increasing in the short-term, which slightly slows new-vehicle sales and encourages consumers to buy used vehicles instead or retain existing vehicles for longer. As the analysis timeframe progresses, the new, higher fuel-economy vehicles become used vehicles, and the impacts of the standards change direction. In 2025, across all criteria pollutants and action alternatives, the smallest increase in emissions is 0.01 percent for VOCs under Alternative 2; the largest increase is 0.6 percent and occurs for SO₂ under Alternative 3. We underscore that these are fractions of a single percent.

In 2035 and 2050, emissions of CO, NO_x, PM_{2.5}, and VOCs generally decrease under the action alternatives compared to the No-Action Alternative, except for CO in 2035 under Alternative 1 (0.07 percent increase) and NO_x in 2035 under Alternative 3 (0.5 percent increase) (again, these are fractions of a single percent), with the more stringent alternatives having the largest decreases, except for NO_x and PM_{2.5} in 2035 (emissions decrease less or increase with more stringent alternatives) and NO_x in 2050 (emissions increase under Alternative 3 relative to Alternative 2, due primarily to slightly higher upstream emissions associated with greater electrification rates). SO₂ emissions generally increase under the action alternatives compared to the No-Action Alternative (except in 2035 under Alternative 1), with the more stringent alternatives having the largest increases. SO₂ increases are largely due to higher upstream emissions associated with electricity use by greater numbers of electrified vehicles being produced in response to the standards. In 2035 and 2050, across all criteria pollutants and action alternatives, the smallest decrease in emissions is 0.03 percent and occurs for NO_x under Alternative 2; the largest decrease is 11.9 percent and occurs for VOCs under Alternative 3. The smallest increase in emissions is 0.07 percent and occurs for CO under Alternative 1; the largest increase is 4.8 percent and occurs for SO₂ under Alternative 3.

The air quality analysis identified the following impacts on toxic air pollutants.

Under each action alternative in 2025 compared to the No-Action Alternative, increases in emissions would occur for all toxic air pollutants by as much as 0.5 (half of 1) percent, except for DPM, for which emissions would decrease by as much as 0.5 percent. For 2025, the largest relative increases in emissions would occur for benzene and 1,3-butadiene, for which emissions would increase by as much as 0.5 percent. Percentage increases in emissions of acetaldehyde, acrolein, and formaldehyde would be even smaller.

Under each action alternative in 2035 and 2050 compared to the No-Action Alternative, decreases in emissions would occur for all toxic air pollutants, except for acetaldehyde, acrolein, and 1,3-butadiene in 2035 under Alternative 1 where emissions would increase by 0.2 (one-fifth of 1), 0.01, and 0.1 percent, respectively, with the more stringent alternatives having the largest decreases, except for benzene (emissions increase in 2035 under Alternative 3 relative to Alternative 2). The largest relative decreases in emissions would occur for formaldehyde, for which emissions would decrease by as much as 10.3 percent. Percentage decreases in emissions of acetaldehyde, acrolein, benzene, 1,3-butadiene, and DPM would be less.

The air quality analysis identified the following health impacts.

In 2025, Alternative 3 would result in slightly increased adverse health impacts (mortality, acute bronchitis, respiratory emergency room visits, and other health effects) nationwide compared to the No-Action Alternative as a result of increases in emissions of NO_x, PM_{2.5}, and SO₂. Alternative 2 would also result in slightly increased adverse health impacts from mortality and non-fatal heart attacks due to increases in NO_x, PM_{2.5}, and SO₂ emissions, while Alternative 1 would result in decreased adverse health impacts. The more stringent alternatives are associated with the largest increases in adverse health impacts, or the smallest decreases in impacts, relative to the No-Action Alternative. Again, in the short-term, these slight changes in health impacts are projected under the action alternatives as the result of increases in the prices of new vehicles slightly delaying sales of new vehicles and encouraging more VMT in older vehicles instead, but this trend shifts over time as higher fuel-economy new vehicles become used vehicles and older vehicles are removed from the fleet.

In 2035 and 2050, all action alternatives would result in decreased

adverse health impacts nationwide compared to the No-Action Alternative as a result of general decreases in emissions of NO_x, PM_{2.5}, and DPM. The decreases in adverse health impacts get larger from Alternative 1 to Alternative 3.

In terms of climate effects, all action alternatives would decrease U.S. passenger car and light truck fuel consumption compared with the No-Action Alternative, resulting in reductions in the anticipated increases in global CO₂ concentrations, temperature, precipitation, and sea level, and increases in ocean pH that would otherwise occur. The impacts of the action alternatives on global mean surface temperature, precipitation, sea level, and ocean pH would be small in relation to global emissions trajectories. Although these effects are small, they occur on a global scale and are long lasting; therefore, in aggregate, they can have large consequences for health and welfare and can make an important contribution to reducing the risks associated with climate change.

The alternatives would have the following impacts related to GHG emissions.

Passenger cars and light trucks are projected to emit 89,600 million metric tons of carbon dioxide (MMTCO₂) from 2021 through 2100 under the No-Action Alternative. Alternative 1 would decrease these emissions by 5 percent through 2100. Alternative 3 would decrease these emissions by 10 percent through 2100. Emissions would be highest under the No-Action Alternative, and emission reductions would increase from Alternative 1 to Alternative 3.

Compared with total projected CO₂ emissions of 984 MMTCO₂ from all passenger cars and light trucks under the No-Action Alternative in the year 2100, the action alternatives are expected to decrease CO₂ emissions from passenger cars and light trucks in the year 2100 from 6 percent under Alternative 1 to 12 percent under Alternative 3.

The emission reductions in 2025 compared with emissions under the No-Action Alternative are approximately equivalent to the annual emissions from 1,284,000 vehicles under Alternative 1 to 2,248,000 vehicles under Alternative 3. For scale, a total of 253,949,000 passenger cars and light trucks are projected to be on the road in 2025 under the No-Action Alternative.

CO₂ emissions affect the concentration of CO₂ in the atmosphere, which in turn affects global temperature, sea level, precipitation, and ocean pH. For the analysis of direct

and indirect impacts, NHTSA used the Global Change Assessment Model Reference Scenario to represent the Reference Case emissions scenario (*i.e.*, future global emissions assuming no comprehensive global actions to mitigate GHG emissions).

Estimated CO₂ concentrations in the atmosphere for 2100 would range from 788.33 pollutant per million parts (ppm) under Alternative 3 to approximately 789.11 ppm under the No-Action Alternative, indicating a maximum atmospheric CO₂ decrease of approximately 0.77 ppm compared to the No-Action Alternative. Atmospheric CO₂ concentration under Alternative 1 would decrease by 0.37 ppm compared with the No-Action Alternative.

Global mean surface temperature is projected to increase by approximately 3.48 °C (6.27 °F) under the No-Action Alternative by 2100. Implementing the most stringent alternative (Alternative 3) would decrease this projected temperature rise by 0.003 °C (0.006 °F), while implementing Alternative 1 would decrease projected temperature rise by 0.002 °C (0.003 °F).

Projected sea-level rise in 2100 ranges from a high of 76.28 centimeters (30.03 inches) under the No-Action Alternative to a low of 76.22 centimeters (30.01 inches) under Alternative 3. Alternative 3 would result in a decrease in sea-level rise equal to 0.06 centimeter (0.03 inch) by 2100 compared with the level projected under the No-Action Alternative compared to a decrease under Alternative 1 of 0.03 centimeter (0.01 inch) compared with the No-Action Alternative.

Global mean precipitation is anticipated to increase by 5.85 percent by 2100 under the No-Action Alternative. Under the action alternatives, this increase in precipitation would be reduced by 0.00 to 0.01 percent.

Ocean pH is anticipated to be 8.2180 under Alternative 3, about 0.0004 more than the No-Action Alternative. Under Alternative 1, ocean pH in 2100 would be 8.2178, or 0.0002 more than the No-Action Alternative.

The action alternatives would reduce the impacts of climate change that would otherwise occur under the No-Action Alternative. Although the projected reductions in CO₂ and climate effects are small compared with total projected future climate change, they are quantifiable and directionally consistent and would represent an important contribution to reducing the risks associated with climate change.

Although NHTSA does quantify the changes in monetized damages that can be attributable to each action

alternative, many specific impacts of climate change on health, society, and the environment cannot be estimated quantitatively. Therefore, NHTSA provides a qualitative discussion of these impacts by presenting the findings of peer-reviewed panel reports including those from the Intergovernmental Panel on Climate Change (IPCC), U.S. Global Change Research Program (GCRP), the U.S. Climate Change Science Program (CCSP), the National Research Council, and the Arctic Council, among others. While the action alternatives would decrease growth in GHG emissions and reduce the impact of climate change across resources relative to the No-Action Alternative, they would not themselves prevent climate change and associated impacts. Long-term climate change impacts identified in the scientific literature are briefly summarized below, and vary regionally, including in scope, intensity, and directionality (particularly for precipitation). While it is difficult to attribute any particular impact to emissions that could result from this proposal, the following impacts are likely to be beneficially affected to some degree by reduced emissions from the action alternatives:

- Impacts on freshwater resources could include changes in rainfall and streamflow patterns, warming temperatures and reduced snowpack, changes in water availability paired with increasing water demand for irrigation and other needs, and decreased water quality from increased algal blooms. Inland flood risk could increase in response to increasing intensity of precipitation events, drought, changes in sediment transport, and changes in snowpack and the timing of snowmelt.

- Impacts on terrestrial and freshwater ecosystems could include shifts in the range and seasonal migration patterns of species, relative timing of species' life-cycle events, potential extinction of sensitive species that are unable to adapt to changing conditions, increases in the occurrence of forest fires and pest infestations, and changes in habitat productivity due to increased atmospheric concentrations of CO₂.

- Impacts on ocean systems, coastal regions, and low-lying areas could include the loss of coastal areas due to inundation, submersion, or erosion from sea-level rise and storm surge, with increased vulnerability of the built environment and associated economies. Changes in key habitats (*e.g.*, increased temperatures, decreased oxygen, decreased ocean pH, increased

salinization) and reductions in key habitats (e.g., coral reefs) may affect the distribution, abundance, and productivity of many marine species.

- Impacts on food, fiber, and forestry could include increasing tree mortality, forest ecosystem vulnerability, productivity losses in crops and livestock, and changes in the nutritional quality of pastures and grazing lands in response to fire, insect infestations, increases in weeds, drought, disease outbreaks, or extreme weather events. Increased concentrations of CO₂ in the atmosphere can also stimulate plant growth to some degree, a phenomenon known as the CO₂ fertilization effect, but the impact varies by species and location. Many marine fish species could migrate to deeper or colder water in response to rising ocean temperatures, and global potential fish catches could decrease. Impacts on food and agriculture, including yields, food processing, storage, and transportation, could affect food prices, socioeconomic conditions, and food security globally.

- Impacts on rural and urban areas could affect water and energy supplies, wastewater and stormwater systems, transportation, telecommunications, provision of social services, incomes (especially agricultural), air quality, and safety. The impacts could be greater for vulnerable populations such as lower-income populations, historically underserved populations, some communities of color and tribal and Indigenous communities, the elderly, those with existing health conditions, and young children.

- Impacts on human health could include increases in mortality and morbidity due to excessive heat and other extreme weather events, increases in respiratory conditions due to poor air quality and aeroallergens, increases in water and food-borne diseases, increases in mental health issues, and changes in the seasonal patterns and range of vector-borne diseases. The most disadvantaged groups such as children, the elderly, the sick, those experiencing discrimination, historically underserved populations, some communities of color and tribal and Indigenous communities, and low-income populations are especially vulnerable and may experience disproportionate health impacts.

- Impacts on human security could include increased threats in response to adversely affected livelihoods, compromised cultures, increased or restricted migration, increased risk of armed conflicts, reduction in adequate essential services such as water and energy, and increased geopolitical rivalry.

In addition to the individual impacts of climate change on various sectors, compound events may occur more frequently. Compound events consist of two or more extreme weather events occurring simultaneously or in sequence when underlying conditions associated with an initial event amplify subsequent events and, in turn, lead to more extreme impacts. To the extent the action alternatives would result in reductions in projected increases in global CO₂ concentrations, this rulemaking would contribute to reducing the risk of compound events.

NHTSA has considered the SEIS carefully in arriving at its tentative conclusion that Alternative 2 is maximum feasible, as discussed below. We seek comment on the SEIS associated with this NPRM.

D. Evaluating the EPCA Factors and Other Considerations To Arrive at the Proposed Standards

Despite only one year having passed since the 2020 final rule, enough has changed in the United States and in the world that revisiting the CAFE standards for MYs 2024–2026 is reasonable and appropriate. The global coronavirus pandemic, with all of its tragedy, also demonstrated what happens to U.S. and global oil consumption (and CO₂ and other pollutant emissions) when driving demand plummets. The Biden Administration committed itself in its earliest moments to improving energy conservation and tackling climate change. Nearly all auto manufacturers have announced forthcoming new advanced technology, high-fuel-economy vehicle models, making strong public commitments that mirror those of the Administration. Five major manufacturers voluntarily bound themselves to stricter GHG national-level requirements as part of the California Framework agreement. While some facts on the ground remain similar to what was before NHTSA in the prior analysis—gas prices remain relatively low in the U.S., for example, and while light-duty vehicle sales fell sharply in MY 2020, the vehicles that *did* sell tended to be, on average, larger, heavier, and more powerful, all factors which increase fuel consumption—again, enough has changed that a rebalancing of the EPCA factors is appropriate for model years 2024–2026.

In the 2020 final rule, NHTSA interpreted the need of the U.S. to conserve energy as less important than in previous rulemakings. This was in part because of structural changes in global oil markets as a result of shale oil drilling in the U.S., but also because in

the context of environmental effects, NHTSA interpreted the word “conserve” as “to avoid waste.” NHTSA concluded then that the ultimate difference to the climate (among the regulatory alternatives) of thousandths of a degree Celsius in 2100 did not represent a “wasteful” use of energy, given the other considerations involved in the balancing of factors.

One of those factors was consumer demand for vehicles with higher fuel economy levels. In the 2020 final rule, NHTSA expressed concern that low gasoline prices and apparent consumer preferences for larger, heavier, more powerful vehicles would make it exceedingly difficult for manufacturers to achieve higher standards without negative consequences to sales and jobs, and would cause consumer welfare losses. Since then, however, more and more manufacturers are announcing more and more vehicle models with advanced engines and varying levels of electrification. It is reasonable to conclude that manufacturers (who are all for-profit companies) would not be announcing plans to offer these types of vehicles if they did not expect to be able to sell them,⁴⁶⁶ and thus that manufacturers are more sanguine about consumer demand for fuel efficiency and the market for fully electric vehicles going forward than they have been previously.

Additionally, NHTSA no longer believes that it is reasonable or appropriate to focus only on “avoiding waste” in evaluating the need of the U.S. to conserve energy. EPCA’s overarching purpose is energy conservation. The need of the U.S. to conserve energy may be reasonably interpreted as continuing to push the balancing toward greater stringency.

The following sections will walk through the four statutory factors in more detail and discuss NHTSA’s decision-making process more thoroughly. To be clear at the outset, however, the fundamental balancing of factors for this proposal is different from the 2020 final rule because the evidence suggests that manufacturers believe there is a market for advanced technology vehicles with higher fuel economy, and CAFE standards are likely to be maximum feasible if they are set at levels that reflect that evidence.

⁴⁶⁶ To the extent that manufacturers are offering these vehicles in response to expected regulations, NHTSA still believes that they would not do so if they believed the vehicles were unsaleable or unmanageably detrimental to profits. Vehicle manufacturers are sophisticated corporate entities well able to communicate their views to regulatory agencies.

We may begin with the need of the U.S to conserve energy, which as stated is being considered more holistically in this proposal as compared to in the 2020 final rule. According to the analysis presented in Section V and in the accompanying PRIA and SEIS, Alternative 3 would save consumers the most in fuel costs, and would achieve the greatest reductions in climate change-causing CO₂ emissions. Alternative 3 would also maximize fuel consumption reductions, better protecting consumers from international oil market instability and price spikes. As discussed above, for now, gasoline is still the dominant fuel used in light-duty transportation. As such, consumers, and the economy more broadly, are subject to fluctuations in price that impact the cost of travel and, consequently, the demand for mobility. Vehicles are long-lived assets and the long-term price uncertainty of petroleum still represents a risk to consumers. By increasing the fuel economy of vehicles in the marketplace, more stringent CAFE standards better insulate consumers against these risks over longer periods of time. Fuel economy improvements that reduce demand for oil are a more certain hedging strategy against price volatility than increasing U.S. energy production. Continuing to reduce the amount of money consumers spend on vehicle fuel thus remains an important consideration for the need of the U.S. to conserve energy.

Additionally, the SEIS finds that overall, projected changes in both upstream and downstream emissions of

criteria and toxic air pollutants are mixed, with emissions of some pollutants remaining constant or increasing and emissions of some pollutants decreasing. These increases are associated with both upstream and downstream sources, and therefore, may disproportionately affect minority and low-income populations that reside in proximity to these sources. However, the magnitude of the change in emissions relative to the No-Action alternative is minor for all action alternatives, and would not be characterized as high or adverse; over time, adverse health impacts are projected to decrease nationwide under each of the action alternatives.

For the other considerations that contribute to the need of the U.S. to conserve energy, it follows reasonably that reducing fuel consumption more would improve our national balance of payments more, and our energy security, as discussed above. It is therefore likely that Alternative 3 best meets the need of the U.S. to conserve energy.

During interagency review, the Department of Energy urged NHTSA to propose Alternative 3, on the basis that “a faster transition to battery electric vehicles (BEVs) is feasible,” because a variety of market analysts and the National Academies of Sciences, Engineering, and Medicine find that BEVs will reach cost parity with ICE vehicles by or before 2025. DOE further commented that new BEV prices would drop over time because “DOE has set aggressive technology targets for battery costs and electric drive technologies, . . . And DOE has a consistent track

record in meeting its technology targets: DOE met or exceeded its technology cost and performance goals for battery and electric drive technologies every year between 2012 and 2018.” [citation omitted] While NHTSA appreciates this comment from DOE, as stated repeatedly throughout this proposal, NHTSA is statutorily prohibited from considering the fuel economy of dedicated alternative fuel vehicles during the rulemaking time frame when determining what levels of standards would be maximum feasible. NHTSA believes that Alternative 3 could potentially end up being maximum feasible in the final rule depending on a variety of factors, but NHTSA would be prohibited from basing such a finding exclusively on the date by which DOE estimates that BEVs will achieve cost parity with ICEs.

We next evaluate how the regulatory alternatives fare in terms of economic practicability. NHTSA recognizes that the amount of lead time available before MY 2024 is less than what was provided in the 2012 rule. As will be discussed further below, NHTSA believes that the evidence suggests that the proposed standards are still economically practicable, and not out of reach for a significant portion of the industry. CAFE standards can help support industry by requiring ongoing improvements even if demand for more fuel economy flags unexpectedly.

For the proposed standards, the annual rates of increase in the passenger car and light truck standards represent increases over the required levels in MY 2023 and are as shown in Table VI-6.

Table VI-6 – Annual Rate of Increase in Proposed CAFE Stringency for Each Model Year from 2024 to 2026

Model year	Passenger Car (percent)	Light Truck (percent)
2024	8	8
2025	8	8
2026	8	8

Part of the way that we try to evaluate economic practicability, and thus where the tipping point in the balancing of factors might be, is through a variety of metrics, examined in more detail below. If the amounts of technology or per-vehicle cost increases required to meet the standards appear to be beyond what we believe the market could bear; or sales and employment appear to be

unduly impacted, the agency may decide that the standards under consideration may not be economically practicable. We underscore again, as throughout this preamble, that the modeling analysis does not dictate the “answer,” it is merely one source of information among others that aids the agency’s balancing of the standards. We similarly underscore that there is no

single bright line beyond which standards might be economically practicable, and that these metrics are not intended to suggest one; they are simply ways to think about the information before us.

Economic practicability may be evaluated in terms of how much technology manufacturers would have to apply to meet a given regulatory

alternative. Technology application can be considered as “which technologies, and when”—both the technologies that NHTSA’s analysis suggests would be used, and how that application occurs given manufacturers’ product redesign cadence. While the need of the U.S. to conserve energy may encourage the agency to be more technology-forcing in its balancing, and while technological feasibility is not limiting in this rulemaking given the state of technology in the industry, regulatory alternatives that require extensive application of very advanced technologies (that may have known or unknown consumer acceptance issues) or that require manufacturers to apply additional technology in earlier model years, in which meeting the standards is already challenging, may not be economically practicable, and may thus be beyond maximum feasible.

The first issue is timing of technology application. While the MY 2024 standards provide less lead time for an increase in stringency than was provided by the standards set in 2012, NHTSA believes that the standards for MYs 2021–2023 should provide a relative “break” for compliance purposes. NHTSA does not believe that significant additional technology application would be required by the CAFE standards in the years immediately preceding the rulemaking

time frame. That said, NHTSA is aware of, and has accounted for, several manufacturers voluntarily agreeing with CARB to increase their fuel economy during those model years. Manufacturers would have to apply more technology than would be required by the MYs 2021–2023 CAFE standards alone to meet those higher fuel economy levels. Again, NHTSA interprets these agreements as evidence that the participating companies believe that applying that additional technology is practicable, because for-profit companies can likely be relied upon to make decisions that maximize their profit. Companies who did not agree with CARB to meet higher targets may not increase their fuel economy levels by as much over MYs 2021–2023, but they, too, will get the relative “break” in CAFE obligations mentioned above, and have additional time to plan for the higher stringency increases in subsequent years. Those manufacturers can opt to employ more modest technologies to improve fuel economy (beyond their standard) to generate credits to carry forward into more challenging years, or concentrate limited research and development resources on the next generation of higher fuel economy vehicles that will be needed to meet the proposed standards in MYs 2024–2026 (and

beyond), rather investing in more modest improvements in the near-term. NHTSA’s analysis estimates manufacturers’ product “cadence,” representing them in terms of estimated schedules for redesigning and “freshening” vehicles, and assuming that significant technology changes will be implemented during vehicle redesigns—as they historically have been. Once applied, a technology will be carried forward to future model years until superseded by a more advanced technology. NHTSA does not consider model years in isolation in the analysis, because that is not consistent with how industry responds to standards, and thus would not accurately reflect practicability. If manufacturers are already applying technology widely and intensively to meet standards in earlier years, requiring them to add yet more technology in the model years subject to the rulemaking may be less economically practicable; conversely, if the preceding model years require less technology, more technology during the rulemaking time frame may be more economically practicable. The tables below illustrate how the agency has modeled that process of manufacturers applying technologies in order to comply with different alternative standards. The technologies themselves are described in detail in Chapters 2 and 3 of the accompanying TSD.

Table VI-7 – Estimated Market Share (%) of Selected Technologies, Passenger Cars, Alternative 2 and Alternative 3, Standard Setting Analysis

Tech	Alt	2020	2023	2024	2025	2026
PHEV (all types)	2	< 1	< 1	2	5	8
BEV (all ranges)	2	4	9	9	10	10
Advanced AERO ¹	2	8	48	71	82	87
Strong Hybrid (all types)	2	3	3	5	5	6
MR4 ²	2	5	12	28	36	44
Advanced Engine ³	2	13	29	46	50	50
PHEV (all types)	3	< 1	< 1	2	7	10
BEV (all ranges)	3	4	9	10	10	10
Advanced AERO	3	8	48	76	87	92
Strong Hybrid (all types)	3	3	4	7	8	8
MR4	3	5	12	30	38	46
Advanced Engine	3	13	29	46	51	52

¹ Combined penetration of 15% and 20% aerodynamic improvement

² Reduce glider weight by 15%

³ Combined penetration of advanced cylinder deactivation, advanced turbo, variable compression ratio, high compression ratio and diesel engines

Table VI-8 – Estimated Market Share (%) of Selected Technologies, Light Trucks, Alternative 2 and Alternative 3, Standard Setting Analysis

Tech	Alt	2020	2023	2024	2025	2026
PHEV (all types)	2	< 1	< 1	2	4	7
BEV (all ranges)	2	< 1	2	2	2	3
Advanced AERO ¹	2	16	38	55	64	75
Strong Hybrid (all types)	2	2	4	7	9	9
MR4 ²	2	11	12	16	21	28
Advanced Engine ³	2	15	32	37	42	50
PHEV (all types)	3	< 1	< 1	4	8	12
BEV (all ranges)	3	< 1	2	2	3	3
Advanced AERO	3	16	38	55	64	74
Strong Hybrid (all types)	3	2	5	9	9	9
MR4	3	11	12	16	21	29
Advanced Engine	3	15	32	36	40	51

¹ Combined penetration of 15% and 20% aerodynamic improvement

² Reduce glider weight by 15%

³ Combined penetration of advanced cylinder deactivation, advanced turbo, variable compression ratio, high compression ratio and diesel engines

Although NHTSA's analysis is intended to estimate ways manufacturers *could* respond to new standards, not to predict how manufacturers *will* respond to new standards, manufacturers have indicated in meetings with the agency and in public announcements (including the CARB Framework Agreements) that they do intend to increase technology application over the coming years, and specifically electrification technology which NHTSA does not model as part of its standard-setting analysis, considered for decision-making, due to the 49 U.S.C. 32902(h) restrictions for MYs 2024–2026.

As the tables illustrate, both Alternative 2 and Alternative 3 appear to require rapid deployment of fuel efficiency technology across a variety of vehicle systems—body improvements due to weight reduction and improved aerodynamic drag, engine advancements, and electrification.⁴⁶⁷ The aggressive application that is simulated to occur between MY 2020 (which NHTSA observed and is the starting point of this analysis) and MY 2023 occurs in all of the alternatives, for both cars and light trucks. This reflects

both the task presented to signatories by the California Framework and existing compliance positions (in some fleets) across the industry to improve fuel economy in the near-term. In general, technology market shares for Alternative 3 look similar to those for Alternative 2, with the notable exception of plug-in hybrids which differ by only a couple of percent for cars and about 5 percent for light trucks. While still relatively small differences on their own, the market share of plug-in hybrids is currently less than one percent in total. While manufacturers could certainly choose to produce fully electric vehicles instead of PHEVs, fully electric vehicles are projected to grow by multiples of their current market share as well. The market for high levels of electrification is likely to continue growing but NHTSA acknowledges that consumer demand, especially in the near-term, remains somewhat unclear. If policy decisions are made to extend or expand incentives for electric vehicle purchases, NHTSA could potentially consider the greater reliance on electrification in Alternative 3 to be a smaller risk.

NHTSA's analysis seeks to account for manufacturers' capital and resource constraints in several ways—through the restriction of technology application to refreshes and redesigns, through the phase-in caps applied to certain technologies, and through the explicit

consideration of vehicle components (like powertrains) and technologies (like platforms based on advanced materials) that are shared by models throughout a manufacturer's portfolio. NHTSA is aware that there is a significant difference in the level of capital and resources required to implement one or more new technologies on a single vehicle model, and the level of capital and resources required to implement those same technologies across the entire vehicle fleet. NHTSA realizes that it would not be economically practicable to expand some of the most advanced technologies to every vehicle in the fleet within the rulemaking time frame, although it should be possible to increase the application of advanced technologies across the fleet in a progression that accounts for those resource constraints. That is what NHTSA's analysis tries to do.

Another consideration for economic practicability is the extent to which new standards could increase the average cost to acquire new vehicles, because even insofar as the underlying application of technology leads to reduced outlays for fuel over the useful lives of the affected vehicles, these per-vehicle cost increases provide both a measure of the degree of effort faced by manufacturers, and also the degree of adjustment, in the form of potential vehicle price increases, that will ultimately be required of vehicle

⁴⁶⁷ While these technology pathways reflect NHTSA's statutory restrictions under EPCA/EISA, it is worth noting that they represent only one possible solution. In the simulations that support the SEIS, PHEV market share grows by less, and is mostly offset by an increase in BEV market share.

purchasers. Table VI-9 and Table VI-10 show the agency’s estimates of average cost increase under the Preferred Alternative for passenger cars and light trucks, respectively. Because our analysis includes estimates of manufacturers’ indirect costs and profits, as well as civil penalties that some manufacturers (as allowed under EPCA/EISA) might elect to pay in lieu of achieving compliance with CAFE standards, we report cost increases as estimated average increases in vehicle price (as MSRP). These are average values, and the agency does not expect that the prices of every vehicle would increase by the same amount; rather, the

agency’s underlying analysis shows unit costs varying widely between different vehicle models. For example, a small SUV that replaces an advanced internal combustion engine with a plug-in hybrid system may incur additional production costs in excess of \$10,000, while a comparable SUV that replaces a basic engine with an advanced internal combustion engine incurs a cost closer to \$2,000. While we recognize that manufacturers will distribute regulatory costs throughout their fleet to maximize profit, we have not attempted to estimate strategic pricing, having insufficient data (which would likely be confidential business information (CBI))

on which to base such an attempt. To provide an indication of potential price increases relative to today’s vehicles, we report increases relative to the market forecast using technology in the MY 2020 fleet—the most recent actual fleet for which we have information sufficient for use in our analysis. We provide results starting in MY 2023 in part to illustrate the cost impacts in the first model year that we believe manufacturers might actually be able to change their products in preparation for compliance with standards in MYs 2024–2026.

Table VI-9 – Estimated Total (vs. MY 2020 Technology) Average MSRP Increases During MYs 2023-2026 Under Preferred Alternative, Passenger Cars

Manufacturer	2023	2024	2025	2026
BMW	1,133	1,468	2,125	2,769
Daimler	1,180	2,422	2,789	3,204
FCA (Stellantis)	2,697	3,031	3,404	3,740
Ford	3,699	3,402	3,421	3,310
GM	848	1,339	2,065	2,474
Honda	685	829	1,332	1,757
Hyundai Kia-H	623	978	1,661	2,357
Hyundai Kia-K	411	997	1,371	1,880
JLR	609	1,532	1,837	2,256
Mazda	2,288	2,427	3,285	3,401
Mitsubishi	822	1,342	1,815	1,785
Nissan	1,349	2,054	2,871	2,856
Subaru	909	2,055	2,265	2,748
Tesla	48	47	49	49
Toyota	364	934	1,075	1,179
VWA	1,102	1,397	1,743	4,523
Volvo	943	2,761	2,829	3,006
Total, Average	1,055	1,521	1,968	2,264

Table VI-10 – Estimated Total (vs. MY 2020 Technology) Average MSRP Increases During MYs 2023-2026 Under Preferred Alternative, Light Trucks

Manufacturer	2023	2024	2025	2026
BMW	1,282	1,379	1,404	1,431
Daimler	634	657	1,358	1,935
FCA (Stellantis)	1,114	1,325	1,643	1,973
Ford	938	1,187	1,219	1,912
GM	738	1,311	2,309	2,935
Honda	527	1,183	1,705	1,674
Hyundai Kia-H	638	764	883	3,117
Hyundai Kia-K	599	2,416	2,414	2,421
JLR	822	1,311	1,850	2,247
Mazda	492	594	1,370	1,664
Mitsubishi	363	841	1,862	1,832
Nissan	1,133	2,249	2,327	2,824
Subaru	1,121	1,267	1,441	1,434
Tesla	82	81	79	78
Toyota	1,239	1,921	1,925	2,331
VWA	2,210	2,222	2,467	2,482
Volvo	901	2,010	2,392	2,628
Total, Average	933	1,413	1,795	2,210

Relative to current vehicles (again, as represented here by technology in the MY 2020 fleet, the most recent for which NHTSA has adequate data), NHTSA judges these cost increases to be significant, but not impossible for the market to bear. Cost increases will be partially offset by fuel savings, which consumers will experience eventually, if not concurrent with the upfront increase in purchase price. And as discussed

previously, nearly every manufacturer has already indicated their intent to continue introducing advanced technology vehicles between now and MY 2026. Again, NHTSA believes that manufacturers introduce new vehicles (and technologies) expecting that there is a market for them—if not immediately, then in the near future. For-profit companies cannot afford to lose money indefinitely. This trend

suggests that manufacturers believe that at least some cost increases should be manageable for consumers.

Relative to the Preferred Alternative, however, NHTSA notes significant further cost increases for several major manufacturers under Alternative 3. Table VI-11 and Table VI-12 show additional technology costs estimated to be incurred under Alternative 3 as compared to the Preferred Alternative.

Table VI-11 – Estimated Difference Between Estimated Average MSRP Increase under Preferred Alternative and Alternative 3 for Passenger Cars

Manufacturer	2023	2024	2025	2026
BMW	48	207	631	693
Daimler	45	292	407	546
FCA (Stellantis)	(0)	122	265	379
Ford	(0)	11	(239)	78
GM	115	139	367	428
Honda	498	555	516	534
Hyundai Kia-H	4	206	462	617
Hyundai Kia-K	-	111	696	670
JLR	(2)	125	292	463
Mazda	(0)	266	542	534
Mitsubishi	-	119	602	576
Nissan	16	308	427	573
Subaru	(0)	(0)	147	468
Tesla	-	-	-	-
Toyota	56	326	383	441
VWA	(0)	47	129	160
Volvo	(12)	(216)	(131)	337
Total, Average	92	227	360	469

Table VI-12 – Estimated Difference Between Estimated Average MSRP Increase under Preferred Alternative and Alternative 3 for Light Trucks

Manufacturer	2023	2024	2025	2026
BMW	24	23	44	143
Daimler	(8)	43	168	331
FCA (Stellantis)	0	83	187	318
Ford	66	521	605	847
GM	-	283	622	798
Honda	312	1,036	1,046	1,037
Hyundai Kia-H	-	17	29	671
Hyundai Kia-K	0	719	693	672
JLR	16	122	214	363
Mazda	-	17	96	387
Mitsubishi	0	128	355	340
Nissan	0	27	58	181
Subaru	0	0	47	(0)
Tesla	-	-	-	-
Toyota	53	652	622	798
VWA	653	624	599	597
Volvo	10	369	490	573
Total, Average	46	347	461	600

For example, Honda's light truck fleet appears to hit an inflection point in cost where much more aggressive technology application is required in order to comply with Alternative 3. In general,

light truck fleets appear to be pressed harder to comply with Alternative 3 than passenger car fleets across the industry. For example, Ford's passenger car compliance costs are estimated to

increase minimally between Alternative 2 and Alternative 3, but light truck compliance costs increase by over 40 percent (in most years). A number of other manufacturers are pushed in both

fleets (Honda, Toyota, and Kia, for example), and make significant additional investments in fuel economy technology to reach compliance with the standards in Alternative 3.

Changes in costs for new vehicles are not the only costs that NHTSA considers in balancing the statutory factors—fuel costs for consumers are relevant to the need of the U.S. to conserve energy, and NHTSA believes

that consumers themselves weigh expected fuel savings against increases in purchase price for vehicles with higher fuel economy. Fuel costs (or savings) continue to be the largest source of benefits for CAFE standards, and GHG reduction benefits, which are also part of the need of the U.S. to conserve energy, are also increasing. E.O. 12866 and Circular A–4 also direct agencies to consider maximizing net

benefits in rulemakings whenever possible and consistent with applicable law. Thus, because it can be relevant to balancing the statutory factors and because it is directed by E.O. 12866 and OMB guidance, NHTSA also considers the net benefits attributable to the different regulatory alternatives, as shown in Table VI–13.

Table VI-13 – Summary of Cumulative Benefits and Costs for Model Years through MY 2029, by Alternative and Discount Rate

		Alternative 1	Alternative 2	Alternative 3
3% Rate	Total Benefits	82.6	121.4	172.9
	Total Costs	66.5	121.1	176.3
	Net Benefits	16.1	0.3	-3.4
7% Rate	Total Benefits	51.6	75.6	107.6
	Total Costs	49.3	90.7	132.8
	Net Benefits	2.3	-15.1	-25.2

While maximizing net benefits is a valid decision criterion for choosing among alternatives, it is not the only reasonable decision perspective. When NHTSA recognizes that the need of the U.S. to conserve fuel weighs importantly in the overall balancing of factors, it is reasonable to consider choosing the regulatory alternative that produces the largest reduction in fuel consumption, while remaining net beneficial. The benefit-cost analysis is not the sole factor that NHTSA considers in determining the maximum feasible stringency, though it supports NHTSA's tentative conclusion that Alternative 2 is the maximum feasible stringency. While Alternative 1 produces higher net benefits, it also continues to allow fuel consumption that could have been avoided in a cost-beneficial manner. And while Alternative 3 achieves greater reductions in fuel consumption than Alternative 2, it shows relatively high negative net benefits under both discount rates.

While NHTSA estimates that new vehicle sales will be slightly lower under Alternative 2 than under the No-Action Alternative, as a consequence of the higher retail prices that result from additional technology application, the difference is only about 1 percent over the entire period covered by MYs 2020–

2026. NHTSA does not believe that this estimated change in new vehicle sales over the period covered by the rule is a persuasive reason to choose another regulatory alternative. Similarly, the estimated labor impacts within the automotive industry provide no evidence that another alternative should be preferred. While the change in sales is estimated to decrease industry employment over the period, the decrease is even smaller than the impact on new vehicle sales (about 0.1 percent). As NHTSA explained earlier in defining economic practicability, standards simply should avoid a *significant* loss of jobs, and may still be economically practicable even though they appear to show a negative impact (here, a very slight impact) on sales and employment.

As with any analysis of sufficient complexity, there are a number of critical assumptions here that introduce uncertainty about manufacturer compliance pathways, consumer responses to fuel economy improvements and higher vehicle prices, and future valuations of the consequences from higher CAFE standards. While NHTSA considers dozens of sensitivity cases to measure the influence of specific parametric assumptions and model relationships, only a small number of them

demonstrate meaningful impacts to net benefits under the proposed standards.

Looking at these cases more closely, the majority of both costs and benefits that occur under the proposed standards accrue to buyers of new cars and trucks, rather than society in general. It then follows that the assumptions that exert the greatest influence over private costs and benefits also exert the greatest influence over net benefits—chief among these is the assumed trajectory of future fuel prices, specifically gasoline. NHTSA considers the “High Oil Price” and “Low Oil Price” cases from AEO 2021 as bounding cases, though they are asymmetrical (while the low case is only about 25 percent lower than the Reference case on average, the high case is almost 50 percent higher on average). The sensitivity cases suggest that fuel prices exert considerable influence on net benefits—where higher and lower prices not only determine the dollar value of each gallon saved, but also how market demand responds to higher levels of fuel economy in vehicle offerings. Under the low case, net benefits become negative and exceed \$30 billion, but increase to almost (positive) \$50 billion in the high case (the largest increase among any sensitivity cases run for this proposal). This suggests that the net benefits resulting from this proposal are

dependent upon the future price of gasoline being at least as high as the AEO 2021 Reference Case projects.

Another critical uncertainty that affects private benefits is the future cost of advanced electrification technologies, specifically batteries. These emerging technologies provide both the greatest fuel savings to new car buyers and impose the highest technology costs (at the moment). While the cost to produce large vehicle batteries has been rapidly declining for years, they are still expensive relative to advancements in internal combustion engines and transmissions. However, the analysis projects continued cost learning over time and shows battery electric vehicles reaching price parity with conventional vehicles in the 2030s for most market segments—after which market adoption of BEVs accelerates—although other estimates show price parity occurring sooner and we seek comment on whether and how to use those estimates in our analysis for the final rule. Electrification is also a viable compliance strategy, as partially or fully electric vehicles benefit from generous compliance incentives that improve their estimated fuel economy relative to measured energy consumption. As such, the assumption about future battery costs has the ability to influence compliance costs to manufacturers and prices to consumers, the rate of electric vehicle adoption in the market, and thus the emissions associated with their operation. NHTSA considered two different mechanisms to affect battery costs: Higher/lower direct costs, and faster/slower cost learning rates. The two mechanisms that reduce cost (whether by faster cost learning or lower direct costs) both increase net benefits relative to the central case, though lowering initial direct costs by 20 percent had a greater effect than increasing the learning rate by 20 percent. Increasing cost (through either mechanism) by 20 percent produced a similar effect, but in the opposite direction (reducing net benefits). However, none of those cases exerted a level of influence that compares to alternative fuel price assumptions.

There is one assumption that affects the analysis without influencing the benefits and costs that accrue to new car buyers: The social cost of damages attributable to greenhouse gas emissions. While there is no feedback in either the analysis or the policy between the assumed social cost of GHGs and metric tons of GHGs emitted (or gallons of fuel consumed), it directly controls the valuation of each metric ton saved over time. The central analysis assumes a SC-GHG cost based on the 2.5 percent

discount rate for the 3 percent social discount rate, and a SC-GHG cost based on the 3 percent discount rate in the 7 percent social discount rate case. However, this assumption directly scales total benefits by increasing (or decreasing) the value of each ton saved. Using the highest SCC-GHG, based on the 95th percentile estimate, pushes net benefits above \$30 billion under Alternative 2. NHTSA does not independently develop the SC-GHG assumptions used in this proposal but takes them from the interagency working group on the social cost of GHGs. If future analyses by that group determine that the SC-GHG should be different from what it currently is, NHTSA will consider those values and whether to include them in subsequent analyses. As the sensitivity cases illustrate, their inclusion could exert enough influence on net benefits to suggest that a different alternative could represent the maximum feasible stringency—at least based on the decision criteria described in this section. As mentioned above, NHTSA is seeking comment on the methodology employed by that group for determining the SC-GHG.

Based on all of the above, NHTSA tentatively concludes that while all of the action alternatives are technologically feasible, Alternative 3 may be too costly to be economically practicable in the rulemaking timeframe, even if choosing it could result in greater fuel savings. NHTSA interprets the need of the U.S. to conserve energy as pushing the balancing toward greater stringency—consumer savings on fuel costs are estimated to be higher under Alternative 3 than under Alternative 2, but the additional technology cost required to meet Alternative 3 (as evidenced by the negative net benefits at both discount rates) may yet make Alternative 3 too stringent for these model years. Changes in criteria pollutants, health effects, and vehicle safety effects are relatively minor under all action alternatives, and thus not dispositive. NHTSA has considered the effect of other motor vehicle standards of the Government by incorporating the fuel economy effects of California's ZEV program into its baseline, and calculating the costs and benefits of CAFE standards as above and beyond those baseline costs and benefits. The additional costs of the proposed standards are, on average, not far from what NHTSA estimated in the 2012 final rule for standards in a similar timeframe; the additional benefits are lower, but this is due to a variety of factors, including significant addition of

fuel-economy-improving technology to new vehicles between then and now (including the growing market for electric vehicles), and lower fuel price projections from EIA. To the extent that higher prices for new vehicles as a result of the technology required by the standards could translate to decreases in new vehicle sales, we note that those effects appear small, as discussed above. Moreover, improving the fuel efficiency of new vehicles has effects over time, not just at point of first sale, on consumer fuel savings. Somewhat-more-expensive-but-more-efficient new vehicles eventually become more-efficient used vehicles, which may be purchased by consumers who may be put off by higher new vehicle prices. The benefits have the potential to continue across the fleet and over time, for all consumers regardless of their current purchasing power.

NHTSA recognizes, again, that lead time for this proposal is less than past rulemakings have provided, and that the economy and the country are in the process of recovering from a global pandemic. NHTSA also recognizes that at least parts of the industry are nonetheless making announcement after announcement of new forthcoming advanced technology, high-fuel-economy vehicle models, and does not believe that they would be doing so if they thought there was no market at all for them. Perhaps some of the introductions are driven by industry perceptions of future regulation, but the fact remains that the introductions are happening. CAFE standards can help to buttress this momentum by continuing to require the fleets as a whole to improve their fuel economy levels steadily over the coming years, so that a handful of advanced technology vehicles do not inadvertently allow backsliding in the majority of the fleet that will continue to be powered by internal combustion for likely the next 5–10 years. CAFE standards that increase steadily may help industry make this transition more smoothly.

And finally, if the purpose of EPCA is energy conservation, and NHTSA is interpreting the need to conserve energy to be largely driven by fuel savings, energy security, and environmental concerns, then it makes sense to interpret EPCA's factors as asking the agency to push stringency as far as possible before benefits become negative. The energy conservation benefits of Alternative 3 appear, under the current analysis, to be highest, as discussed in the SEIS and in Section VI.C above, and better protect consumers from international oil market instability and price spikes. By

increasing the fuel economy of vehicles in the marketplace, more stringent CAFE standards better insulate consumers against these risks over longer periods of time. Fuel economy improvements that reduce demand for oil are a more certain hedging strategy against price volatility than increasing U.S. energy production. However, with negative net benefits for Alternative 3 under both discount rates, it may be that for the moment, the costs of achieving those benefits are more than the market is willing to bear. NHTSA thus aims to help bolster the industry's trajectory toward higher future standards, by keeping stringency high in the mid-term, but not so high as to be economically impracticable.

NHTSA therefore proposes that Alternative 2 is maximum feasible for MYs 2024–2026. We seek comment on this tentative conclusion.

VII. Compliance and Enforcement

A. Introduction

1. Overview of the NHTSA Compliance Program

A manufacturer's fleet is divided into three compliance categories of automobiles: Passenger vehicles manufactured domestically, passenger vehicles not manufactured domestically; and non-passenger automobiles.⁴⁶⁸ Each category has its own CAFE fleet mpg standard that a manufacturer is required to meet. The CAFE standard is determined for each model year by a combination of the production volume of vehicles produced for sale, the footprint of those vehicles, and the requisite CAFE footprint-based fuel economy target curves.

For each compliance category, manufacturers self-report data at the end of each MY in the form of a Final Model Year Report, and once these data are verified by EPA, NHTSA determines final compliance. Using EPA's final verified data, a manufacturer fleet is determined to be compliant if the 2-cycle CAFE performance of their fleet with the addition of the Alternative Motor Fuels Act (AMFA) and AC/OC incentives are equal to or greater than the CAFE fleet mpg standard. The manufacturer fleet is out of compliance if its fleet mpg falls below the CAFE mpg standard, in which case the manufacturer may resolve the shortfall through civil penalties or the use of flexibilities. Resolving a shortfall through flexibilities may include the

⁴⁶⁸ See 49 U.S. Code 32903.6. Passenger vehicles not manufactured domestically are referenced as import passenger cars and non-passenger automobiles as light trucks.

application of CAFE credits through trade, carry-forward, carry-back, or transfer from within the manufacturer's fleet accounts or from another manufacturer's fleet accounts.

The following sections provide a brief overview how CAFE standards and compliance values are derived, what compliance flexibilities and incentives are available to manufacturers, and the revisions to the CAFE program NHTSA is proposing in this rulemaking. In summary, NHTSA is proposing to: (1) Increase and clarify flexibilities for its off-cycle program; (2) revive incentives for hybrid and electric full-size pickup trucks through MY 2025; (3) modify its standardized templates for CAFE reporting and credit transactions; and (4) add a new template for manufacturers to report information on the monetary and non-monetary costs associated with credit trades.

2. How Manufacturers' Target and Achieved Performances Are Calculated

Compliance begins each model year with manufacturers testing vehicles on a dynamometer in a laboratory over pre-defined test cycles and controlled conditions.⁴⁶⁹ EPA and manufacturers use two different dynamometer test procedures—the Federal Test Procedure (FTP) and the Highway Fuel Economy Test (HFET) to determine fuel economy. These procedures originated in the early 1970s and were intended to generally represent city and highway driving conditions, respectively. These two tests are commonly referred to as the “2-cycle” test procedures for CAFE. A machine is connected to the vehicle's tailpipe while it performs the test cycle, which collects and analyzes exhaust

⁴⁶⁹ For readers unfamiliar with this process, the test is similar to running a car on a treadmill following a program—or more specifically, two programs. 49 U.S.C. 32904(c) states that, in testing for fuel economy, EPA must “use the same procedures for passenger automobiles [that EPA] used for model year 1975 (weighted 55 percent urban cycle and 45 percent highway cycle), or procedures that give comparable results.” Thus, the “programs” are the “urban cycle,” or Federal Test Procedure (abbreviated as “FTP”) and the “highway cycle,” or Highway Fuel Economy Test (abbreviated as “HFET”), and they have not changed substantively since 1975. Each cycle is a designated speed trace (of vehicle speed versus time) that vehicles must follow during testing—the FTP is meant roughly to simulate stop and go city driving, and the HFET is meant roughly to simulate steady flowing highway driving at about 50 mph. The 2-cycle dynamometer test results differ somewhat from what consumers will experience in the real-world driving environment because of the lack of high speeds, rapid accelerations, and hot and cold temperatures evaluations with the A/C operation. These added conditions are more so reflected in the EPA 5-cycle test results listed on each vehicle's fuel economy label and on the *fuel economy.gov* website.

gases, such as CO₂ quantities.⁴⁷⁰ Fuel economy is determined from relating a derived emissions factor to the amount of observed CO₂ using a reference test fuel.⁴⁷¹ Manufacturers continue to test vehicles over the course of the model year and will test enough vehicles to cover approximately 90 percent of the subconfigurations within each model type. Manufacturers self-report this information to EPA as part of their end-of-the-model year reports, which are due 90 days after the model year is completed. After manufacturers submit their reports, EPA confirms and validates those results by testing a random sample of vehicles at the National Vehicle and Fuel Emissions Laboratory (NVFEL) in Ann Arbor, Michigan.

A manufacturer's fleet fuel economy performance (hereafter referenced as Base CAFE) for a given model year is calculated through the following steps:

- Each vehicle model's mile per gallon (mpg) performance in the city and highway test cycles are calculated based off the carbon emitted during dynamometer testing. The vehicle's mpg performance is combined at 55 percent city and 45 percent highway. Measurement incentives for alternative fuel vehicles (such as for electricity, counting 15 percent of the actual energy used to determine the gasoline equivalent mpg) are applied as part of these procedures;
- Performance improvements not fully captured through 2-cycle dynamometer testing, such as eligible A/C and off-cycle technologies are then added to the vehicle's mpg performance. Incentives for full-size pickup trucks with mild or strong HEV technology or other technologies that perform significantly better than the vehicle's target value are also applied.
- The quantity of vehicles produced of each model type within a manufacturer's fleet is divided by its respective fuel economy performance (mpg) including any flexibility/incentive increases; The resulting numbers for each model type are summed;
- The manufacturer's total production volume is then divided by the summed value calculated in the previous step; and

⁴⁷⁰ Vehicles without tailpipe emissions, such as battery electric vehicles, have their performance measured differently, as discussed below.

⁴⁷¹ Technically, for the CAFE program, carbon-based tailpipe emissions (including CO₂, CH₄, and CO) are measured, and fuel economy is calculated using a carbon balance equation. EPA uses carbon-based emissions (CO₂, CH₄, and CO, the same as for CAFE) to calculate the tailpipe CO₂ equivalent for the tailpipe portion of its standards. CO₂ is by far the largest carbon-based exhaust constituent.

• That number, which is the harmonic average of the fleet’s fuel economy, is rounded to the nearest tenth of an mpg and represents the manufacturer’s achieved fuel economy. The Base CAFE of each fleet is compared to the manufacturer’s unique fleet compliance obligation, which is calculated using the same approach as the Base CAFE performance, except that the fuel economy target value (based on

the unique footprint of each vehicle within a model type) is used instead of the measured fuel economy performance values. The fuel economy target values of the model types within each fleet and production volumes are used to derive the manufacturer’s fleet standard (also known as the obligation) which is the harmonic average of these values.

To further illustrate how Base CAFE and fuel economy targets are calculated, assume that a manufacturer produces two models of cars—a hatchback and a sedan. Figure VII–1 shows the two vehicle models imposed onto a fuel economy target function. From Figure VII–1, we can see that the target function extends from about 30 mpg for the largest cars to about 41 mpg for the smallest cars.

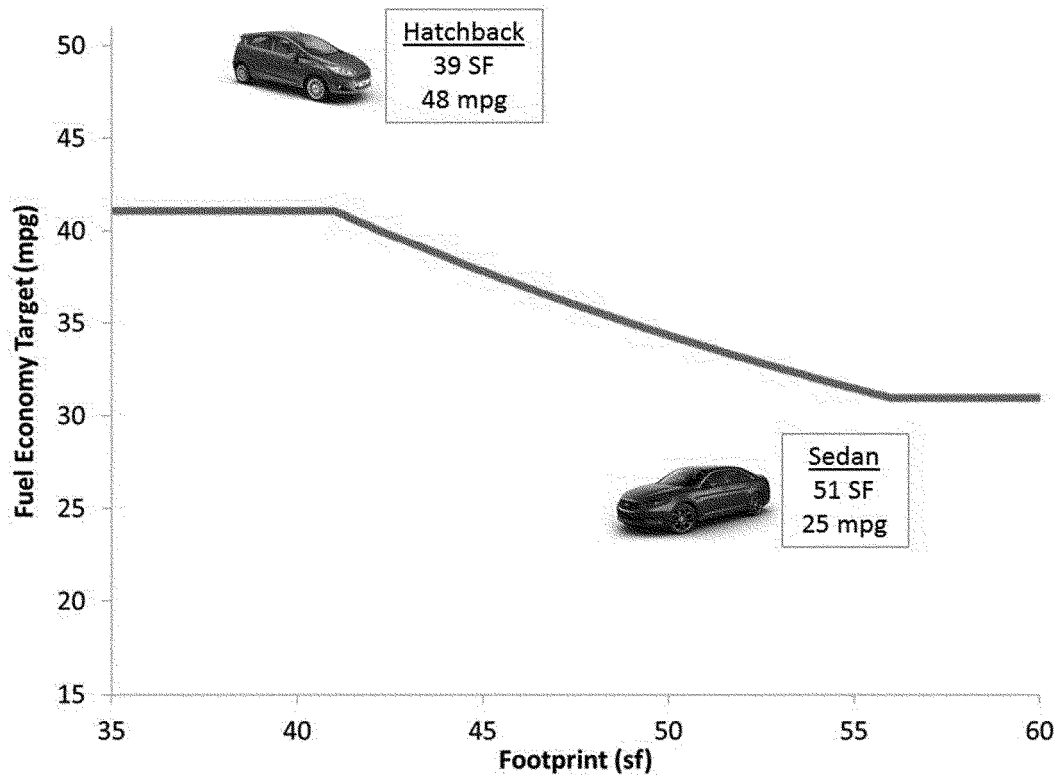


Figure VII-1 – Illustration of Vehicle Models vs. Fuel Economy Targets

The manufacturer’s required CAFE obligation would be determined by calculating the production-weighted harmonic average of the fuel economy target values applicable at the hatchback and sedan footprints (from the curve, about 41 mpg for the hatchback and about 33 mpg for the sedan). The manufacturer’s achieved Base CAFE level is determined by calculating the production-weighted harmonic average of the hatchback and sedan fuel economy levels (in this example the values shown in the boxes in Figure VII–1, 48 mpg for the hatchback and 25 mpg for the sedan). Depending on the relative mix of hatchbacks and sedans produced, the manufacturer’s fleet Base CAFE may be equal to the standard, perform better than the standard (if the required fleet CAFE is less than the achieved fleet Base CAFE) and thereby

earn credits, or perform worse than the standard (if the required fleet CAFE is greater than achieved fleet Base CAFE) and thereby earn a credit shortfall which would need to be made up using CAFE credits, otherwise the manufacturer would be subject to civil penalties.

As illustrated by the example, the CAFE program’s use of sales-weighted harmonic averages makes compliance more intricate than comparing a model to its target as not every model type needs to precisely meet its target for a manufacturer to achieve compliance. Consequently, if a manufacturer finds itself producing large numbers of vehicles that fall well-short of its targets, a manufacturer can attempt to equally balance its compliance by producing vehicles that are excessively over-compliant. However, NHTSA

understands that several factors determine the ability of manufacturers to change their fleet-mix mid-year. In response, the CAFE program is structured to provide relief to manufacturers in offsetting any shortfalls by offering several compliance flexibilities. Many manufacturers use these flexibilities to avoid civil penalties.

3. The Use for CAFE Compliance Flexibilities and Incentives

The CAFE program offers several compliance flexibilities which expand options for compliance, and incentives which encourage manufacturers to build vehicles with certain technologies to achieve longer range policy objectives. For example, since MY 2017, manufacturers have had the flexibility to earn credits for air conditioning

(A/C) systems with improved efficiency. These fuel economy improvements are added to the 2-cycle performance results of the vehicle and increases the calculation of a manufacturer's fleet Base CAFE in determining compliance relative to standards.⁴⁷²

Some CAFE flexibilities and incentives are codified by statute in EPCA or EISA, while others have been implemented by the NHTSA through regulations, consistent with the statutory scheme. Compliance flexibilities and incentives have a great deal of theoretical attractiveness: If designed properly, they can help reduce the overall regulatory costs, while maintaining or improving programmatic benefits. If designed poorly, they may create significant potential for market distortion. Consequently, creating or

revising compliance flexibilities and incentives requires proper governmental and industry collaboration for understanding upcoming technological developments and for determining whether a technology is economically feasible for compliance. When designing these programmatic elements, the agency must be mindful to ensure flexibilities and incentives are provided with long term benefits to the CAFE program while avoiding unintended windfalls for only certain manufacturers or technologies.

Compliance incentives and flexibilities are structured to encourage implementation of technology that will further increase fuel savings. Some incentives are designed to encourage the development of technologies that may have high initial costs but offer promising fuel efficiency benefits in the long-term. Others are designed to bring low cost technologies uniformly into the market that improve fuel economy in the real-world but may be missed by the 2-cycle test, such as the cost-effective off-cycle menu technologies included by EPA for CAFE compliance.

Below is a summary of all the current and proposed changes to the flexibilities and incentives for the CAFE and CO₂ programs in Table VII-1 through Table VII-4. Note that this proposal only covers the CAFE program; the EPA program is listed here to demonstrate the congruencies between the two programs. NHTSA is proposing to maintain the bulk of its current program with a few modifications. One of the changes raised in this proposal is to increase the off-cycle flexibility technology benefit cap along with new technology definitions as shown in the table. NHTSA is also proposing to reinstate incentives for full-size hybrid and game changing advanced technology pickup trucks for model years 2022 through 2026. NHTSA believes that these incentives will increase the production of environmentally beneficial technologies and help achieve economies of scale to reduce costs that will enable more stringent CAFE standards in the future. These proposals are explained in further detail in Section VII.B.

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⁴⁷² NHTSA characterizes any programmatic benefit manufacturers can use to comply with CAFE standards that fully accounts for fuel use as a "flexibility" (e.g., credit trading) and any benefit that counts less than the full fuel use as an "incentive" (e.g., adjustment of alternative fuel vehicle fuel economy). NHTSA flexibilities and incentives are discussed further in Section VII.B.3.a).

Table VII-1 – Statutory Flexibilities for Over-compliance with Standards

Regulatory Item	NHTSA		EPA	
	Authority	Current Program	Authority	Current and <i>Proposed</i> Program
Credit Earning	49 U.S.C. 32903(a)	Denominated in tenths of a mpg	CAA 202(a)	Denominated in g/mi
Credit “Carry-forward”	49 U.S.C. 32903(a)(2)	5 MYs into the future	CAA 202(a)	5 MYs into the future (except for MYs 2010-2015 = credits may be carried forward through MY 2021) <i>EPA proposes to extend credit expiration for MY 2016 by 2 years, and for MYs 2017-2020 by 1 year</i>
Credit “Carryback” (AKA “deficit carry-forward”)	49 U.S.C. 32903(a)(1)	3 MYs into the past	CAA 202(a)	3 MYs into the past
Credit Transfer	49 U.S.C. 32903(g)	Up to 2 mpg per fleet; transferred credits may not be used to meet MDPCS	CAA 202(a)	Unlimited
Credit Trade	49 U.S.C. 32903(f)	Unlimited quantity; traded credits may not be used to meet MDPCS	CAA 202(a)	Unlimited

Table VII-2 – Current and Proposed Flexibilities that Address Gaps in Compliance Test Procedures

Regulatory Item	NHTSA		EPA	
	Authority	Current and Proposed Program	Authority	Current and Proposed Program
A/C efficiency	49 U.S.C. 32904	Allows mfrs to earn “fuel consumption improvement values” (FCIVs) equivalent to EPA credits starting in MY 2017	CAA 202(a)	“Credits” for A/C efficiency improvements up to caps of 5.0 g/mi for cars and 7.2 g/mi for trucks
Off-cycle	49 U.S.C. 32904	Allows mfrs to earn “fuel consumption improvement values” (FCIVs) equivalent to EPA credits starting in MY 2017 <i>For MY 2020 and beyond, NHTSA proposes to implement CAFE provisions equivalent to the EPA proposed changes</i>	CAA 202(a)	“Menu” of pre-approved credits (~10), up to cap of 10 g/mi for MY 2014 and beyond; other pathways require EPA approval through either 5-cycle testing or through public notice and comment <i>EPA proposes to revise the definitions for passive cabin ventilation and active engine and transmission warm-up beginning in MY 2023; for MY 2020-2022, the cap is 15 g/mi if the revised definitions are met (if these technologies are used). In MY 2023 and later, the cap is increased to 15 g/mile</i>

Table VII-3 – Incentives that Encourage Application of Technologies

Regulatory item	NHTSA		EPA	
	Authority	Proposed Program	Authority	Current and Proposed Program
Full-size pickup trucks with HEV or overperforming target	49 U.S.C. 32904	Allows mfrs to earn FCIVs equivalent to EPA credits for MYs 2017-2021 <i>NHTSA proposes to reinstate incentives for strong hybrid OR overperforming target by 20% for MYs 2022-2025</i>	CAA 202(a)	10 g/mi for full-size pickups with mild hybrids OR overperforming target by 15% (MYs 2017-2021); 20 g/mi for full-size pickups with strong hybrids OR overperforming target by 20% (MYs 2017-2021); requires 10% or more of full-size pickup production volume <i>EPA proposes to reinstate incentives for strong hybrid OR overperforming by 20% for MYs 2022-2025</i>

Table VII-4 – Incentives that Encourage Alternative Fuel Vehicles

Regulatory item	NHTSA		EPA	
	Authority	Current Program	Authority	Current and <i>Proposed</i> Program
Dedicated alternative fuel vehicle	49 U.S.C. 32905(a) and (c)	Fuel economy calculated assuming gallon of liquid or gallon equivalent gaseous alt fuel = 0.15 gallons of gasoline; for EVs petroleum equivalency factor	CAA 202(a)	Multiplier incentives for EVs and FCVs (each vehicle counts as 2.0/1.75/1.5 vehicles in 2017-2021), NGVs (1.6/1.45/1.3 vehicles for MYs 2017-2021, then 2.0 for MYs 2022-2026); each EV = 0 g/mi upstream emissions through MY 2021 (then phases out based on per-mfr production cap of 200k vehicles) 2026 <i>EPA proposes to add vehicle multiplier incentive for EVs and FCVs; each vehicle counts as 2.0 for MYs 2022-2024, and 1.75 for MY 2025, subject to a cap on all vehicle multipliers</i>
Dual-fueled vehicles	49 U.S.C. 32905(b), (d), and (e); 32906(a)	FE calc using 50% operation on alt fuel and 50% on gasoline through MY 2019. Starting with MY 2020, NHTSA uses the SAE defined "Utility Factor" methodology to account for actual potential use, and "F-factor" for FFV; NHTSA will continue to incorporate the 0.15 incentive factor	CAA 202(a)	Multiplier incentives for PHEVs and NGVs (each vehicle counts as 1.6/1.45/1.3 vehicles in 2017-2021 NGVs count as 2.0 vehicles in 2022-2026); electric operation = 0 g/mi through MY 2026; the SAE defined "Utility Factor" method for use, and "F-factor" for FFV <i>EPA proposes to add vehicle multiplier incentive for PHEVs; each vehicle counts as 1.6 for MYs 2022-2024, and 1.45 for MY 2025, subject to a cap on all vehicle multipliers</i>

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4. Light Duty CAFE Compliance Data for MYs 2011–2020

NHTSA uses compliance data in part to identify industry trends. For this proposal, NHTSA examined CAFE compliance data for model years 2011 through 2020 using final compliance data for MYs 2011 through 2017,⁴⁷³ projections from end-of-the-model year reports submitted by manufacturers for

MYs 2018 and 2019,⁴⁷⁴ and projections from manufacturers' mid model year reports for MY 2020.⁴⁷⁵ Projections from the mid-year and end-of-the-model year reports may differ from EPA-verified final CAFE values either because of differing test results or final sales-volume figures. MY 2011 was selected as the start of the data because it represents the first compliance model year for which manufacturers were

permitted to trade and transfer credits.⁴⁷⁶ The data go up to MY 2020, because this was the most recent year compliance reports were available.

Figure VII-2 through Figure VII-5 provide a graphical overview of the actual and projected compliance data for MYs 2011 to 2020.⁴⁷⁷

In the figures, an overview is provided for the total fuel economy performance of the industry (the combination of all passenger cars and light trucks produced for sale during the

⁴⁷³ Final compliance data have been verified by EPA and are published on the NHTSA's Public Information Center (PIC) site. MY 2017 is currently the most-recent model year verified by EPA.

⁴⁷⁴ MY 2018 data come from information received in manufacturers' final reports submitted to EPA according to 40 CFR 600.512-12.

⁴⁷⁵ Manufacturers' mid-model year CAFE reports are submitted to NHTSA in accordance with 49 CFR part 537. At the time of the analysis, end of the model year data had not yet been submitted for MY 2020.

⁴⁷⁶ 49 CFR 535.6(c).

⁴⁷⁷ As mentioned previously, the figures include estimated values for certain model years based on the most up to date information provided to NHTSA from manufacturers.

model year) as a single fleet, and for each of the three CAFE compliance fleets: Domestic passenger car, import passenger car, and light truck fleets. For each of the graphs, a sale-production weighting is applied to determine the average total or fleet Base CAFE performances.^{478 479 480} The graphs do not include adjustments for full-size pickup trucks because manufacturers have yet to bring qualifying products into production.

The figures also show how many credits remain in the market each model year. One complicating factor for presenting credits is that the mpg-value of a credit is contingent where it was earned and applied. Therefore, the actual use of the credits for MYs 2018 and beyond will be uncertain until compliance for those model years is completed. Also, since credits can be

⁴⁷⁸ In the figures, the label “2-Cycle CAFE” represents the maximum increase each year in the average fuel economy set to the limitation “cap” for manufacturers attributable to dual-fueled automobiles as prescribed in 49 U.S.C. 32906. The label “AC/OC contribution” represents the increase in the average fuel economy adjusted for A/C and off-cycle fuel consumption improvement values as prescribed by 40 CFR 600.510–12.

⁴⁷⁹ Consistent with applicable law, NHTSA established provisions starting in MY 2017 allowing manufacturers to increase compliance performance based on fuel consumption benefits gained by technologies not accounted for during normal 2-cycle EPA compliance testing (called “off-cycle technologies” for technologies such as stop-start systems) as well as for A/C systems with improved efficiencies and for hybrid or electric full-size pickup trucks.

⁴⁸⁰ Adjustments for earned credits include those that have been adjusted for fuel saving using the manufacturers CAFE values for the model years in which they were earned and adjusted to the average CAFE values for the fleets they exist within.

retained for up to 6 MYs after they were earned or applied retroactively to the previous 3 model years, it is impossible to know the final application of credits for MY 2020 until MY 2023 compliance data are finalized. Instead of attempting to project how credits would be generated and used, the agency opted to value each credit based on its actual value when earned, by estimating the value when applied assuming it was applied to the overall average fleet and across all vehicles. In the figures, two different approaches were used to represent the mpg value of credits used to offset shortages (shown as CAFE after credit allocation in the figures). The mpg shortages for MYs 2011 to 2017 are based upon actual compliance values from EPA and the credit allocations or fines manufacturers instructed NHTSA to adjust and apply to resolve compliance shortages. For MYs 2018 to 2020, NHTSA used a different approach for representing the mpg shortages, deriving them from projected estimates adjusted for fuel savings calculated from the projected fleet average performances and standards for each model year and fleet. To represent the mpg value of manufacturers’ remaining banked credits in the figures (shown as Credits in the Market) the same weighting approach was also applied to these credits based upon the fleet averages. For MYs 2011–2017, the remaining banked credits include those currently existing in manufacturers’ credit accounts adjusted for fuel savings and subtracting any expired credits for each year. This approach was taken to represent these credits for the actual value that would likely exist if the

credits were applied for compliance purposes. Without adjusting the banked credits, it would provide an unrealistic value of the true worth of these credits when used for compliance. For MYs 2018–2020, the mpg value of the remaining banked credits is shown slightly differently where the value represents the difference between the adjusted credits carried forward from previous model years (minus expiring credits) and the projected earned credits minus any expected credit shortages. Since all the credits in these model years were adjusted using the same approach it was possible to subtract the credit amounts. However, readers are reminded that for MYs 2018–2020 since the final CAFE reports have yet to be issued, the credit allocation process has not started, and the data shown in the graphs are a projection of potential overall compliance. Consequently, the credits included for MYs 2018–2020 are separated from earlier model years by a dashed line to highlight that there is a margin of uncertainty in the estimated values. Projecting how and where credits will be used is difficult for a number of reasons such as not knowing which flexibilities manufacturers will utilize and the fact that credits are not valued the same across different fleets. As such, the agency reminds readers that the projections may not align with how manufacturers will actually approach compliance for these years.

Table VII–5 provides the numerical CAFE performance values and standards for MYs 2011–2020 as shown in the figures.

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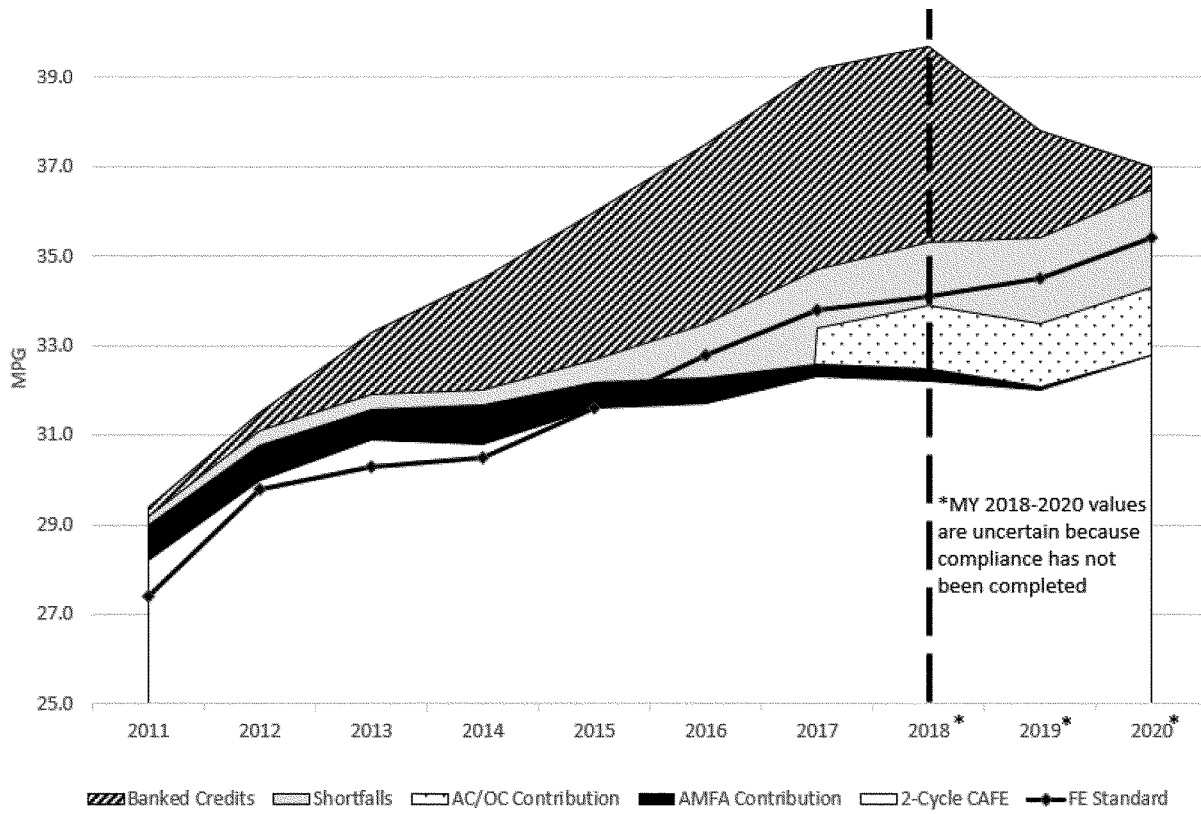


Figure VII-2 – Total Fleet Compliance Overview for MYs 2011 to 2020

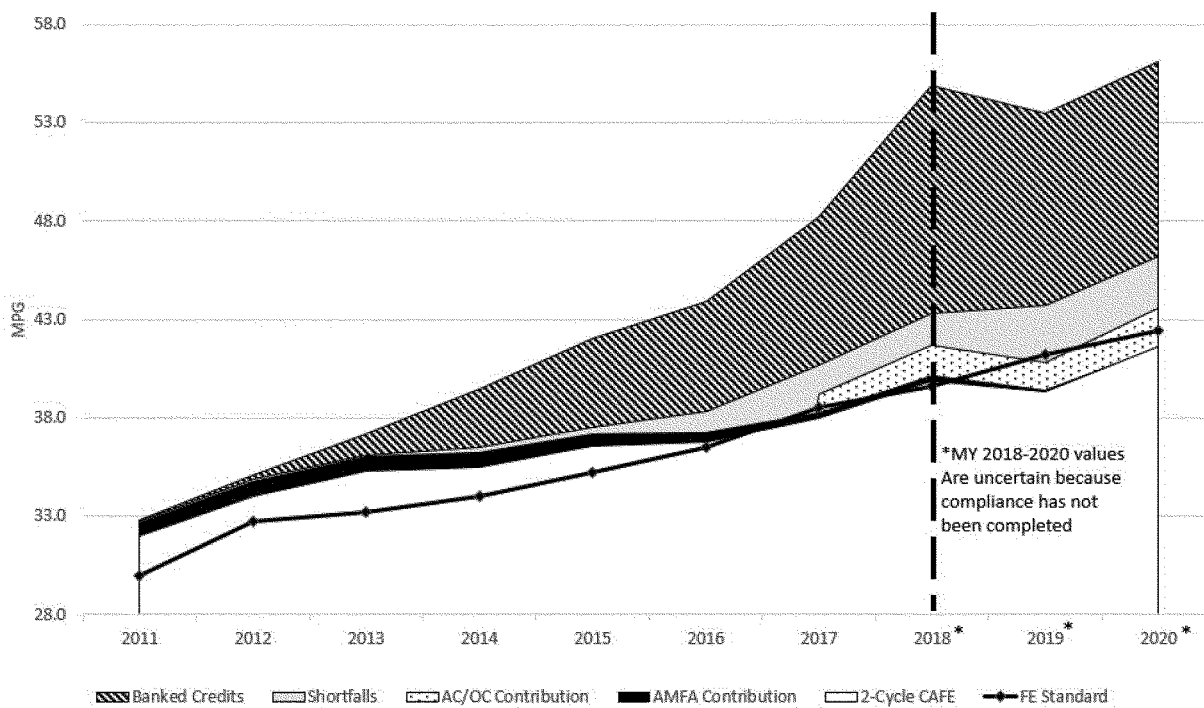


Figure VII-3 – Domestic Passenger Car Compliance Overview for MYs 2011 to 2020

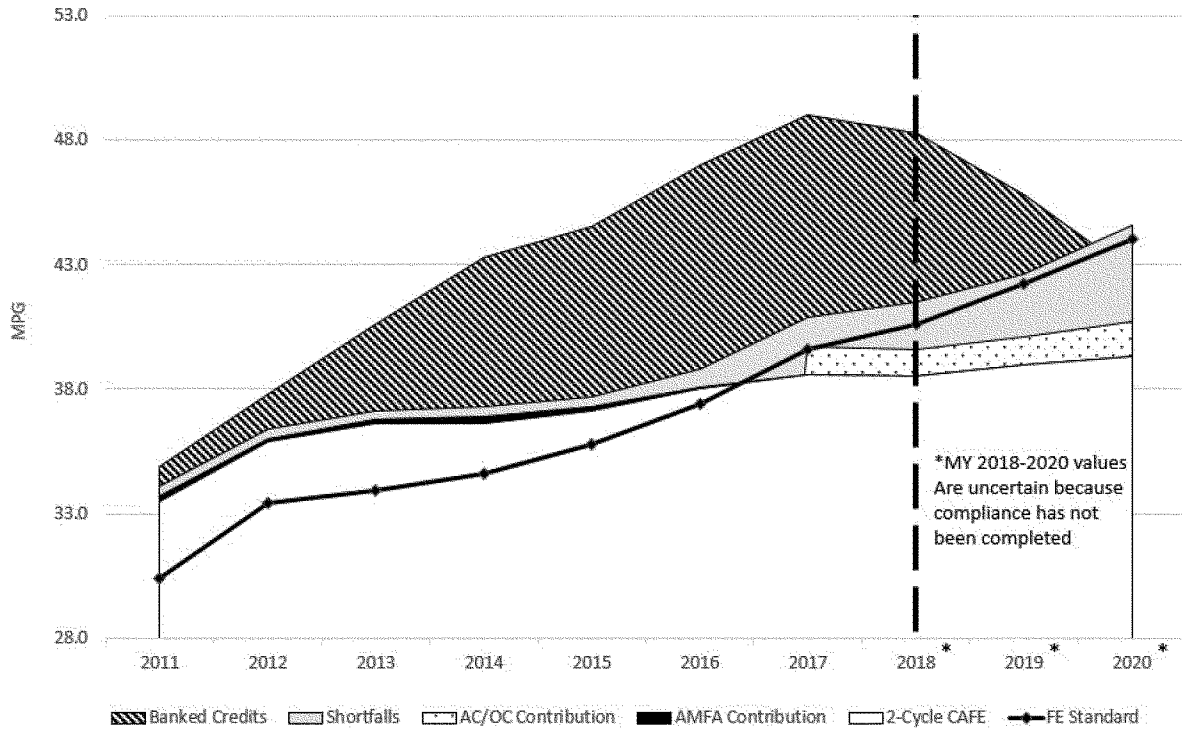


Figure VII-4 – Import Passenger Car Compliance Overview for MYs 2011 to 2020

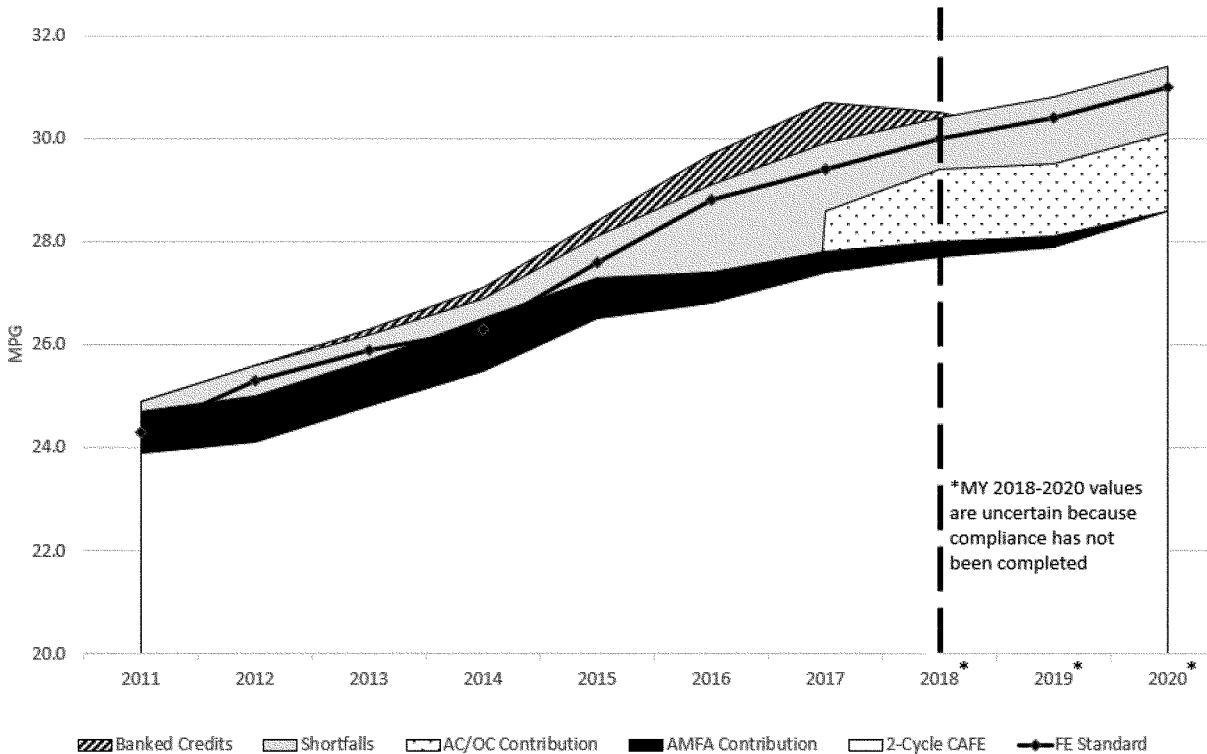


Figure VII-5 – Light Truck Compliance Overview for MYs 2011 to 2020

Table VII-5 – CAFE Performance and Standards for MYs 2011 to 2020

Model Year	Domestic Passenger Car		Import Passenger Car		Light Truck		Total Fleet	
	CAFE (mpg)	Standard (mpg)	CAFE (mpg)	Standard (mpg)	CAFE (mpg)	Standard (mpg)	CAFE (mpg)	Standard (mpg)
2020	43.6	42.4	40.7	44	30.1	31	34.3	35.4
2019	40.8	41.2	40.1	42.2	29.5	30.4	33.5	34.5
2018	41.7	39.6	39.6	40.6	29.4	30	33.9	34.1
2017	39.2	38.5	39.7	39.6	28.6	29.4	33.4	33.8
2016	37.3	36.5	38.1	37.4	27.4	28.8	32.3	32.8
2015	37.2	35.2	37.3	35.8	27.3	27.6	32.2	31.6
2014	36.3	34	36.9	34.6	26.5	26.3	31.7	30.5
2013	36.1	33.2	36.8	33.9	25.7	25.9	31.6	30.3
2012	34.8	32.7	36	33.4	25	25.3	30.8	29.8
2011	32.7	30	33.7	30.4	24.7	24.3	29	27.4

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As shown in Figure VII-2, manufacturers’ fuel economy performance (2-cycle CAFE plus AMFA) for the total fleet was better than the fleet-wide target through MY 2015. On average, the total fleet exceeded the standards by approximately 0.9 mpg for MYs 2011 to 2015. As shown in Figure VII-3 through Figure VII-5, domestic and import passenger cars exceeded standards on average by 2.1 mpg and 2.3 mpg, respectively. By contrast, light truck manufacturers on average fell below the standards by 0.3 mpg over the same time period.

For MYs 2016 through 2020, Figure VII-2 shows that the total fleet Base CAFE (including 2-Cycle CAFE plus A/C and OC benefits) falls below and appears to remain below the fleet CAFE standards for these model years.⁴⁸¹ The projected compliance shortfall (*i.e.* the difference between CAFE performance values and the standards) remains constant and reaches its greatest difference between MYs 2019 and 2020. Compliance becomes even more complex when observing individual compliance fleets over these years. Only domestic passenger car fleets collectively appear to exceed CAFE standards while import passenger car fleets appear to have the greatest compliance shortages. In MY 2020, the import passenger car fleet appear to

reach its highest compliance shortfall equal to 3.3 mpg.

The graphs provide an overall representation of the average values for each fleet, although they are less helpful for evaluating compliance with the minimum domestic passenger car standards given statutory prohibitions on manufacturers using traded or transferred credits to meet those standards.⁴⁸² Consequently, in MY 2020, domestic passenger car manufacturers may improve their performance by adding more AC/OC technology, allowing the domestic passenger car fleet to once again exceed CAFE standards. However, NHTSA notes that several manufacturers have already reported insufficient earned credits and may have to make fine payments if they fail to reach the minimum domestic passenger car standards.

In summary, MY 2016 is the last compliance model year that passenger cars complied with CAFE standards relying solely on Base CAFE performance. Prior to this timeframe, passenger car manufacturers especially those building domestic fleets could substantially exceed CAFE standards. MY 2016 marked the first time in the history of the CAFE program where compliance for passenger car manufacturers fell below standards thereby increasing shortfalls and forcing the need for manufacturers to rely

heavily upon credit flexibilities. Despite higher shortfalls, domestic passenger car manufacturers have continued to generate credits and increase their total credit holdings. The projections show that for MYs 2018–2020, domestic passenger car fleets will transition from generating to using credits but will maintain sizable amounts of banked credits sufficient to sustain compliance shortfalls in other regulatory fleets. Figure VII-4 shows residual available banked credits even as far as MY 2020. Domestic passenger car credits and their off-cycle credits will play an important role in sustaining manufacturers in complying with CAFE standards.

From the projections, it appears that based on the number of remaining domestic passenger credits in the market and the rate at which they are being used, there will be insufficient credits to cover the shortfalls in other compliance fleets in years following MY 2020. Figure VII-2 shows that the total remaining combined credits for the industry is expected to decline starting in MY 2018. Import passenger cars and light truck fleets will play a major role in the decline and possible depletion of all available credits to resolve shortfalls after MY 2020. Several factors exist that could produce this outcome. First, increasing credit shortages are occurring in the import passenger car and light truck fleets especially since the reduction and then termination of AMFA incentives in MY 2019 (a major contributor for light trucks). Next, residual banked credits for the light truck fleet are expected to be exhausted starting in MY 2018 and for import

⁴⁸¹ Until MY 2023 compliance, the last year where earned credits can be retroactively applied to MY 2020, NHTSA will be unable to make a determination about the fleet’s overall compliance over this timespan.

⁴⁸² In accordance with 49 CFR 536.9(c), transferred or traded credits may not be used, pursuant to 49 U.S.C. 32903(g)(4) and (f)(2), to meet the domestically manufactured passenger automobile minimum standard specified in 49 U.S.C. 32902(b)(4) and in 49 CFR 531.5(d).

passenger cars in MY 2020. Finally, the use of AC/OC benefits for import passenger cars and light trucks is not a significant factor for these fleets in complying with CAFE standards. Manufacturers will need to change their production strategies or introduce substantially more fuel saving technologies to sustain compliance in the future.

Figure VII–6 provides a historical overview of the industry’s use of CAFE credit flexibilities and fine payments for addressing compliance shortfalls.⁴⁸³ As mentioned, MY 2017 is the last model year for which CAFE compliance determinations are completed, and credit application and civil penalty payment determinations finalized. As shown in the figure, for MYs 2011–2015, manufacturers generally resolved credit shortfalls by carrying forward earned credits from previous years. However, since 2011, the rise in manufacturers executing credit trades has become increasingly common and, in MY 2017, credit trades were the most frequently used flexibility for achieving compliance. Credit transfers have also become increasingly more prevalent for manufacturers. As a note to readers, credit trades in the figures can also involve credit transfers but are aggregated in the figure as credit trades to simplify results. In MY 2016, credit transfers constituted the highest contributor to credit flexibilities but are

⁴⁸³ The Figure includes all credits manufacturers have used in credit transactions to date. Credits contained in carryback plans yet to be executed or in pending enforcement actions are not included in the Figure.

starting to decline signifying that manufacturers are currently exhausting credit transfers within their own fleets. Manufacturers only occasionally carry back credits to resolve performance shortfalls. NHTSA believes that trading credits between manufacturers and to some degree transferring traded credit across fleets will be the most commonly used flexibility in complying with future CAFE standards as started in MY 2017.

Credit trading has generally replaced civil penalty payments as a compliance mechanism. Only a handful of manufacturers have made civil penalty payments since the implementation of the credit trading program. As previously shown, NHTSA believes that manufacturers have sufficient credits to resolve any import passenger car and light truck performance shortfalls expected through MY 2020. As of recent, the only fine payments being made or expected in the future are those directly resulting from manufacturers failing to comply with the minimum domestic passenger car standards.⁴⁸⁴ There were two fine payments made in MYs 2016 and 2017 which fit this exact case. By statute, manufacturers cannot use traded or transferred credits to address performance shortfalls for failing to meet the minimum domestic

⁴⁸⁴ Six manufacturers have paid CAFE civil penalties since credit trading began in 2011. Fiat Chrysler paid the largest civil penalty total over the period, followed by Jaguar Land Rover and then Volvo. See Summary of CAFE Civil Penalties Collected, CAFE Public Information Center, https://one.nhtsa.gov/cafe_pic/CAFE_PIC_Fines_LIVE.html.

passenger car standards.⁴⁸⁵ Because of this limitation, the fine payments made in MY 2016 and 2017 came from one manufacturer that had exhausted all of its earned domestic passenger credits and could not carryback future credits.⁴⁸⁶ The same condition will occur for other manufacturers in the future. NHTSA calculates that six manufacturers will meet this same condition and have to make substantial civil penalty payments for failing to comply with the minimum domestic passenger cars standards in MYs 2018 through 2020.

In Figure VII–8, additional information is provided on the credit flexibilities exercised and fine payments made by manufacturers for MYs 2011–2017. The figure includes the gasoline gallon equivalent for these credit flexibilities or for paying civil penalties. The figure shows that manufacturers used carrying forward credits most often to resolve shortfalls. Credit trades were the second leading benefit to manufacturers in using credit flexibilities and then followed by credit transfers. In summary, manufacturers used these flexibilities amounting to the equivalent of 2,952,856 gallons of fuel by carrying forward credits in 2017 and 583,720 gallons of fuel by trading credits in 2017.

⁴⁸⁵ Congress prescribed minimum domestic passenger car standards for domestic passenger car manufacturers and unique compliance requirements for these standards in 49 U.S.C. 32902(b)(4) and 32903(f)(2).

⁴⁸⁶ Fiat Chrysler paid \$77,268,702.50 in civil penalties for MY 2016 and \$79,376,643.50 for MY 2017 for failing to comply with the minimum domestic passenger car standards for those MYs.

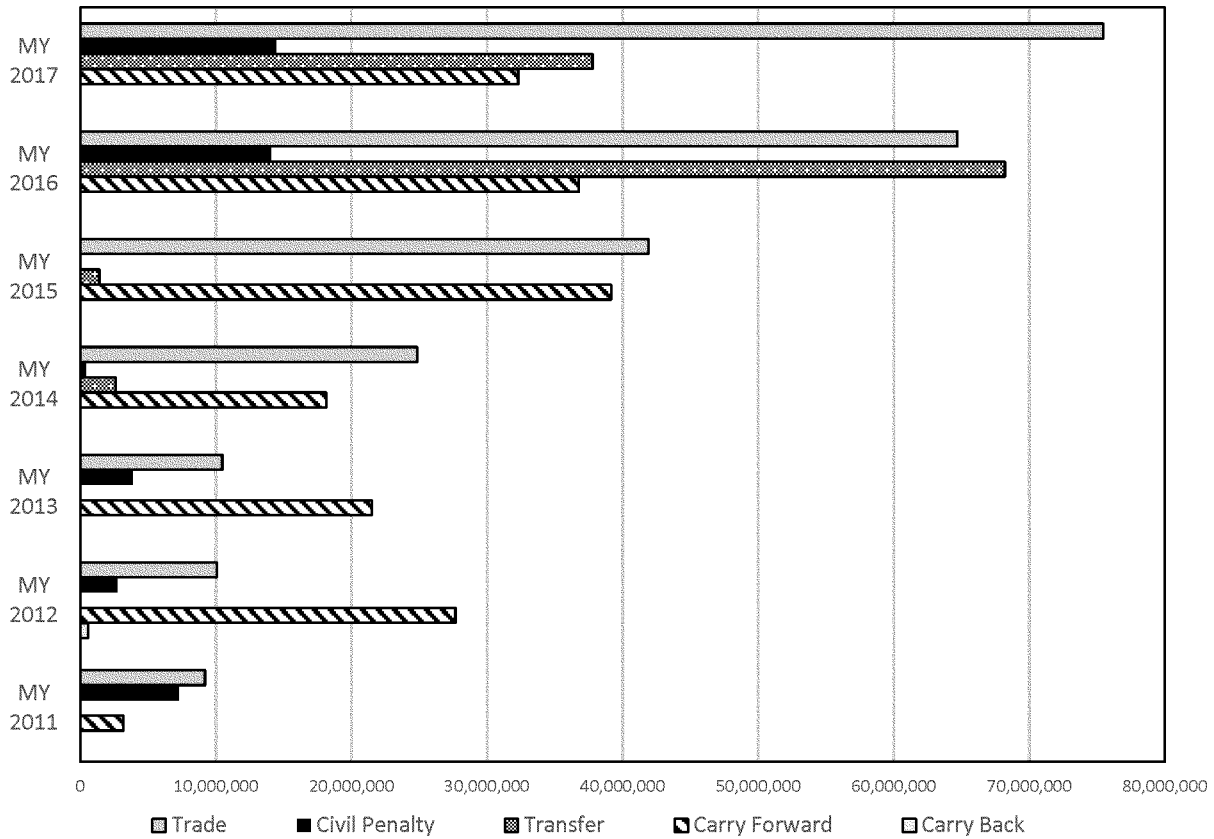


Figure VII-6 – Industry Use of Compliance Flexibilities and Civil Penalty Payments⁴⁸⁷

⁴⁸⁷ For Figure VII-6; in each year some flexibilities were not utilized by manufacturers. For

example, carry backed credits were not utilized in 2011, 2013, 2014, 2015, 2016, or 2017. Transfer

credits were not used in 2011, 2012 or 2013. No civil penalties were paid in 2015.

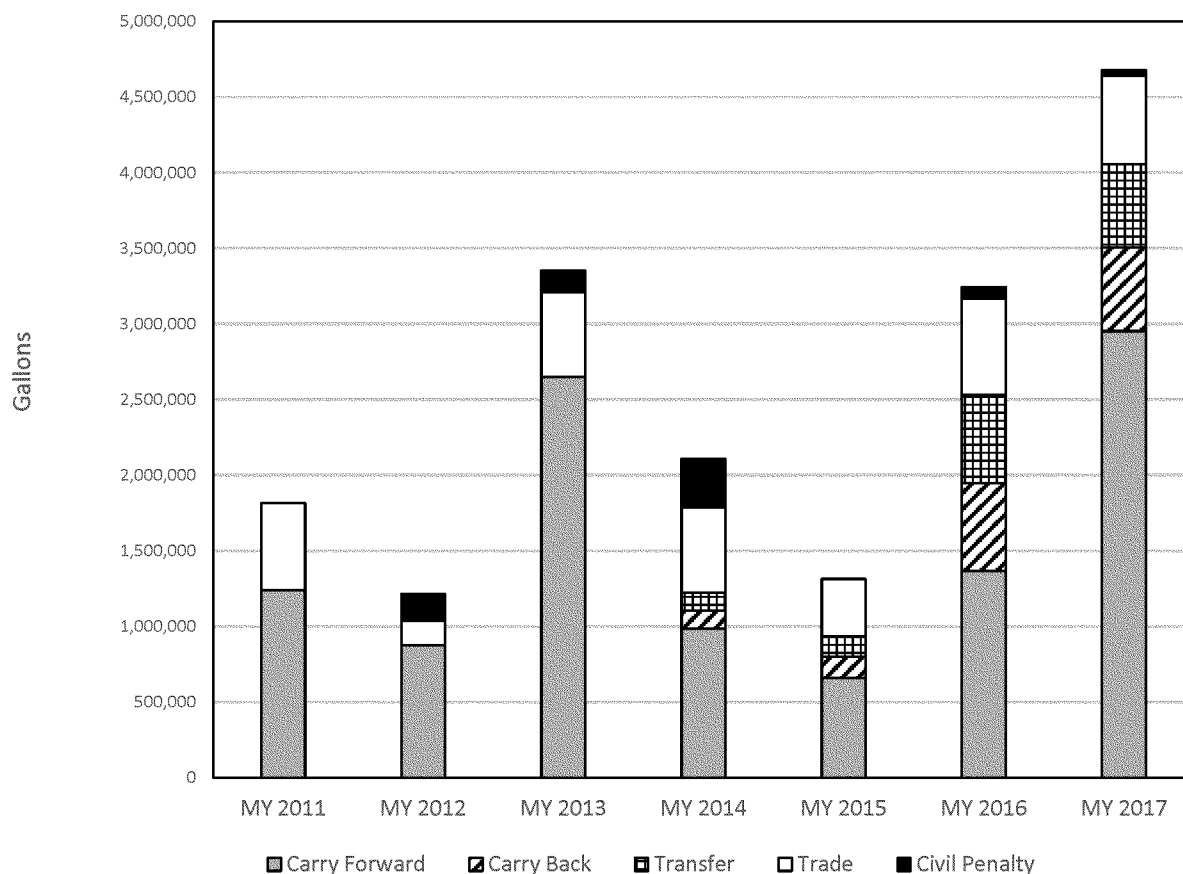


Figure VII-7 – Value of Applied Credit Flexibilities and Civil Penalty Payments in Gallons

Despite this compliance picture, NHTSA's analysis supporting this NPRM shows some amount of overcompliance in the baseline/No-Action Alternative for the model years subject to this proposal. This modeled overcompliance occurs due to assumptions about a variety of factors, including (1) a number of manufacturers voluntarily binding themselves to the California Framework Agreements, (2) expected manufacturer compliance with California's ZEV program, (3) expected manufacturer compliance with the EPA GHG and NHTSA CAFE standards finalized in 2020, (4) a small amount of market demand for increased fuel economy (due mostly to projected fuel prices), (5) the projected affordability of applying certain technologies that are eligible for compliance boosts (like off-cycle adjustments), and so on. If these assumptions do not come to pass in the real world, the difference between the compliance picture over the last several model years and the one shown in the analysis for the next several years would accordingly be smaller. Overcompliance with the regulatory alternatives is much lower than what was shown in the NPRM that preceded the 2020 final rule

and is highly manufacturer-dependent. NHTSA seeks comment on the amount of overcompliance with the regulatory alternatives shown, if any, in light of how the agency has described its modeling approach for this proposal.

5. Shift in Sales Production From Passenger Cars to Light Trucks

The apparent stagnant growth in the automotive industry's CAFE performance is likely related to a relative decrease in the share of passenger cars, where manufacturers made the most gains in fuel economy performance combined with an increase in the relative share of light trucks purchased beginning with MY 2013. Light trucks experienced sharp increases in sales, increasing by a total of 5 percent from MYs 2013 to 2014. In MY 2014, light trucks comprised approximately 41 percent of the total sales production volume of automobiles and has continued to grow ever since. In comparison, for model year 2014, domestic passenger cars represented 36 percent of the total fleet and import passenger cars represented 23 percent. Both domestic and import passenger car sales have continued to fall every year

since MY 2013. Figure VII-8 shows the sales production volumes of light trucks and domestic and import passenger cars for MYs 2004 to 2020. Historically, light truck fleets have fallen below their associated CAFE standards and have had larger performance shortages than either import and domestic passenger car fleets. For MY 2020, NHTSA expects even greater CAFE performance shortages in the light truck and import passenger car fleets than in prior model years, based upon manufacturer's mid-model year (MMY) reports. MY 2020 light trucks are expected to comprise approximately 53 percent of the total. As mentioned previously, the combined effect of these fuel economy shortages will likely require manufacturers to rely on compliance flexibilities or pay civil penalties.

Out of 25 vehicle types listed in the EPA database, 5 vehicle types—namely compact cars, midsize cars, small and standard SUVs with 4WD, and standard pickup trucks with 4WD have the highest volumes of vehicles produced for sale in MYs 2012 to 2017. From 2012 to 2020, there was a drastic decrease of 24% and 17% in the production of compact cars and midsize cars,

respectively. On the other side, there was a significant increase in the production of 4WD small and standard equaling approximately 41% collectively of all sales. Standard pickup trucks with 4WD experienced little change in the production volume throughout the years. As shown in Figure VII-9, small SUVs, with 4WD and 2WD drivetrains, have surpassed the sales production volumes of all

other vehicle types over these the given model years. The number of small and standard SUVs sold in the U.S. for MY 2017 nearly doubled compared to sales in the U.S. for MY 2012. During that same period, passenger car sales production as a total of vehicle sales production decreased by approximately 11 percent. The combination of low gas prices and the increased utility that SUVs provide, along with aggressive

manufacturer marketing, may explain the shift in sales production. Nonetheless, if the sales of these small SUVs and pickup trucks continue to increase, there may be continued stagnation in the CAFE performance of the overall fleet unless manufacturers respond with greater adoption of fuel economy technology in the SUV and pickup truck portion of their fleets.

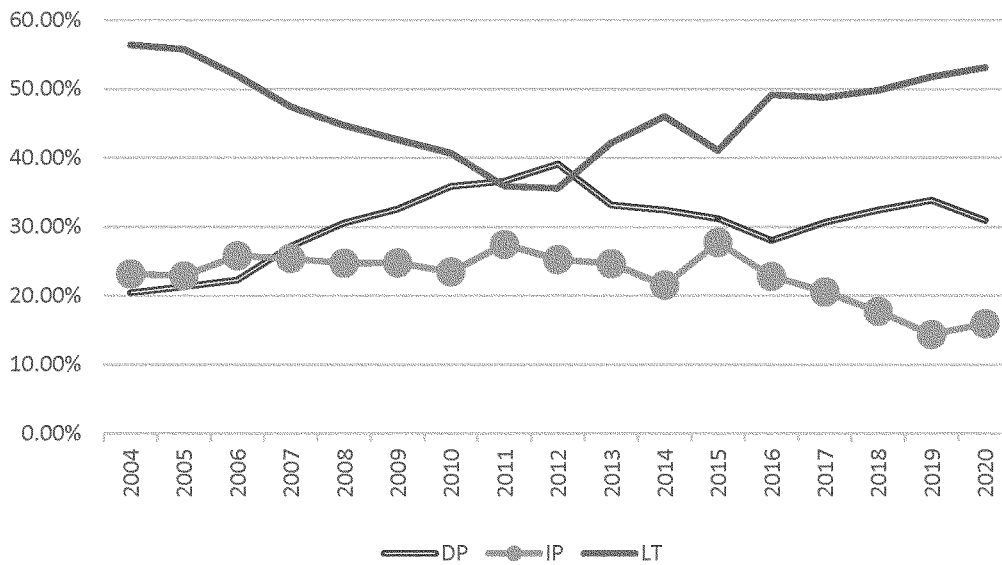


Figure VII-8 – Sales Production Volumes for MYs 2004 to 2020

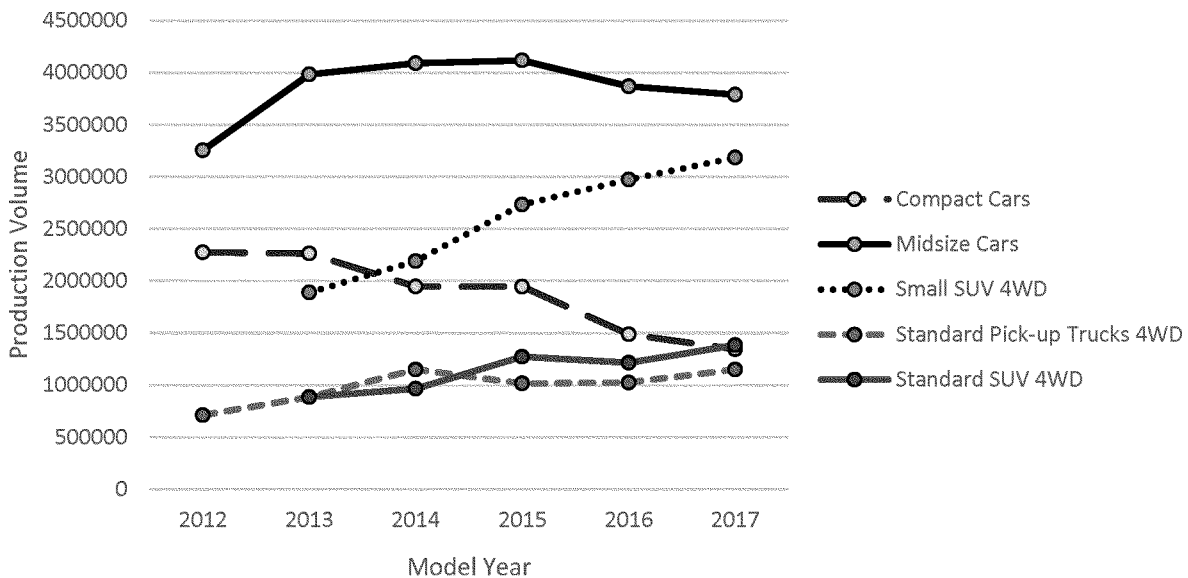


Figure VII-9 – Change in Major Vehicle Type Production from 2012-2017

6. Electrification

According to data submitted to EPA and NHTSA for MYs 2012 through 2017, the population of electrified

vehicles in the passenger car fleet has steadily increased. The percentage of petroleum-based passenger cars in the market has decreased. While the

nominal amount of electric light trucks has increased, the percentage of electric light trucks has decreased due to petroleum-based light trucks growing at

a faster rate. All electric passenger cars account for up to 3 percent of the total production of light-duty vehicles each year. In comparison, all electric light trucks account for about 0.2 percent of

the total fleet each year. The number of passenger cars using alternative fuels has also steadily increased while the population of alternative fuel light trucks has become non-existent.

However, comparing the total fleet, the population of electric and hybrid vehicles is steadily increasing each year on average.

Table VII-6 – Production Volumes by Fuel Usage for MYs 2012 to 2017^{488,489,490,491}

PV number		2012	2013	2014	2015	2016	2017
Petroleum	PC	8,200,856	9,120,467	8,718,892	9,095,073	8,627,914	8,375,973
Flexible Fuel Vehicle	PC	3,307	514	746	372	845	3,521
Electricity/Hybrid	PC	453,447	624,584	486,844	505,846	365,314	614,755
Petroleum	LT	4,770,297	5,428,215	6,283,680	7,115,971	7,211,930	7,928,617
Flexible Fuel Vehicle	LT	216	82	337	0	0	0
Electricity/Hybrid	LT	18,061	23,300	22,216	21,561	65,278	97,980
PV percentage		2012	2013	2014	2015	2016	2017
Petroleum	PC	60.99%	60.01%	56.20%	54.34%	53.03%	49.21%
Alternative	PC	0.02%	0.00%	0.00%	0.00%	0.01%	0.02%
Electricity/Hybrid	PC	3.37%	4.11%	3.14%	3.02%	2.25%	3.61%
Petroleum	LT	35.48%	35.72%	40.51%	42.51%	44.32%	46.58%
Flexible Fuel Vehicle	LT	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Electricity/Hybrid	LT	0.13%	0.15%	0.14%	0.13%	0.40%	0.58%
PV percentage		2012	2013	2014	2015	2016	2017
Petroleum	Total	96.47%	95.73%	96.71%	96.85%	97.35%	95.79%
Flexible Fuel Vehicle	Total	0.03%	0.00%	0.01%	0.00%	0.01%	0.02%
Electricity/Hybrid	Total	3.51%	4.26%	3.28%	3.15%	2.65%	4.19%

Despite the small market share currently for electric and hybrid trucks, manufacturers are making a strong effort to grow this market. Starting in 2020, several manufacturers introduced several new models of hybrid and PEV SUVs and crossovers.

NHTSA is considering new CAFE compliance strategies for electric pickup trucks in this rulemaking. EPA and NHTSA previously provided

⁴⁸⁸ 49 U.S. Code 538 discusses Flexible Fuel Vehicle.

⁴⁸⁹ Definition of Electricity/Hybrids can be found in 49 U.S. Code 523.2.

⁴⁹⁰ If the fuel type is marked as Hybrid, for this table the vehicles are automatically counted as Hybrid no matter what type of fuel category they have. Flexible Fuel Vehicle is everything else except where the fuel type is gasoline and electric/hybrid.

⁴⁹¹ Complete data is only available through MY 2017.

flexibilities for hybrid and electric pickup trucks adopted under the 2017–2025 CAFE and GHG final rule issued in 2012. These flexibilities would have provided manufacturers with an incentive through MY 2025 to build additional electric pickup trucks but in the 2020 final rule, NHTSA and EPA decided to terminate these incentives early. Further discussion of NHTSA’s and EPA’s incentive programs for hybrid and electric pickup trucks is presented in Section B.3.e)(1). As a part of the section, a new proposal is also included for EPA and NHTSA to reconsider extending the incentives for pickup trucks back to their original effective date ending in MY 2025.

7. Vehicle Classification

Vehicle classification, for purposes of the light-duty CAFE program, refers to

whether an automobile qualifies as a passenger automobile (car) or a non-passenger automobile (light truck). Passenger cars and light trucks are subject to different fuel economy standards as required by EPCA/EISA and consistent with their different capabilities.

Vehicles are designated as either passenger automobiles or non-passenger automobiles. Vehicles “capable of off-highway operation” are, by statute, non-passenger automobiles.⁴⁹² Determining “off-highway operation” was left to NHTSA, and currently is a two-part inquiry: First, does the vehicle either have 4-wheel drive or over 6,000 pounds gross vehicle weight rating (GVWR), and second, does the vehicle have a significant feature designed for

⁴⁹² 49 U.S. Code 32902.

off-highway operation.⁴⁹³ NHTSA's regulation on vehicle classification contain requirements for vehicles to be classified as light trucks either on the basis of off-highway capability or on the basis of having "truck-like characteristics." Over time, NHTSA has refined the light truck vehicle classification by revising its regulations and issuing legal interpretations. However, based on the increase in crossover SUVs and advancements in vehicle design trends, NHTSA has become aware of vehicle designs that complicate classification determinations for the CAFE program. Throughout the past decade, NHTSA has identified these changes in compliance testing, data analysis, and has discussed the trend in rulemakings, publications, and with stakeholders.

NHTSA believes that an objective procedure for classifying vehicles is paramount to the agency's continued oversight of the CAFE program. When there is uncertainty as to how vehicles should be classified, inconsistency in determining manufacturers' compliance obligations can result, which is detrimental to the predictability and fairness of the program. In the 2020 final rule, NHTSA attempted to resolve several classification issues and committed to continuing research to resolve others. NHTSA notified the public of its plans to develop a compliance test procedure for verifying manufacturers' submitted classification data. An objective standard would help avoid manufacturers having to reclassify their vehicles, improve consistency and fairness across the industry, and introduce areas within the criteria where uncertainties existed and research could be conducted in the near future to resolve.

In this rulemaking, NHTSA is providing additional classification guidance and seeking comments on several unknown aspects needed to develop its compliance test procedure. Based upon the comments received to this NPRM, NHTSA plans to release its draft test procedure later this year. No changes are being made in this rulemaking that will change how vehicles are classified.

(a) Clarifications for Classifications Based Upon "Off-Road Capability"

For a vehicle to qualify as off-highway (off-road) capable, in addition to either having 4WD or a GVWR more than 6,000 pounds. The vehicle must have four out of five characteristics indicative of off-highway operation. These characteristics are:

- An approach angle of not less than 28 degrees
- A breakover angle of not less than 14 degrees
- A departure angle of not less than 20 degrees
- A running clearance of not less than 20 centimeters
- Front and rear axle clearances of not less than 18 centimeters each

(1) Production Measurements

NHTSA's regulations require manufacturers to measure vehicle characteristics when a vehicle is at its curb weight, on a level surface, with the front wheels parallel to the automobile's longitudinal centerline, and the tires inflated to the manufacturer's recommended cold inflation pressure.⁴⁹⁴ NHTSA clarified in the 2020 final rule that 49 CFR part 537 requires manufacturers to classify vehicles for CAFE based upon their physical production characteristics. The agency verifies reported values by measuring production vehicles. Manufacturers must also use physical vehicle measurements as the basis for values reported to the agency for purposes of vehicle classification. It may be possible for certain vehicles within a model type to qualify as light trucks while others would not because of their production differences. Since issuing the 2020 final rule, NHTSA has met with manufacturers to reinforce the use of production measurements and clarifying here that manufacturers are only required to report classification information for those physical measurements used for qualification and can omit other measurements.

In the previous rulemaking, NHTSA also identified that certain vehicle designs incorporate rigid (*i.e.*, inflexible) air dams, valance panels, exhaust pipes, and other components, equipped as manufacturers' standard or optional equipment (*e.g.*, running boards and towing hitches), that likely do not meet the 20-centimeter running clearance requirement. Despite these rigid features, some manufacturers are not taking these components into consideration when making classification decisions. Additionally, other manufacturers provide dimensions for their base vehicles without considering optional or various trim level components that may reduce the vehicle's ground clearance. Consistent with our approach to other measurements, NHTSA believes that ground clearance, as well as all the other off-highway criteria for a light truck determination, should use the

measurements from vehicles with all standard and optional equipment installed, at the time vehicles are shipped to dealerships. These views were shared by manufacturers in response to the previous CAFE rulemaking.

The agency reiterates that the characteristics listed in 49 CFR 523.5(b)(2) are characteristics indicative of off-highway capability. A fixed feature—such as an air dam that does not flex and return to its original state or an exhaust that could detach—inherently interferes with the off-highway capability of these vehicles. If manufacturers seek to classify vehicles as light trucks under 49 CFR 523.5(b)(2) and the vehicles have a production feature that does not meet the four remaining characteristics to demonstrate off-highway capability, they must be classified as passenger cars. NHTSA also clarifies that vehicles that have adjustable ride height, such as air suspension, and permit variable on-road or off-road running clearances should be classified based upon the mode most commonly used or the off-road mode for those with this feature. NHTSA seeks comments on how to define the mode most commonly used for any adjustable suspensions. For the test procedure, would it be more appropriate to allow manufacturers to define the mode setting for vehicles with adjustable suspensions?

(2) Testing for Approach, Breakover, and Departure Angles

Approach angle, breakover angle, and departure angle are relevant to determine off-highway capability. Large approach and departure angles ensure the front and rear bumpers and valance panels have sufficient clearance for obstacle avoidance while driving off-road. The breakover angle ensures sufficient body clearance from rocks and other objects located between the front and rear wheels while traversing rough terrain. Both the approach and departure angles are derived from a line tangent to the front (or rear) tire static loaded radius arc extending from the ground near the center of the tire patch to the lowest contact point on the front or rear of the vehicle. The term "static loaded radius arc" is based upon the definitions in SAE J1100 and J1544.⁴⁹⁵ The term is defined as the distance from wheel axis of rotation to the supporting surface (ground) at a given load of the vehicle and stated inflation pressure of

⁴⁹³ 49 U.S. Code 523.5(A)(5)(ii)(b).

⁴⁹⁴ 49 U.S. Code 523.5(A)(5).

⁴⁹⁵ See SAE J1100 published on May 26, 2012 and SAE J1544 published on Oct 25, 2011.

the tire (manufacturer's recommended cold inflation pressure).

The static loaded radius arc is easy to measure, but the imaginary line tangent to the static loaded radius arc is difficult to ascertain in the field. The approach and departure angles are the angles between the line tangent to the static loaded radius arc and the level ground on which the test vehicle rests. For the compliance test procedure, a substitute measurement will be used. A measurement that provides a good approximation of the approach and departure angles involve using a line tangent to the outside diameter or perimeter of the tire and extends to the lowest contact point on the front or rear of the vehicle. This approach provides an angle slightly greater than the angle derived from the true static loaded radius arc. The approach also has the advantage to allow measurements to be made quickly for measuring angles in the field to verify data submitted by the manufacturers used to determine light truck classification decisions. In order to comply, the vehicle measurement must be equal to or greater than the required measurements to be considered as compliant and if not, the reported value will require an investigation which could lead to the manufacturer's vehicle becoming reclassified as a passenger car.

(3) Running Clearance

NHTSA regulations define "running clearance" as "the distance from the surface on which an automobile is standing to the lowest point on the automobile, excluding unsprung weight." Unsprung weight includes the components (*e.g.*, suspension, wheels, axles, and other components directly connected to the wheels and axles) that are connected and translate with the wheels. Sprung weight, on the other hand, includes all components fixed underneath the vehicle that translate with the vehicle body (*e.g.*, mufflers and subframes). To clarify these requirements, NHTSA previously issued a letter of interpretation stating that certain parts of a vehicle—such as tire aero deflectors that are made of flexible plastic, bend without breaking, and return to their original position—would not count against the 20-centimeter running clearance requirement. The agency explained that this does not mean a vehicle with less than 20 centimeters running clearance could be elevated by an upward force that bends the deflectors and still be considered compliant with the running clearance criterion, as it would be inconsistent with the conditions listed in the introductory paragraph of 49 CFR

523.5(b)(2). Further, NHTSA explained that without a flexible component installed, the vehicle must meet the 20-centimeter running clearance requirement along its entire underside. This 20-centimeter clearance is required for all sprung weight components. For its compliance test procedure, NHTSA will include a list of the all the components under the vehicle considered as unsprung components. NHTSA will update the list of unsprung components as the need arises.

(4) Front and Rear Axle Clearance

NHTSA regulations state that front and rear axle clearances of not less than 18 centimeters are another criterion that can be used for designating a vehicle as off-highway capable.⁴⁹⁶ The agency defines "axle clearance" as the vertical distance from the level surface on which an automobile is standing to the lowest point on the axle differential of the automobile.

The agency believes this definition may be outdated because of vehicle design changes, including axle system components and independent front and rear suspension components. In the past, traditional light trucks with and without 4WD systems had solid rear axles with center-mounted differential on the axle. For these trucks, the rear axle differential was closer to the ground than any other axle or suspension system component. This traditional axle design still exists today for some trucks with a solid chassis (also known as body-on-frame configuration). Today, however, many SUVs and CUVs that qualify as light trucks are constructed with a unibody frame and have unsprung (*e.g.*, control arms, tie rods, ball joints, struts, shocks, etc.) and sprung components (*e.g.*, the axle subframes) connected together as a part of the axle assembly. These unsprung and sprung components are located under the axles, making them lower to the ground than the axles and the differential, and were not contemplated when NHTSA established the definition and the allowable clearance for axles. The definition also did not originally account for 2WD vehicles with GVWRs greater than 6,000 pounds that had one axle without a differential, such as the model year 2018 Ford Expedition. Vehicles with axle components that are low enough to interfere with the vehicle's ability to perform off-road would seem inconsistent with the regulation's intent of ensuring off-highway capability.

In light of these issues, for the compliance test procedure, NHTSA will

ask manufacturers to identify those axle components that are sprung or unsprung and provide sufficient justification as a part of the testing setup request forms sent to manufacturers before testing. In addition, for vehicles without a differential, NHTSA will request the location each manufacturer used to establish its axle clearance qualification. NHTSA will validate the location specified by the manufacturer but will challenge any location on the vehicle's axle found to be located at a lower elevation to the ground than the designed location of its axle clearance measurement.

(5) 49 CFR 571.3 MPV Definition

The definition for multipurpose passenger vehicle (MPV) is defined as a "a motor vehicle with motive power, except a low-speed vehicle or trailer, designed to carry 10 persons or less which is constructed either on a truck chassis or with special features for occasional off-road operation."⁴⁹⁷ The regulation is silent, however, in defining special features for occasional off-road operation are qualified. In a letter of interpretation dated May 31, 1979, the agency responded to a question from Subaru requesting the agency's opinion whether a four-wheel drive hatchback sedan could be classified as an MPV. NHTSA responded stating that the agency interprets the definition as requiring that the vehicle contain more than a single feature designed for off-road use and that four-wheel drive would be useful in snow on public streets, roads and highways, so this feature cannot be determinative of the vehicle's classification if there are no features for off-road use. The interpretation also stated that Subaru needed to provide additional information (including, but not limited to, pictures or drawings of the vehicle) concerning other special features of the vehicle that would make it suitable for off-road operation. Finally, the interpretation referenced 49 CFR 523.5(b)(2) for a description of some of the characteristics that would be considered "special features" for off-road operation although that section relates primarily related to fuel economy. Considering that the definition for MPVs does not list the "special features," NHTSA is seeking comment on whether manufacturers use "special features" other than those in 49 CFR 523.5(b)(2) to qualify vehicles as MPVs. Should NHTSA link the definition of MPV in 49 CFR 571.3 (as it relates to special features for occasional off-road operation) to 49 CFR

⁴⁹⁶ 49 U.S. Code 523.5(b)(2).

⁴⁹⁷ 49 CFR 571.3.

523.5(b)(2)? What drawbacks exist in linking both provisions? Using the longstanding off-road features for fuel economy provides could clarify the means for certifying that a vehicle meets the definition for MPV in 571.3 when manufacturers may otherwise be uncertain as to how to classify a vehicle.

B. Complying With the NHTSA CAFE Program

1. Annual Compliance Process

Manufacturers' production decisions drive the mixture of automobiles on the road. Manufacturers largely produce a mixture of vehicles both to influence and meet consumer demand and address compliance with CAFE standards through the application of fuel economy improving technologies to those vehicles, and by using compliance flexibilities and incentives that are available in the CAFE program. As discussed earlier in this NPRM, each vehicle manufacturer is subject to separate CAFE standards for passenger cars and light trucks, and for the passenger car standards, a manufacturer's domestically-manufactured and imported passenger car fleets are required to comply separately.⁴⁹⁸ Additionally, domestically-manufactured passenger cars are subject to a statutory minimum standard. Some CAFE program flexibilities are described by statute. Other flexibilities are established by NHTSA through regulation in accordance with the EPCA and EISA, such as fuel economy improvements for air conditioning efficiency, off-cycle, and pickup truck advanced technologies that are not expressly specified by CAFE statute, but are implemented consistent with EPCA's provisions regarding the calculation of fuel economy authorized for EPA.

Compliance with the CAFE program begins each year with manufacturers submitting required reports to NHTSA in advance and during the model year that contain information, specifications, data, and projections about their fleets.⁴⁹⁹ Manufacturers report early product projections to NHTSA describing their efforts to comply with CAFE standards per EPCA's reporting requirements.⁵⁰⁰ Manufacturers' early projections are required to identify any of the flexibilities and incentives manufacturers plan to use for air-conditioning (A/C) efficiency, off-cycle and, through MY 2021, which this action proposes to extend through MY

2026, full-size pickup truck advanced technologies. EPA consults with NHTSA when reviewing and considering manufacturers' requests for fuel consumption improvement values for A/C and off-cycle technologies that improve fuel economy. NHTSA evaluates and monitors the performance of the industry using compliance data. NHTSA also audits manufacturers' projected data for conformance and verifies vehicle conformance through measurements (e.g., vehicle footprints) to ensure manufacturers are complying. After the model year ends, manufacturers submit final reports to EPA, that include final information on all the flexibilities and incentives allowed or approved for the given model year.⁵⁰¹ EPA then verifies manufacturers' reported information and values and calculates the final fuel economy level of each fleet produced by each manufacturer, and transmits that information to NHTSA.⁵⁰²

In previous years, the normal processes for CAFE compliance between NHTSA and EPA have been effective at administering the CAFE program for decades. EPA sends NHTSA its final CAFE results usually between November to December after the given model year. In recent years, this process has been disrupted by manufacturers submitting requests for A/C and off-cycle benefits during the model year and at times well after the end of the model year. As EPA cannot finalize CAFE results until all A/C and off-cycle credits for a model year are accounted for, the belated submissions have significantly delayed NHTSA receiving final CAFE results for many manufacturers. Late submissions place significant burdens on the agencies and complicate administering the CAFE program, including delaying the exchange and use of credits. In the following sections, NHTSA discusses the adverse impacts on the CAFE program resulting from late and retro-active A/C and off-cycle requests and proposes regulatory modifications to mitigate late submissions and help expedite processes for future off-cycle requests.

⁵⁰¹ For example, alternative fueled vehicles get special calculations under EPCA (49 U.S.C. 32905–06), and fuel economy levels can also be adjusted to reflect air conditioning efficiency and “off-cycle” improvements.

⁵⁰² 49 U.S.C. 32904(c)–(e). EPCA granted EPA authority to establish fuel economy testing and calculation procedures; EPA uses a two-year early certification process to qualify manufacturers to start selling vehicles, coordinates manufacturer testing throughout the model year, and validates manufacturer-submitted final test results after the close of the model year.

After receiving EPA's final reports, NHTSA completes the remainder of its compliance processes for manufacturers usually one to three months after receiving EPA's final reports. The process starts with NHTSA using EPA's final verified information to determine the CAFE standard for each of the manufacturer's fleets, and each fleet's compliance level. Those results are then used to determine credits, credit shortfalls and credit balances, and NHTSA sends letters to manufacturers stating the outcome of that assessment. Credit shortfall letters specify the obligated credit deficiency a manufacturer must resolve to comply with the applicable CAFE standard for the given model year. Credit balance letters specify the official balance of credits NHTSA has allotted to the manufacturer in each of its credit accounts and a ledger of the credit transactions the manufacturer has executed. Upon receipt of NHTSA's compliance letters, manufacturers are required to submit plans explaining how they plan to resolve any shortfalls. NHTSA periodically releases data and reports to the public through its CAFE Public Information Center (PIC) based on information in the EPA final reports for the given compliance model year and based on the projections manufacturers provide to NHTSA for the next two model years.⁵⁰³

Some flexibilities are defined, and sometimes limited by statute—for example, while Congress allowed manufacturers to transfer credits earned for over-compliance from their car fleet to their truck fleet and vice versa, Congress also limited the amount by which manufacturers could increase their CAFE levels using those transfers.⁵⁰⁴ Consistent with the limits Congress placed on certain statutory flexibilities and incentives, NHTSA crafted and implemented credit transfer and trading regulations authorized by EISA ensure that total fuel savings are preserved when manufacturers exercise statutory compliance flexibilities required by statute.

NHTSA and EPA have previously developed other compliance flexibilities and incentives for the CAFE program consistent with the statutory provisions regarding EPA's calculation of manufacturers' fuel economy levels. As discussed previously, NHTSA finalized in the 2012 final rule an approach for manufacturers' “credits” under EPA's program to be applied as fuel economy

⁵⁰³ The NHTSA Public Information Center (PIC) is located at https://one.nhtsa.gov/cape_pic/CAFE_PIC_Home.htm.

⁵⁰⁴ See 49 U.S.C. 32903(g).

⁴⁹⁸ 49 U.S.C. 32904(b).

⁴⁹⁹ 49 U.S.C. 32907(a); 49 CFR 537.7.

⁵⁰⁰ 49 U.S.C. 32907(a).

“adjustments” or “improvement values” under NHTSA’s program for: (1) Technologies that cannot be measured or cannot be fully measured on the 2-cycle test procedure, *i.e.*, “off-cycle” technologies; and (2) A/C efficiency improvements that also improve fuel economy but cannot be measured on the 2-cycle test procedure. Additionally, both agencies’ programs give manufacturers compliance incentives through MY 2021, and proposed to be extended to MY 2026 in this NPRM, for utilizing specified technologies on full-size pickup trucks, such as hybridization, or full-size pickup trucks that overperform their fuel economy stringency target values by greater than a specified amount.

The following sections outline how NHTSA determines whether manufacturers are in compliance with CAFE standards for each model year, and how manufacturers may use compliance flexibilities, or alternatively address noncompliance through civil penalties. Moreover, it explains how manufacturers submit data and information to the agency. This includes a detailed discussion of NHTSA’s standardized CAFE reporting template adopted as a part of the 2020 final rule, and the standardized template for reporting credit transactions. In the 2020 final rule, NHTSA also adopted requirements for manufacturers to provide information on terms of credit trades. In this rulemaking, NHTSA is proposing to make changes to its reporting and credit templates and to issue a new template to clarify the required reporting information for credit trades. These new requirements were intended to streamline reporting and data collection from manufacturers, in addition to helping the agency use the best available data to inform CAFE program decision makers.

2. How does NHTSA determine compliance?

(a) Manufacturers Submit Data to NHTSA and EPA and the Agencies Validate Results

EPCA, as amended by EISA, in 49 U.S.C. 32907, requires manufacturers to submit reports to the Secretary of Transportation explaining how they will comply with the CAFE standards for the model year for which the report is made; the actions a manufacturer has taken or intends to take to comply with the standard; and other information the Secretary requires by regulation.⁵⁰⁵ A manufacturer must submit a report containing this information during the

30-day period before the beginning of each model year, and during the 30-day period beginning the 180th day of the model year.⁵⁰⁶ When a manufacturer determines it is unlikely to comply with a CAFE standard, the manufacturer must report additional actions it intends to take to comply and include a statement about whether those actions are sufficient to ensure compliance.⁵⁰⁷

To implement these reporting requirements, NHTSA issued 49 CFR part 537, “Automotive Fuel Economy Reports,” which specifies three types of CAFE reports that manufacturers must submit.⁵⁰⁸ A manufacturer must first submit a pre-model year (PMY) report containing the manufacturer’s projected compliance information for that upcoming model year. By regulation, the PMY report must be submitted in December of the calendar year prior to the corresponding model year.⁵⁰⁹ Manufacturers must then submit a mid-model year (MMY) report containing updated information from manufacturers based upon actual and projected information known midway through the model year. By regulation, the MMY report must be submitted by the end of July for the applicable model year.⁵¹⁰ Finally, manufacturers must submit a supplementary report to supplement or correct previously submitted information, as specified in NHTSA’s regulation.⁵¹¹

If a manufacturer wishes to request confidential treatment for a CAFE report, it must submit both a confidential and redacted version of the report to NHTSA. CAFE reports submitted to NHTSA contain estimated sales production information, which may be protected as confidential until the termination of the production period for that model year.⁵¹² NHTSA protects each manufacturer’s competitive sales production strategies for 12 months, but does not permanently exclude sales production information from public disclosure. Sales production volumes are part of the information NHTSA routinely makes publicly available through the CAFE PIC.

The manufacturer reports provide information on light-duty automobiles such as projected and actual fuel economy standards, fuel economy performance, and production volumes, as well as information on vehicle design features (*e.g.*, engine displacement and

transmission class) and other vehicle attribute characteristics (*e.g.*, track width, wheelbase, and other off-road features for light trucks). Beginning with MY 2017, to obtain credit for fuel economy improvement values attributable to additional technologies, manufacturers must also provide information regarding A/C systems with improved efficiency, off-cycle technologies (*e.g.*, stop-start systems, high-efficiency lighting, active engine warm-up), and full-size pickup trucks with hybrid technologies or with fuel economy performance that is better than footprint-based targets by specified amounts. This includes identifying the makes and model types equipped with each technology, the compliance category those vehicles belong to, and the associated fuel economy improvement value for each technology.⁵¹³ In some cases, NHTSA may require manufacturers to provide supplementary information to justify or explain the benefits of these technologies and their impact on fuel consumption or to evaluate the safety implication of the technologies. These details are necessary to facilitate NHTSA’s technical analyses and to ensure the agency can perform enforcement audits as appropriate.

NHTSA uses manufacturer-submitted PMY, MMY, and supplementary reports to assist in auditing manufacturer compliance data and identifying potential compliance issues as early as possible. Additionally, as part of its footprint validation program, NHTSA conducts vehicle testing throughout the model year to confirm the accuracy of the track width and wheelbase measurements submitted in the reports.⁵¹⁴ These tests help the agency better understand how manufacturers may adjust vehicle characteristics to change a vehicle’s footprint measurement, and ultimately its fuel economy target. NHTSA also includes a summary of manufacturers’ PMY and MMY data in an annual fuel economy performance report made publicly available on its PIC.

As mentioned, NHTSA uses EPA-verified final-model year (FMY) data to evaluate manufacturers’ compliance with CAFE program requirements and draw conclusions about the performance of the industry. After

⁵¹³ NHTSA collects model type information based upon the EPA definition for “model type” in 40 CFR 600.002.

⁵¹⁴ U.S. Department of Transportation, NHTSA, Laboratory Test Procedure for 49 CFR part 537, Automobile Fuel Economy Attribute Measurements (Mar. 30, 2009), available at <http://www.nhtsa.gov/DOC/NHTSA/Vehicle%20Safety/Test%20Procedures/Associated%20Files/TP-537-01.pdf>.

⁵⁰⁶ *Id.*

⁵⁰⁷ *Id.*

⁵⁰⁸ See 47 FR 34986, Aug. 12, 1982.

⁵⁰⁹ 49 CFR 537.5(b).

⁵¹⁰ *Id.*

⁵¹¹ 49 CFR 537.8.

⁵¹² 49 CFR part 512, appx. B(2).

⁵⁰⁵ 49 U.S.C. 32907(a).

manufacturers submit their FMY data, EPA verifies the information, accounting for NHTSA and EPA testing, and subsequently forwards the final verified data to NHTSA.

(b) New CAFE Reporting Templates Adopted in the 2020 Final Rule

NHTSA adopted changes to its CAFE reporting requirements in the 2020 final rule with the intent of streamlining data collection and reporting for manufacturers while helping the agency obtain the best available data to inform CAFE program decision-makers. The agency adopted two new standardized reporting templates for manufacturers. NHTSA's goal was to adopt standardized templates to assist manufacturers in providing the agency with all the necessary data to ensure they comply with CAFE regulations.

The first template was designed for manufacturers to simplify reporting CAFE credit transactions starting in model year 2021. The template's purpose was to reduce the burden on credit account holders, encourage compliance, and facilitate quicker NHTSA credit transaction approval. Before the template, manufacturers would inconsistently submit information required by 49 CFR 536.8, creating difficulties in processing credit transactions. Using the template simplifies CAFE compliance aspects of the credit trading process and helps to ensure that trading parties follow the requirements for a credit transaction in 49 CFR 536.8(a).⁵¹⁵

The second template was designed to standardize reporting for CAFE PMY and MMY information, as specified in 49 CFR 537.7(b) and (c), as well as supplementary information required by 49 CFR 537.8. The template organizes the required data in a manner consistent with NHTSA and EPA regulations and simplifies the reporting process by incorporating standardized responses consistent with those provided to EPA. The template collects the relevant data, calculates intermediate and final values in accordance with EPA and NHTSA methodologies, and aggregates all the final values required by NHTSA regulations in a single summary worksheet. Thus, NHTSA believes that the standardized templates will benefit both the agency and manufacturers by helping to avoid reporting errors, such as data omissions and miscalculations, and will ultimately simplify and streamline reporting. Manufacturers are required to use the standardized

template for all PMY, MMY, and supplementary CAFE reports starting in MY 2023. The template also allowed manufacturers to enter information to generate the required confidential versions of CAFE reports specified in 49 CFR part 537 and to produce automatically the required non-confidential versions by clicking a button within the template.

The standardized CAFE reporting templates were made available on the NHTSA website and through the DOT docket. Since then, manufacturers have downloaded the templates and met with NHTSA to share recommendations for changes, such as allowing the PMY and MMY reporting templates to accommodate different types of alternative fueled vehicles and to clarify and correct the methods for calculating CAFE values. The proposed changes are discussed in the following sections. NHTSA plans to host a series of workshops to implement the templates and to provide an open dialogue for manufacturers to identify any further problems and seek clarifications. NHTSA plans to announce the workshops through the **Federal Register** later this year.

(1) Changes to the CAFE Reporting Template

The changes to the CAFE Reporting Template include several general improvements made to simply the use and the effectiveness for manufacturers. These include, but are not limited to; wording changes, corrections to calculations and codes, and auto-populating fields previously requiring manual entry.

More specifically, NHTSA is proposing to modify the CAFE Reporting Template by adding filters and sorting functions to help manufacturers connect the data definitions to the location of each of the required data fields in the template. Additional information from other parts of the CAFE Reporting Template would be pulled forward to display on the summary tab. For the information that must be included pursuant to 49 CFR 537.7(b)(2), manufacturers can also compare the values the template calculates to their own internally calculated CAFE values. Additionally, we are proposing to expand the CAFE Reporting Template to include more of the required information regarding vehicle classification, and guidance provided to ease manufacturers reporting burden by having them report only the data used for each vehicle's qualification pathway ignoring other possible light truck classification information.

NHTSA is also proposing that the CAFE Reporting Template be modified to combine the footprint attribute information and model type sub-configuration data for the purposes of matching. NHTSA uses this information to match test data directly to fuel economy footprint values for the purposes of modeling fuel economy standards. Features were added to auto-populate redundant information from one worksheet to another. The data gathered and the formulas coded within the proposed worksheets have also been updated for the calculation of fuel economy based on 40 CFR 600.510–12. The changes to the data and formulas will allow data to more accurately represent the fuel economy of electric and other vehicles using alternative fuels. NHTSA considers this information critically important to forming a more complete picture of the performances of dual fuel and alternative fuel vehicles.

We are also proposing several corrections so that manufacturers will submit CAFE data at each of the different sub-configuration levels they test and will combine CO₂ and fuel economy data. As mentioned, manufacturers test approximately 90-percent of their vehicles within each model type. Each sub-configuration variant within a model type has a unique CO₂ and CAFE value. Manufacturers combine other vehicles at the configuration, base level and then finally at the model type level for determining CAFE performance. The CAFE performance data for the sub-configurations have been added to the proposed template. NHTSA determined that this level of data was needed to verify manufacturers reported CAFE values.

Finally, we are proposing corrections to the CAFE Reporting Template to collect information on off-cycle technologies. The proposed changes match the format of the data with the EPA off-cycle database system. For example, manufacturers report to EPA high efficiency lighting as combination packages, so NHTSA is proposing to change its form to reflect this same level of information.

Version 2.21 of the template is available on NHTSA's Public Information Center (PIC) site.

(2) Credit Transactions Reporting Template

NHTSA established mandatory use of the CAFE credit template starting on January 1, 2021. However, manufacturers identified several calculation errors in the version of the credit reporting template available on

⁵¹⁵ Submitting a properly completed template and accompanying transaction letter will satisfy the trading requirements in 49 CFR part 536.

the PIC site. Those calculation errors have been corrected and a new version of the template is available for download on the NHTSA PIC. Starting January 1, 2022, NHTSA will only accept its credit template as the sole source for executing CAFE credit transactions. Until that time, manufacturers can deviate from the generated language in the NHTSA credit trade confirmation by adding qualifications but, at a minimum, must include the core information generated by the template.

(3) Monetary and Non-Monetary Credit Trade Information

Credit trading became permissible in MY 2011.⁵¹⁶ To date, NHTSA has received numerous credit trades from entities, but has only made limited information publicly available.⁵¹⁷ As discussed earlier, NHTSA maintains an online CAFE database with manufacturer and fleetwide compliance information that includes year-by-year accounting of credit balances for each credit holder. While NHTSA maintains this database, the agency's regulations currently state that it will not publish information on individual transactions, and NHTSA has not previously required trading entities to submit information regarding the compensation (whether financial, or other items of value) exchanged for credits.^{518 519} Thus, NHTSA's PIC offers sparse information to those looking to determine the value of a credit.

The lack of information regarding credit transactions means entities wishing to trade credits have little, if any, information to determine the value of the credits they seek to buy or sell. Historically we have assumed that the civil penalty for noncompliance with CAFE standards largely determines the upper value of a credit, because it is logical to assume that manufacturers would not purchase credits if it cost less to pay civil penalties instead, but it is unknown how other factors affect the value. For example, a credit nearing the end of its five-model-year lifespan would theoretically be worth less than a credit within its full five-model-year lifespan. In the latter case, the credit holder would likely value the credit

more, as it can be used for compliance purposes for a longer period of time.

NHTSA adopted requirements in the 2020 final rule requiring manufacturers to submit all credit trade contracts, including cost and transactional information, to the agency starting January 1, 2021. NHTSA also adopted requirements allowing manufacturers to submit the information confidentially, in accordance with 49 CFR part 512.⁵²⁰ As stated in the final rule, NHTSA intended to use this information to determine the true cost of compliance for all manufacturers. This information would allow NHTSA to better assess the impact of its regulations on the industry and provide more insightful information in developing future rulemakings. This confidential information would be held by secure electronic means in NHTSA's database systems. As for public information, NHTSA would include more information on the PIC on aggregated credit transactions, such as the combined flexibilities all manufacturers used for compliance as shown in Figure VII-6, or information comparable to the credit information EPA makes available to the public. In the future, NHTSA will consider what information, if any, can be meaningfully shared with the public on credit transactional details or costs, while accounting for the concerns raised by the automotive industry for protecting manufacturers' competitive sources of information.

However, manufacturers continue to argue that disclosing trading terms may not be as simple as a spot purchase at a given price. As stated in the 2020 final rule, manufacturers contend a number of transactions for both CAFE and CO₂ credits involve a range of complexity due to numerous factors that are reflective of the marketplace, such as the volume of credits, compliance category, credit expiration date, a seller's compliance strategy, and even the CAFE penalty rate in effect at that time. In addition, automakers have a range of partnerships and cooperative agreements with their own competitors. Credit transactions can be an offshoot of these broader relationships, and difficult to price separately and independently.

Since then, NHTSA has identified a series of non-monetary factors that it believes to be important to the costs associated with credit trading in the CAFE program.⁵²¹ The agency believes this information will allow for a better

assessment of the true costs of compliance. NHTSA further notes that greater government oversight is needed over the CAFE credit market and it needs to understand the full range of complexity in transactions, monetary and non-monetary, in addition to the range of partnerships and cooperative agreements between credit account holders—which may impact the price of credit trades.⁵²² Therefore, using the identified series of non-monetary factors, NHTSA has developed a new CAFE Credit Reporting Template (Form 1621) for capturing the monetary and non-monetary terms of credit trading contracts. NHTSA proposes that manufacturers start using the new template starting September 1, 2022. The draft template can be viewed and downloaded from the NHTSA PIC site.

3. What compliance flexibilities and incentives are currently available under the CAFE program and how do manufacturers use them?

Generating, trading, transferring, and applying CAFE credits is governed by statute.⁵²³ Program credits are generated when a vehicle manufacturer's fleet over-complies with its standard for a given model year, meaning its vehicle fleet achieved a higher corporate average fuel economy value than the amount required by the CAFE program for that fleet in that model year. Conversely, if the fleet average CAFE level does not meet the standard, the fleet incurs debits (also referred to as a shortfall or deficit). A manufacturer whose fleet generates a credit shortfall in a given model year can resolve its shortfall using any one or combination of several credits flexibilities, including credit carryback, credit carry-forward, credit transfers, and credit trades, and if all credit flexibilities have been exhausted, then the manufacturer must resolve its shortfall by making civil penalty payments.⁵²⁴

NHTSA has also promulgated compliance flexibilities and incentives consistent with EPCA's provisions regarding calculation of fuel economy levels for individual vehicles and for fleets.⁵²⁵ These compliance flexibilities and incentives, which were first adopted in the 2012 rule for MYs 2017 and later, include A/C efficiency improvement and off-cycle adjustments,

⁵¹⁶ 49 CFR 536.6(c).

⁵¹⁷ Manufacturers may generate credits, but non-manufacturers may also hold or trade credits. Thus, the word "entities" is used to refer to those that may be a party to a credit transaction.

⁵¹⁸ 49 CFR 536.5(e)(1).

⁵¹⁹ NHTSA understands that not all credits are exchanged for monetary compensation. The proposal that NHTSA is adopting in this proposed rule requires entities to report compensation exchanged for credits and is not limited to reporting monetary compensation.

⁵²⁰ See also 49 U.S.C. 32910(c).

⁵²¹ UCS, Detailed Comments, NHTSA-2018-0067-12039; Jason Schwartz, Detailed Comments, NHTSA-2018-0067-12162.

⁵²² Honda, Detailed Comments, NHTSA-2018-0067-11819.

⁵²³ 49 U.S.C. 32903.

⁵²⁴ Manufacturers may elect to pay civil penalties rather than utilizing credit flexibilities at their discretion. For purposes of the analysis, we assume that manufacturers will only pay penalties when all flexibilities have been exhausted.

⁵²⁵ 49 U.S.C. 32904.

and adjustments for advanced technologies in full-size pickup trucks, including adjustments for mild and strong hybrid electric full-size pickup trucks and performance-based incentives in full-size pickup trucks. The fuel consumption improvement benefits of these technologies measured by various testing methods can be used by manufacturers to increase the CAFE performance of their fleets.

(a) Available Credit Flexibilities

Under NHTSA regulations, credit holders (including, but not limited to manufacturers) have credit accounts with NHTSA where they can, hold credits, and use them to achieve compliance with CAFE standards, by carrying forward, carrying back, or transferring credits across compliance categories, subject to several restrictions. Manufacturers with excess credits in their accounts can also trade credits to other manufacturers, who may use those credits to resolve a shortfall currently or in a future model year. A credit may also be cancelled before its expiration date if the credit holder so chooses. Traded and transferred credits are subject to an “adjustment factor” to ensure total oil savings are preserved.⁵²⁶

Credit “carryback” means that manufacturers are able to use recently earned credits to offset a deficit that had accrued in a prior model year, while credit “carry-forward” means that manufacturers can bank credits and use them towards compliance in future model years. EPCA, as amended by EISA, allows manufacturers to carryback credits for up to three model years, and to carry-forward credits for up to five model years.⁵²⁷ Credits expire the model year after which the credits may no longer be used to achieve compliance with fuel economy regulations.⁵²⁸ Manufacturers seeking to use carryback credits must submit a carryback plan to NHTSA, for NHTSA’s review and approval, demonstrating their ability to earn sufficient credits in future MYs that can be carried back to resolve the current MY’s credit shortfall.

Credit “trading” refers to the ability of manufacturers or persons to sell credits to, or purchase credits from, one another while credit “transfer” means the ability to transfer credit between a manufacturer’s compliance fleets to resolve a credit shortfall. EISA gave NHTSA discretion to establish by regulation a CAFE credit trading program, to allow credits to be traded between vehicle manufacturers, now

codified at 49 CFR part 536.⁵²⁹ EISA prohibits manufacturers from using traded credits to meet the minimum domestic passenger car CAFE standard.⁵³⁰

(b) Fuel Savings Adjustment Factor

Under NHTSA’s credit trading regulations, a fuel savings adjustment factor is applied when trading occurs between manufacturers and those credits are used, or when a manufacturer transfers credits between its compliance fleets and those credits are used, but not when a manufacturer carries credits forward or backwards within the same fleet.⁵³¹

NHTSA is including in this proposal a restoration of certain definitions that are part of the adjustment factor equation that had been inadvertently deleted in the 2020 final rule. The 2020 final rule had intended to add a sentence to the adjustment factor term in 49 CFR 536.4(c), simply to make clear that the figure should be rounded to four decimal places. While the 2020 final rule implemented this change, the amendatory instruction for doing so unintentionally deleted several other definitions from that paragraph. NHTSA had not intended to modify or delete those definitions, so they are simply being added back into the paragraph.

(c) VMT Estimates for Fuel Savings Adjustment Factor

NHTSA uses VMT estimates as part of its fuel savings adjustment equation. Including VMT is important as fuel consumption is directly related to vehicle use, and in order to ensure trading credits between fleets preserves oil savings, VMT must be considered.⁵³² For MYs 2017 and later, NHTSA finalized VMT values of 195,264 miles for passenger car credits, and 225,865 miles for light truck credits.⁵³³

(d) Fuel Economy Calculations for Dual and Alternative Fueled Vehicles

As discussed at length in prior rulemakings, EPCA, as amended by EISA, encouraged manufacturers to build alternative-fueled and dual- (or flexible-) fueled vehicles by providing special fuel economy calculations for “dedicated” (that is, 100 percent) alternative fueled vehicles and “dual-fueled” (that is, capable of running on either the alternative fuel or gasoline/diesel) vehicles.

Dedicated alternative-fuel automobiles include electric, fuel cell, and compressed natural gas vehicles, among others. The statutory provisions for dedicated alternative fuel vehicles in 49 U.S.C. 32905(a) state that the fuel economy of any dedicated automobile manufactured after MY 1992 shall be measured “based on the fuel content of the alternative fuel used to operate the automobile. A gallon of liquid alternative fuel used to operate a dedicated automobile is deemed to contain 0.15 gallon of fuel.” There are no limits or phase-out for this special fuel economy calculation within the statute.

EPCA’s statutory incentive for dual-fueled vehicles at 49 U.S.C. 32906 and the measurement methodology for dual-fueled vehicles at 49 U.S.C. 32905(b) and (d) expired after MY 2019. In the 2012 final rule, NHTSA and EPA concluded that it would be inappropriate and contrary to the intent of EPCA/EISA to measure dual-fueled vehicles’ fuel economy like that of conventional gasoline vehicles with no recognition of their alternative fuel capability. The agencies determined that for MY 2020 and later vehicles, the general statutory provisions authorizing EPA to establish testing and calculation procedures provide discretion to set the CAFE calculation procedures for those vehicles. The methodology for EPA’s approach is outlined in the 2012 final rule for MYs 2017 and later at 77 FR 63128 (Oct. 15, 2012).

(e) Flexibilities for Air-Conditioning Efficiency, Off-Cycle Technologies, and Full-Size Pickup Trucks

(1) Incentives for Advanced Technologies in Full-Size Pickup Trucks

Under its EPCA authority for CAFE and under its CAA authority for GHGs, EPA established fuel consumption improvement values (FCIVs) for manufacturers that hybridize a significant quantity of their full-size pickup trucks, or that use other technologies that significantly reduce fuel consumption of these full-sized pickup trucks. More specifically, CAFE FCIVs were made available to manufacturers that produce full-size pickup trucks with Mild HEV or Strong HEV technology, provided the percentage of production with the technology is greater than specified percentages.⁵³⁴ In addition, CAFE FCIVs were made available for manufacturers that produce full-size pickups with other technologies that enable full-size

⁵²⁹ 49 U.S.C. 32903(f).

⁵³⁰ 49 U.S.C. 32903(f)(2).

⁵³¹ See Section III.C for details about carry forward and back credits.

⁵³² See 49 CFR 536.4(c).

⁵³³ 77 FR 63130 (Oct. 15, 2012).

⁵³⁴ 77 FR 62651 (Oct. 15, 2012).

⁵²⁶ See Section VII.B.3.b) for details.

⁵²⁷ 49 U.S.C. 32903(a).

⁵²⁸ 49 CFR 536.3(b).

pickup trucks to exceed their CAFE targets based on footprints by specified amounts (*i.e.*, electric vehicles and other electric components).⁵³⁵ These performance-based incentives create a technology-neutral path (as opposed to the other technology-encouraging path) to achieve the CAFE FCIVs, which would encourage the development and application of new technological approaches.

Large pickup trucks represent a significant portion of the overall light duty vehicle fleet and generally have higher levels of fuel consumption and GHG emissions than most other light duty vehicles. Improvements in the fuel economy and GHG emissions of these vehicles can have significant impact on the overall light-duty fleet fuel use and GHG emissions. NHTSA believes that offering incentives could encourage the deployment of technologies that can significantly improve the efficiency of these vehicles and that also will foster production of those technologies at levels that will help achieve economies of scale, would promote greater fuel savings overall and make these technologies more cost effective and available in the future model years to assist in compliance with CAFE standards.

EPA and NHTSA also established limits on the eligibility for these pickup trucks to qualify for incentives. A truck was required to meet minimum criteria for bed size and towing or payload capacities and meet minimum production thresholds (in terms of a percentage of a manufacturer's full-size pickup truck fleet) in order to qualify for these incentives. Under the provisions, Mild HEVs are eligible for a per-vehicle CO₂ credit of 10 g/mi (equivalent to 0.0011 gallon/mile for a gasoline-fueled truck) during MYs 2017–2021. To be eligible a manufacturer would have to show that the Mild HEV technology is utilized in a specified portion of its truck fleet beginning with at least 20 percent of a company's full-size pickup production in MY 2017 and ramping up to at least 80 percent in MY 2021. Strong HEV pickup trucks are eligible for a 20 g/mi credit (0.0023 gallon/mile) during MYs 2017–2021, and in this rulemaking proposed to be extended through MY 2026, if the technology is used on at least 10 percent of a company's full-size pickups in that model year. EPA and NHTSA also adopted specific definitions for Mild and Strong HEV pickup trucks, based on energy flow to the high-voltage battery during testing.

Furthermore, to incentivize other technologies that can provide significant reductions in GHG emissions and fuel consumption for full-size pickup trucks, EPA also adopted, a performance-based fuel consumption improvement value for full-size pickup trucks. Eligible pickup trucks certified as performing 15 percent better than their applicable CO₂ target receive a 10 g/mi credit (0.0011 gallon/mile), and those certified as performing 20 percent better than their target receive a 20 g/mi credit (0.0023 gallon/mile). The 10 g/mi performance-based credit is available for MYs 2017 to 2021 and, once qualifying; a vehicle model will continue to receive the credit through MY 2021, provided its CO₂ emissions level does not increase. To be eligible a manufacturer would have to show that the technology is utilized in a specified portion of its truck fleet beginning with at least 20 percent of a company's full-size pickup production in MY 2017 and ramping up to at least 80 percent in MY 2021. The 20 g/mi performance-based credit was available for a vehicle model for a maximum of 5 years within the 2017 to 2021 model year period, and in this rulemaking proposed to be extended through MY 2026, provided its CO₂ emissions level does not increase. To be eligible, the technology must be applied to at least 10 percent of a company's full-size pickups in for the model year.

The agencies designed a definition for full-size pickup truck based on minimum bed size and hauling capability, as detailed in 40 CFR 86.1866–12(e). This definition ensured that the larger pickup trucks, which provide significant utility with respect to bed access and payload and towing capacities, are captured by the definition, while smaller pickup trucks with more limited capacities are not covered. A full-size pickup truck is defined as meeting requirements (1) and (2) below, as well as either requirement (3) or (4) below.

(1) Bed Width—The vehicle must have an open cargo box with a minimum width between the wheelhouses of 48 inches. And—

(2) Bed Length—The length of the open cargo box must be at least 60 inches. And—

(3) Towing Capability—the gross combined weight rating (GCWR) minus the gross vehicle weight rating (GVWR) must be at least 5,000 pounds. Or—

(4) Payload Capability—the GVWR minus the curb weight (as defined in 40 CFR 86.1803) must be at least 1,700 pounds.

In the 2020 CAFE rule, the agencies ended the incentives for full-size pickup trucks after the end of model year 2021

believing expanded incentives would likely not result in any further emissions benefits or fuel economy improvements since an increase in sales volume was unanticipated. At the time, no manufacturer had qualified to use the full-size pickup truck incentives since they went into effect in MY 2017. One vehicle manufacturer introduced a mild hybrid pickup truck in MY 2019 but was ineligible for the FCIV because it did not meet the minimum production threshold. Other manufacturers had announced potential collaborations or started designing future hybrid or electric models, but none were expected to meet production requirements within the time period of eligibility for these incentives.

Since the 2020 final rule, many manufacturers have publicly announced several new model types of full-size electric pickup trucks starting in MY 2022. NHTSA notes that historically its goal has always been to promote electric vehicles due to their exceptional fuel saving benefits. For this reason, even given the discontinuation in MY 2019 of AMFA incentives for dual fueled vehicles, NHTSA retained its benefits for alternative dedicated fueled vehicles to focus on the growth of electric vehicles in the market. Therefore, after the careful consideration of this new information and the potential role incentives could play in increasing the production of these technologies, and the associated beneficial impacts on fuel consumption, the agency is proposing to extend the full-size pickup truck incentive through MY 2025 for strong hybrids and for full-size pickup trucks performing 20-percent better than their target. Also, understanding the importance of electric vehicles in the market, NHTSA is proposing to allow manufacturers to combine both the incentives for alternative fueled vehicles and full-size pickup trucks FCIVs when complying with the CAFE program.

(2) Flexibilities for Air Conditioning Efficiency

A/C systems are virtually standard automotive accessories, and more than 95 percent of new cars and light trucks sold in the U.S. are equipped with mobile A/C systems. A/C system usage places a load on an engine, which results in additional fuel consumption; the high penetration rate of A/C systems throughout the light-duty vehicle fleet means that more efficient systems can significantly impact the total energy consumed. A/C systems also have non-CO₂ emissions associated with

⁵³⁵ *Id.*

refrigerant leakage.⁵³⁶ Manufacturers can improve the efficiency of A/C systems though redesigned and refined A/C system components and controls.⁵³⁷ That said, such improvements are not measurable or recognized using 2-cycle test procedures since A/C is turned off during 2-cycle testing. Any A/C system efficiency improvements that reduce load on the engine and improve fuel economy is therefore not measurable on those tests.

The CAFE program includes flexibilities to account for the real-world fuel economy improvements associated with improved A/C systems and to include the improvements for compliance.⁵³⁸ The total A/C efficiency credits is calculated by summing the individual credit values for each efficiency improving technology used on a vehicle, as specified in the A/C credit menu. The total A/C efficiency credit sum for each vehicle is capped at 5.0 grams/mile for cars and 7.2 grams/mile for trucks. Additionally, the off-cycle credit program contains credit earning opportunities for technologies that reduce the thermal loads on a vehicle from environmental conditions (solar loads or parked interior air temperature).⁵³⁹ These technologies are listed on a thermal control menu that provides a predefined improvement value for each technology. If a vehicle has more than one thermal load improvement technology, the improvement values are added together, but subject to a cap of 3.0 grams/mile for cars and 4.3 grams/mile for trucks. Under its EPCA authority for CAFE, EPA calculates equivalent FCIVs and applies them for the calculation of manufacturer's fleet CAFE values. Manufacturers seeking credits beyond the regulated caps must request the added benefit for A/C technology under the off-cycle program discussed in the

⁵³⁶ Notably, manufacturers cannot claim CAFE-related benefits for reducing A/C leakage or switching to an A/C refrigerant with a lower global warming potential. While these improvements reduce GHG emissions consistent with the purpose of the CAA, they generally do not impact fuel economy and, thus, are not relevant to the CAFE program.

⁵³⁷ The approach for recognizing potential A/C efficiency gains is to utilize, in most cases, existing vehicle technology/componentry, but with improved energy efficiency of the technology designs and operation. For example, most of the additional A/C-related load on an engine is because of the compressor, which pumps the refrigerant around the system loop. The less the compressor operates, the less load the compressor places on the engine resulting in less fuel consumption. Thus, optimizing compressor operation with cabin demand using more sophisticated sensors, controls, and control strategies is one path to improving the efficiency of the A/C system.

⁵³⁸ See 40 CFR 86.1868–12.

⁵³⁹ See 40 CFR 86.1869–12(b).

next section. The agency is not proposing to change its A/C efficiency flexibility and will retain its provisions in its current form.

(3) Flexibilities for Off-Cycle Technologies

“Off-cycle” technologies are those that reduce vehicle fuel consumption in the real world, but for which the fuel consumption reduction benefits cannot be fully measured under the 2-cycle test procedures (city, highway or correspondingly FTP, HFET) used to determine compliance with the fleet average standards. The cycles are effective in measuring improvements in most fuel economy improving technologies; however, they are unable to measure or underrepresent certain fuel economy improving technologies because of limitations in the test cycles. For example, off-cycle technologies that improve emissions and fuel economy at idle (such as “stop start” systems) and those technologies that improve fuel economy to the greatest extent at highway speeds (such as active grille shutters which improve aerodynamics) receive less than their real-world benefits in the 2-cycle compliance tests.

In the CAFE rule for MYs 2017–2025, EPA, in coordination with NHTSA, established regulations extending the off-cycle technology flexibility to the CAFE program starting with MY 2017. For the CAFE program, EPA calculates off-cycle fuel consumption improvement values (FCIVs) that are equivalent to the EPA CO₂ credit values, and applies them in the calculation of manufacturer's CAFE compliance values for each fleet instead of treating them as separate credits as for the EPA GHG program.

For determining benefits, EPA created three compliance pathways for the off-cycle program. The first approach allows manufacturers to gain credits using a predetermined approach or “menu” of credit values for specific off-cycle technologies which became effective starting in MY 2014 for EPA.⁵⁴⁰ This pathway allows manufacturers to use credit values established by EPA for a wide range of off-cycle technologies, with minimal or no data submittal or testing requirements.⁵⁴² Specifically, EPA

⁵⁴⁰ See 40 CFR 86.1869–12(b). The first approach requires some technologies to derive their predetermined credit values through EPA's established testing. For example, waste heat recovery technologies require manufacturers to use 5-cycle testing to determine the electrical load reduction of the waste heat recovery system.

⁵⁴¹ EPA implemented its off-cycle GHG program starting in MY 2012.

⁵⁴² The Technical Support Document (TSD) for the 2012 final rule for MYs 2017 and beyond

established a menu with a number of technologies that have real-world fuel consumption benefits not measured, or not fully measured, by the two-cycle test procedures, and those benefits were reasonably quantified by the agencies at that time. For each of the pre-approved technologies on the menu, EPA established a menu value or approach that is available without testing verifications. Manufacturers must demonstrate that they are in fact using the menu technology, but not required to submit test results to EPA to quantify the technology's effects, unless they wish to receive a credit larger than the default value. The default values for these off-cycle credits were largely determined from research, analysis, and simulations, rather than from full vehicle testing, which would have been both cost and time prohibitive. EPA generally used conservative predefined estimates to avoid any potential credit windfall.⁵⁴³

For off-cycle technologies not on the pre-defined technology list, EPA created a second pathway which allows manufacturers to use 5-cycle testing to demonstrate off-cycle improvements.⁵⁴⁴ Starting in MY 2008, EPA developed the “five-cycle” test methodology to measure fuel economy for the purpose of improving new car window stickers (labels) and giving consumers better information about the fuel economy they could expect under real-world driving conditions.⁵⁴⁵ As learned through development of the “five-cycle” methodology and prior rulemakings, there are technologies that provide real-world fuel consumption improvements,

provides technology examples and guidance with respect to the potential pathways to achieve the desired physical impact of a specific off-cycle technology from the menu and provides the foundation for the analysis justifying the credits provided by the menu. The expectation is that manufacturers will use the information in the TSD to design and implement off-cycle technologies that meet or exceed those expectations in order to achieve the real-world benefits of off-cycle technologies from the menu.

⁵⁴³ While many of the assumptions made for the analysis were conservative, others were “central.” For example, in some cases, an average vehicle was selected on which the analysis was conducted. In that case, a smaller vehicle may presumably deserve fewer credits whereas a larger vehicle may deserve more. Where the estimates are central, it would be inappropriate for the agencies to grant greater credit for larger vehicles, since this value is already balanced by smaller vehicles in the fleet. The agencies take these matters into consideration when applications are submitted for credits beyond those provided on the menu.

⁵⁴⁴ See 40 CFR 86.1869–12(c). EPA proposed a correction for the 5-cycle pathway in a separate technical amendments rulemaking. See 83 FR 49344 (Oct. 1, 2019). EPA is not approving credits based on the 5-cycle pathway pending the finalization of the technical amendments rule.

⁵⁴⁵ <https://www.epa.gov/vehicle-and-fuel-emissions-testing/dynamometer-drive-schedules>.

but those improvements are not fully reflected on the “two-cycle” test. EPA established this alternative for a manufacturer to demonstrate the benefits of off-cycle technologies using 5-cycle testing. The additional emissions test allows emission benefits to be demonstrated over some elements of real-world driving not captured by the two-cycle CO₂ compliance tests including high speeds, rapid accelerations, hot temperatures, and cold temperatures. Under this pathway, manufacturers submit test data to EPA, and EPA determines whether there is sufficient technical basis to approve the off-cycle credits. No public comment period is required for manufacturers seeking credits using the EPA menu or using 5-cycle testing.

The third pathway allows manufacturers to seek EPA review, through a notice and comment process, to use an alternative methodology other than the menu or 5-cycle methodology for determining the off-cycle technology CO₂ credits.⁵⁴⁶ Manufacturers must provide supporting data on a case-by-case basis demonstrating the benefits of the off-cycle technology on their vehicle models. Manufacturers may also use the third pathway to apply for credits and FCIVs for menu technologies where the manufacturer is able to demonstrate credits and FCIVs greater than those provided by the menu.

(a) The Off-Cycle Process

In meetings with EPA and manufacturers, NHTSA examined the processes for bringing off-cycle technologies into market. Two distinct processes were identified: (1) The manufacturer’s off-cycle pre-production process, and; (2) the manufacturer’s regulatory compliance process. During the pre-production process, the off-cycle program for most manufacturers begins as early as four to 6 years in advance of the given model year. Manufacturers’ design teams or suppliers identify technologies to develop capable of qualifying for off-cycle credits after careful considering of the possible benefits. Manufacturer then identify the opportunities for the technologies finding the most optimal condition for equipping the technology given the availability in the production cycle of either new or multiple platforms capitalizing on any commonalities to increase sales volumes and reduce costs. After establishing their new or series platform development plans, manufacturers have two processes for off-cycle technologies on the pre-defined menu list or using 5-cycle

testing and for those for which benefits are sought using the alternative approval methodology. For those on the menu list or 5-cycle testing, technologies whose credit amounts are defined by EPA regulation, manufacturers confirm that: (1) New candidate technologies meet regulatory definitions; and (2) for qualifying technologies, there is real fuel economy (FE) benefit based on good engineering judgement and/or testing. For these technologies, manufacturers conduct research and testing independently without communicating with EPA or NHTSA. For non-menu technologies, those not defined by regulation, manufacturers pre-production processes include: (1) Determining the credit amounts based on the effectiveness of the technologies; (2) developing suitable test procedures; (3) identifying any necessary studies to support effectiveness; (4) and identifying the necessary equipment or vehicle testing using good engineer judgement to confirm the vehicle platform benefits of the technology.

While for the regulatory compliance process, the first step for manufacturers begins by providing EPA with early notification in their pre-model year GHG reports (*e.g.*, 2025MY Pre-GHG are due in 2023CY) of their intention to generate any off-cycle credits in accordance with 40 CFR 600.514–12. Next, manufacturers present a brief overview of the technology concept and planned model types for their off-cycle technologies as a part of annual pre-certification meetings with EPA. Manufacturers typically hold their pre-certification meetings with EPA somewhere between September through November two years in advance of each model year. These meetings are designed to give EPA a holistic overview of manufacturers planned product offerings for the upcoming compliance model year and since 2012 information on the A/C and off-cycle programs. Thus, a manufacturer complying in the 2023 compliance model year would arrange its pre-certification meeting with EPA in September 2021 and would be required to share information on the A/C and off-cycle technologies its plans to equip during the model year. After this, manufacturers report projected information on off-cycle technologies as a part of their CAFE reports to NHTSA in accordance with 49 CFR part 537 CAFE due by December 31st before the end of the model year.

According to EPA and NHTSA regulations, eligibility to gain benefits for off-cycle technologies only require manufacturers to reporting information

in advance of the model year notifying the agencies of a manufacturer’s intent to claim credits. More specifically, manufacturers must notify EPA in their pre-model year reports, and in their applications for certification, of their intention to generate any A/C and off-cycle credits before the model year, regardless of the methodology for generating credits. Similarly, for NHTSA, manufacturers are also required to provide data in their pre-model year reports required by 49 CFR part 537 including projected information on A/C, off-cycle, and full-size pickup truck incentives. These regulations require manufacturers to report information on factors such as the approach for determining the benefit of the technology, projected production information and the planned model types for equipping the off-cycle technology.

If a manufacturer is pursuing credits for a non-menu off-cycle technology, EPA also encourages manufacturers to seek early reviews for the eligibility of a technology, the test procedure, and the model types for testing in advance of the model year. EPA emphasizes the critical importance for manufacturers to seek these reviews prior to conducting testing or any analytical work. Yet, some manufacturers have decided not to seek EPA’s early reviews which resulted in significant delays in the process as EPA has had to identify and correct multiple testing and analytical errors after the fact. Consequently, EPA’s goal is to provide approvals for manufacturers as early as possible to ensure timely processing of their credit requests. NHTSA shares the same goals and views as EPA for manufacturers submissions but to-date neither agency has created any required deadlines for these reviews. For NHTSA, its only requirement is for manufacturers to submit copies of all information sent to EPA at the same time.

The next step in the credit review process is for manufacturers to submit an analytical plan defining the required testing to derive the exact benefit of a non-menu off-cycle technology before the model year begins and then to start testing. It is noted that some manufacturers failed to seek EPA’s early reviews which delayed finalizing their analytical plans and then the start of their testing. These delays had greater impacts depending upon the required testing for the technology. For example, some manufacturers were required to conduct a four-season testing methodology lasting almost a year to evaluate the performance of a technology during all environmental conditions.

⁵⁴⁶ See 40 CFR 86.1869–12(d).

After completing testing, manufacturers are required to prepare an official application requesting a certain amount of off-cycle credits for the technology. In accordance with EPA regulations, the official application request must include final testing data, details on the methodology used to determine the off-cycle credit value, and the official benefit value requested. EPA anticipated that these submissions would be made prior to the end of the model year where the off-cycle technology was applied.

Each manufacturers' application to EPA must then undergo a public notice and comment process if the manufacturer uses a methodology to derive the benefit of a technology not previously approved by EPA. Once a methodology for a specific off-cycle technology has gone through the public notice and comment process and is approved for one manufacturer, other manufacturers may follow the same methodology to collect data on which to base their off-cycle credits. Other manufacturers are only required to submit applications citing the approved methodology, but those manufacturers must provide their own necessary test data, modeling, and calculations of credit value specific to their vehicles, and any other vehicle-specific details pursuant to that methodology, to assess an appropriate credit value. This is similar to what occurred with the advanced A/C compressor, where one manufacturer applied for credits with data collected through bench testing and vehicle testing, and subsequent to the first manufacturer being approved, other manufacturers applied for credits following the same methodology by submitting test data specific for their vehicle models. Consequently, as long as the testing is conducted using the previously-approved methodology, EPA will evaluate the credit application and issue a decision with no additional notice and comment, since the first application that established the methodology was subject to notice and comment. EPA issues a decision document regarding the manufacturer's official application upon resolution of any public comments to the its **Federal Register** notice and after consultation with NHTSA. Finally, manufacturers submit information after the model year ends on off-cycle technologies and the equipped vehicles in their final CAFE reports due by March 30th and then in their final GHG Averaging, Banking, and Trading (AB&T) reports due to EPA by April 30th.

During the 2020 rulemaking, the agencies and manufacturers both agreed that responding to petitions before the

end of a model year is beneficial to manufacturers and the government. It allows manufacturers to have a better idea of what credits they will earn, and for the government, a timely and less burdensome completion of manufacturers' end-of-the-year final compliance processes. EPA structured the A/C and off-cycle programs to make it possible to complete the processes by the end of the model year so manufacturers could submit their final reports within the required deadline—90 days after the calendar year, when CAFE final reports are due from manufacturers.⁵⁴⁷

However, at the time of the previous rulemaking, manufacturers were submitting retroactive off-cycle petitions for review causing significant delays to review and approval of novel technologies and issuances of **Federal Register** notices seeking public comments, where applicable. As a result, the agencies set a one-time allowance that ended in May 2020 for manufacturers to ask for retroactive credits or FCIVs for off-cycle technologies equipped on previously-manufactured vehicles after the model year had ended. After that time, the agencies denied manufacturers' late submissions requesting retroactive credits. However, manufacturers who properly submitted information ahead of time were allowed to make corrections to resolve inadvertent errors during or after the model year.

Both EPA and NHTSA regulations fail to include specific deadlines for manufacturers to meet in finalizing their off-cycle analytical plans or the official applications to the agencies. The agencies believed that enforcing the existing submission requirements would be the most efficient approach to expedite approvals and set aside adding any new regulatory deadlines or additional requirements in the previous rulemaking. There were also concerns to provide manufacturers with maximum flexibility and due to the uncertainties existing with the non-menu off-cycle process. However, the agencies anticipated that any timeliness problems would resolve themselves as the off-cycle program reached maturity and more manufacturers began requesting benefits for previously approved off-cycle technologies.

Despite the agencies' expectations, the lack of deadlines for test results or the official application has significantly delayed approvals for non-menu off-cycle requests. In many cases, EPA has received off-cycle non-menu application requests either late in the model year or

after the model year. This falls outside the agencies planned strategy for the off-cycle non-menu review process whereas manufacturers would seek approval and submit their official application requests either in advance of the model year or early enough in the model year to allow the agency to approve a manufacturer's credits before the end of the model year.

(b) Proposed Changes to the Off-Cycle Program

(i) Review Process

The current review process for off-cycle technologies is causing significant challenges in finalizing end-of-the-year compliance processes for the agencies. The backlog of retro-active and pending late off-cycle requests have delayed EPA from recalculating NHTSA's MY 2017 finals and from completing those for MYs 2018 and 2019. Fifty-four off-cycle non-menu requests have been submitted to EPA to date. Nineteen of the requests were submitted late and another seven apply retroactively to previous model years starting as early as model year 2015. Since these requests represent potential credits or adjustments that will influence compliance figures, CAFE final results cannot be finalized until all off-cycle requests have been disposed. These factors have so far delayed MY 2017 final CAFE compliance by 28 months, MY 2018 by 15 months, and MY 2019 by 4 months.

These late reports amount to more than just a mere accounting nuisance for the agencies; they are actively chilling the credit market. Until EPA verifies final compliance numbers, manufacturers are uncertain about either how many credits they have available to trade or, conversely, how many credits are necessary for them to cover any shortfalls.

For MY 2017, NHTSA will void manufacturers' previous credit trades pending the revised final calculations. Second, until late requests are approved, credit sellers are unable to make trades with buyers having pending approvals or credits are sold whereas the final balance of credits is unknown. Because credit trades and transfers must be adjusted for fuel savings anytime a change occurs in a manufacturer's CAFE values, the resulting earned or purchased credits must be recalculated. These recalculations are significantly burdensome on the government to administer and places an undue risk on manufacturers involved in CAFE credit trade transactions.

NHTSA met with EPA and manufacturers to better understand the process for reviewing off-cycle non-menu technologies. From these

⁵⁴⁷ 40 CFR 600.512(12).

discussions, NHTSA identified several issues that may be influencing late submissions. First, non-menu requests are becoming more complex and are requiring unique reviews. Previously approved technologies are also becoming more complex and are requiring either new testing, test procedures or have evolved beyond the definitions which at one time previously qualified them. Next, manufacturers identified the lack of standardized test procedures approved by EPA or certainty from EPA on which model types need to be tested as major sources for delays in submitting their analytical plans. In addition, manufacturers claimed there is significant uncertainty surrounding the necessary data sources to substantiate the benefit of the technology. For example, the data sources necessary to substantiate the usage rates certain technologies in the market. Testing or extrapolating test results for variations in model types can also be difficult and a source of delay. Manufacturers are typically uncertain as to what configurations within a model type must be tested and believe further guidance may be needed by EPA. Manufacturers further claim that it is challenging to coordinate the required testing identified by EPA for off-cycle in coordination with other required certification and emissions testing. Several of these issues were addressed in the 2020 final rule. In that rulemaking, the agencies stated that developing a standardized test procedure “toolbox” may not be possible due to the development of new and emerging technologies, and manufacturers’ different approaches for evaluating the benefits of the technologies. However, the agencies committed to considering additional guidance, if feasible, as the programs further matures in the review process of technologies and, if possible, identify consistent methodologies that may help manufacturers analyze off-cycle technologies.

Part of the issue is that the review process begins significantly later than the development of technology. Typically, EPA only learns about a new off-cycle technology during manufacturers’ precertification meetings, months or even years after manufacturers started to develop the technology. NHTSA seeks comments on whether opportunities exist during the initial development of off-cycle technologies for manufacturers to start discussions with the agencies to identify suitable test procedures or approval of the initial concept of a new technology.

After certification meetings, NHTSA also identified that in many cases, manufacturers do not communicate with EPA seeking approvals for their test procedures, test vehicles or credit calculations until anywhere from 3–6 months after the initial development of the technology. Delays in approving a suitable test procedure extends the manufacturers ability to perform testing or to submit its formal request for benefits until after the model year has ended. As mentioned, testing can take up to 12 months after a suitable test procedure and identifying which subconfigurations must be tested.

One manufacturer also stated that set submission deadlines are impossible, agency approvals are variable based on OEM need and reply timing is driven by the EPA. When questioned whether any deadlines could be imposed manufacturers responded believing any deadlines would need to be negotiated between the manufacturer and the government. Please comment on any drawbacks associated with negotiating and enforcing off-cycle process deadlines with manufacturers.

NHTSA is proposing to modify the eligibility requirements for non-menu off-cycle technologies in the CAFE program starting in model year 2024. Manufacturers will be required to finalize their analytical plans by December before the model years and their final official technology credit requests by September during the model year. Manufacturers will also be required to meet the proposed deadlines or be subject an enforcement action. Unless an extension is granted by NHTSA for good cause, a manufacturer will be precluded from claiming any off-menu items not timely submitted. Failure to request extensions or meet negotiated deadlines will be subject to enforcement action in compliance with 49 U.S.C. 32912(a).

To further streamline the process of reviews, NHTSA also proposes to work with EPA to create a quicker process for adding off-cycle technologies to the predetermined menu list if widely approved for multiple manufacturers. For example, the agencies added high-efficiency alternators and advanced A/C compressors to the menu allowing manufacturers to select the menu credit rather than continuing to seek credits through the public approval process. High-efficiency alternators were added to the off-cycle credits menu, and advanced A/C compressors with a variable crankcase valve were added to the menu for A/C efficiency credits. The credit levels are based on data previously submitted by multiple manufacturers through the off-cycle

credits application process. The high efficiency alternator credit is scalable with efficiency, providing an increasing credit value of 0.16 grams/mile CO₂ per percent improvement as the efficiency of the alternator increases above a baseline level of 67 percent efficiency. The advanced A/C compressor credit value is 1.1 grams/mile for both cars and light trucks.⁵⁴⁸

(ii) Safety Assessment

In the 2016 heavy-duty fuel economy rule (81 FR 73478, October 25, 2016), NHTSA adopted provisions preventing manufacturers from receiving credits for technology that impair safety—whether due to a defect, negatively affecting a FMVSS, or other safety reasons.⁵⁴⁹ Additionally, NHTSA clarified that technologies that do not provide fuel savings as intended will also be stripped of credits. To harmonize the light-duty and heavy-duty off-cycle programs, NHTSA is proposing to adopt these provisions for the light-duty CAFE program. While the agency encourages fuel economy innovations, safety remains NHTSA’s primary mission and any technology applied for CAFE-purposes should not impair safety. Furthermore, adopting these requirements for the light-duty fleet will harmonize it with the heavy-duty regulations.

(iii) Menu Credit Cap

Due to the uncertainties associated with combining menu technologies and the fact that some uncertainty is introduced because off-cycle credits are provided based on a general assessment of off-cycle performance, as opposed to testing on the individual vehicle models, EPA established caps that limit the amount of credits a manufacturer may generate using the EPA menu list. Off-cycle technology is capped at 10 grams/mile per year on a combined car and truck fleet-wide average basis. In its concurrent proposal for MYs 2023–2026 GHG standards (86 FR 43726, August 10, 2021), EPA is proposing to increase the off-cycle menu cap from 10 grams CO₂/mile to 15 grams CO₂/mile beginning with MY 2023. EPA also proposes to revise the definitions for passive cabin ventilation and active engine and transmission warm-up beginning in MY 2023, as discussed in the next following sections. Furthermore, EPA is proposing, for MYs

⁵⁴⁸ For additional details regarding the derivation of these credits, see EPA’s Memorandum to Docket EPA–HQ–OAR–2018–0283 (“Potential Off-cycle Menu Credit Levels and Definitions for High Efficiency Alternators and Advanced Air Conditioning Compressors”).

⁵⁴⁹ See 49 CFR 535.7(f)(2)(iii).

2020–2022, to allow manufacturers to use the cap of 15 g/mi if the revised definitions are met for these technologies. NHTSA is proposing to adopt these same provisions for the CAFE programs as a part of this rulemaking. No caps were established for technologies gaining credits through the petitioning or 5-cycle approval methodologies and the agency is not proposing to add caps in these areas.

(iv) Proposal To Update the Menu Technology Definitions

(a) Passive Cabin Ventilation

Some manufacturers have claimed off-cycle credits for passive ventilation cabin technologies based on the addition of software logic to their HVAC system that sets the dash vent to the open position when the power to vehicle is turned off at higher ambient temperatures. The manufacturers have indicated that the opening of the vent allows for the flow of ambient temperature air into the cabin. While ensuring that the interior of the vehicle is open for flow into the cabin, by only opening the dash vent no other action is taken to improve the flow of heated air out of the vehicle. This technology relies on the pressure in the cabin to reach a sufficient level for the heated air in the interior to flow out through body leaks or the body exhausters open and vent heated air out of the cabin.

The credits for passive cabin ventilation were determined based on an National Renewable Energy Laboratory (NREL) study that strategically opened a sunroof to allow for the unrestricted flow of heated air to exit the interior of the vehicle while combined with additional floor openings to provide a minimally restricted entry for cooler ambient air to enter the cabin.⁵⁵⁰ The modifications NREL performed on the vehicle reduced the flow restrictions for both heated cabin air to exit the vehicle and cooler ambient air to enter the vehicle, creating a convective airflow path through the vehicle cabin.

Analytical studies performed by manufacturers to evaluate the performance of the open dash vent demonstrate that while the dash vent may allow for additional airflow of ambient temperature air entering the cabin, it does not reduce the existing restrictions on heated cabin air exiting the vehicle. Opening the dash vent primarily relies on body leaks and

occasional venting of the heated cabin air through the body exhausters for the higher temperature cabin air to be vented from the vehicle. While this does provide some reduction in cabin temperatures this technology is not as effective as the combination of vents used by the NREL researchers to allow additional ambient temperature air to enter the cabin and also to reduce the restriction of heated air exiting the cabin.

As noted in the Joint Technical Support Document: Final Rulemaking for 2017–2025 Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards,⁵⁵¹ pg. 584, “For passive ventilation technologies, such as opening of windows and/or sunroofs and use of floor vents to supply fresh air to the cabin (which enhances convective airflow), (1.7 grams/mile for LDVs and 2.3 grams/mile for LDTs) a cabin air temperature reduction of 5.7 °C can be realized.” The passive cabin ventilation credit values were based on achieving the 5.7 °C cabin temperature reduction.

EPA and NHTSA have decided to revise the passive cabin ventilation definition to make it consistent with the technology used to generate the credit value. NHTSA supports EPA’s proposal to revise the definition of passive cabin ventilation to only include methods which create and maintain convective airflow through the body’s cabin by opening windows or a sunroof, or equivalent means of creating and maintaining convective airflow, when the vehicle is parked outside in direct sunlight.

Current systems claiming the passive ventilation credit by opening the dash vent would no longer meet the updated definition. Manufacturers seeking to claim credits for the open dash vent system will be eligible to petition the agency for credits for this technology using the alternative EPA approved method outlined in § 86.1869–12(d).

(b) Active Engine and Transmission Warmup

NHTSA, in coordination with EPA, is proposing to revise the menu definitions of active engine and transmission warm-up to no longer allow systems that capture heat from the coolant circulating in the engine block prior to the opening of the thermostat to qualify for the Active Engine and Active Transmission warm-up menu credits.

The agency would allow credit for coolant systems that capture heat from a liquid-cooled exhaust manifold if the system is segregated from the coolant loop in the engine block. The agency would also allow system design that captures and routes waste heat from the exhaust to the engine or transmission as this was the basis for these two credits as originally proposed in the NPRM to the 2017 to 2025 GHG rulemaking (76 FR 74854, Dec. 1, 2011).

Manufacturers seeking to utilize their existing systems that capture coolant heat before the engine is fully warmed-up and transfer this heat to the engine oil and transmission fluid would remain eligible to seek credits through the alternative method application process outlined in § 86.1869–12(d). These technologies may provide some benefit, however, as noted above as these system designs remove heat that is needed to warmup the engine may be less effective than those that capture and utilize exhaust waste heat.

VIII. Public Participation

NHTSA requests comments on all aspects of this NPRM. This section describes how you can participate in this process.

How do I prepare and submit comments?

Your comments must be written and in English.⁵⁵² To ensure that your comments are correctly filed in the docket, please include the docket number NHTSA–2021–0053 in your comments. Your comments must not be more than 15 pages long.⁵⁵³ NHTSA established this limit to encourage you to write your primary comments in a concise fashion. However, you may attach necessary additional documents to your comments, and there is no limit on the length of the attachments. If you are submitting comments electronically as a PDF (Adobe) file, we ask that the documents please be scanned using the Optical Character Recognition (OCR) process, thus allowing NHTSA to search and copy certain portions of your submissions.⁵⁵⁴ Please note that pursuant to the Data Quality Act, in order for substantive data to be relied upon and used by the agency, it must meet the information quality standards set forth in the OMB and DOT Data Quality Act guidelines. Accordingly, we encourage you to consult the guidelines in preparing your comments. OMB’s

⁵⁵⁰ Rugh, J., Chaney, L., Lustbader, J., and Meyer, J., “Reduction in Vehicle Temperatures and Fuel Use from Cabin Ventilation, Solar-Reflective Paint, and a New Solar-Reflective Glazing,” SAE Technical Paper 2007–01–1194, 2007.

⁵⁵¹ “Final Rulemaking for 2017–2025 Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards” August 2012. NHTSA and EPA. https://www.nhtsa.gov/sites/nhtsa.gov/files/joint_final_tsd.pdf. Last Accessed June 6, 2021.

⁵⁵² 49 CFR 553.21.

⁵⁵³ *Id.*

⁵⁵⁴ Optical character recognition (OCR) is the process of converting an image of text, such as a scanned paper document or electronic fax file, into computer-editable text.

guidelines may be accessed at <https://www.gpo.gov/fdsys/pkg/FR-2002-02-22/pdf/R2-59.pdf>. DOT's guidelines may be accessed at <https://www.transportation.gov/dot-information-dissemination-quality-guidelines>.

Tips for Preparing Your Comments

When submitting comments, please remember to:

- Identify the rulemaking by docket number and other identifying information (subject heading, **Federal Register** date and page number).
- Explain why you agree or disagree, suggest alternatives, and substitute language for your requested changes.
- Describe any assumptions and provide any technical information and/or data that you used.
- If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.
- Provide specific examples to illustrate your concerns and suggest alternatives.
- Explain your views as clearly as possible, avoiding the use of profanity or personal threats.
- Make sure to submit your comments by the comment period deadline identified in the **DATES** section above.

How can I be sure that my comments were received?

If you submit your comments to NHTSA's docket by mail and wish DOT Docket Management to notify you upon receipt of your comments, please enclose a self-addressed, stamped postcard in the envelope containing your comments. Upon receiving your comments, Docket Management will return the postcard by mail.

How do I submit confidential business information?

If you wish to submit any information any information under a claim of confidentiality, you should submit three copies of your complete submission, including the information you claim to be confidential business information, to the Chief Counsel, NHTSA, at the address given above under **FOR FURTHER INFORMATION CONTACT**. When you send a comment containing confidential business information, you should include a cover letter setting forth the information specified in 49 CFR part 512.

In addition, you should submit a copy from which you have deleted the claimed confidential business information to the Docket by one of the methods set forth above.

Will NHTSA consider late comments?

NHTSA will consider all comments received before the close of business on the comment closing date indicated above under **DATES**. To the extent practicable, we will also consider comments received after that date. If interested persons believe that any information that the agency places in the docket after the issuance of the NPRM affects their comments, they may submit comments after the closing date concerning how the agency should consider that information for the final rule. However, the agency's ability to consider any such late comments in this rulemaking will be limited due to the time frame for issuing a final rule.

If a comment is received too late for us to practicably consider in developing a final rule, we will consider that comment as an informal suggestion for future rulemaking action.

How can I read the comments submitted by other people?

You may read the materials placed in the dockets for this document (e.g., the comments submitted in response to this document by other interested persons) at any time by going to <https://www.regulations.gov>. Follow the online instructions for accessing the dockets. You may also read the materials at the DOT Docket Management Facility by going to the street address given above under **ADDRESSES**.

How do I participate in the public hearings?

NHTSA will hold one virtual public hearing during the public comment period. The agency will announce the specific date and web address for the hearing in a supplemental **Federal Register** notification. The agency will accept oral and written comments to the rulemaking documents and will also accept comments to the Supplemental Environmental Impact Statement (SEIS) at this hearing. The hearing will start at 9 a.m. Eastern standard time and continue until everyone has had a chance to speak.

NHTSA will conduct the hearing informally, and technical rules of evidence will not apply. We will arrange for a written transcript of each hearing to be posted in the dockets as soon as it is available and keep the official record of the hearing open for 30 days following the hearing to allow you to submit supplementary information.

The Draft Supplemental Environmental Impact Statement (SEIS) associated with this proposal has a unique public docket number and is available in Docket No. NHTSA-2021-0054.

Comments on the Draft SEIS can be submitted electronically at <http://www.regulations.gov>, in Docket No. NHTSA-2021-0054. You may also mail or hand deliver comments to Docket Management, U.S. Department of Transportation, 1200 New Jersey Avenue SE, Room W12-140, Washington, DC 20590 (referencing Docket No. NHTSA-2021-0054), between 9 a.m. and 5 p.m., Monday through Friday, except on Federal holidays. To be sure someone is there to help you, please call (202) 366-9322 before coming. All comments and materials received, including the names and addresses of the commenters who submit them, will become part of the administrative record and will be posted on the web at <http://www.regulations.gov>.

IX. Regulatory Notices and Analyses

A. Executive Order 12866, Executive Order 13563

Executive Order 12866, "Regulatory Planning and Review" (58 FR 51735, Oct. 4, 1993), as amended by Executive Order 13563, "Improving Regulation and Regulatory Review" (76 FR 3821, Jan. 21, 2011), provides for making determinations whether a regulatory action is "significant" and therefore subject to the Office of Management and Budget (OMB) review process and to the requirements of the Executive Order. Under these Executive orders, this action is an "economically significant regulatory action" because it is likely to have an annual effect on the economy of \$100 million or more. Accordingly, NHTSA submitted this action to OMB for review and any changes made in response to OMB recommendations have been documented in the docket for this action. The benefits and costs of this proposal are described above and in the Preliminary Regulatory Impact Analysis (PRIA), which is located in the docket and on NHTSA's website.

B. DOT Regulatory Policies and Procedures

This proposal is also significant within the meaning of the Department of Transportation's Regulatory Policies and Procedures. The benefits and costs of the proposal are described above and in the PRIA, which is located in the docket and on NHTSA's website.

C. Executive Order 13990

Executive Order 13990, "Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis" (86 FR 7037, Jan. 25, 2021), directed the immediate review of "The Safer Affordable Fuel-Efficient (SAFE)

Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks” (the 2020 final rule) by July 2021. The Executive order directed that “In considering whether to propose suspending, revising, or rescinding that rule, the agency [*i.e.*, NHTSA] should consider the views of representatives from labor unions, States, and industry.”

This proposal follows the review directed in this Executive order. Promulgated under NHTSA’s statutory authorities, it proposes new CAFE standards for the model years covered by the 2020 final rule for which there is still available lead time to change, and it accounts for the views provided by labor unions, States, and industry.

D. Environmental Considerations

1. National Environmental Policy Act (NEPA)

Concurrently with this NPRM, NHTSA is issuing a Supplemental Environmental Impact Statement (SEIS), pursuant to the National Environmental Policy Act, 42 U.S.C. 4321–4347, and implementing regulations issued by the Council on Environmental Quality (CEQ), 40 CFR part 1500, and NHTSA, 49 CFR part 520. NHTSA prepared the SEIS to analyze and disclose the potential environmental impacts of the proposed CAFE standards and a range of alternatives. The SEIS analyzes direct, indirect, and cumulative impacts and analyzes impacts in proportion to their significance.

The SEIS describes potential environmental impacts to a variety of resources, including fuel and energy use, air quality, climate, land use and development, hazardous materials and regulated wastes, historical and cultural resources, noise, and environmental justice. The SEIS also describes how climate change resulting from global carbon dioxide emissions (including CO₂ emissions attributable to the U.S. light-duty transportation sector under the alternatives considered) could affect certain key natural and human resources. Resource areas are assessed qualitatively and quantitatively, as appropriate, in the SEIS.

NHTSA has considered the information contained in the SEIS as part of developing this proposal. The SEIS is available for public comment; instructions for the submission of comments are included inside the document. NHTSA will simultaneously issue the Final Environmental Impact Statement and Record of Decision, pursuant to 49 U.S.C. 304a(b), unless it is determined that statutory criteria or practicability considerations preclude

simultaneous issuance. For additional information on NHTSA’s NEPA analysis, please see the SEIS.

2. Clean Air Act (CAA) as Applied to NHTSA’s Proposal

The CAA (42 U.S.C. 7401 *et seq.*) is the primary Federal legislation that addresses air quality. Under the authority of the CAA and subsequent amendments, EPA has established National Ambient Air Quality Standards (NAAQS) for six criteria pollutants, which are relatively commonplace pollutants that can accumulate in the atmosphere as a result of human activity. EPA is required to review each NAAQS every five years and to revise those standards as may be appropriate considering new scientific information.

The air quality of a geographic region is usually assessed by comparing the levels of criteria air pollutants found in the ambient air to the levels established by the NAAQS (taking into account, as well, the other elements of a NAAQS: Averaging time, form, and indicator). Concentrations of criteria pollutants within the air mass of a region are measured in parts of a pollutant per million parts (ppm) of air or in micrograms of a pollutant per cubic meter (µg/m³) of air present in repeated air samples taken at designated monitoring locations using specified types of monitors. These ambient concentrations of each criteria pollutant are compared to the levels, averaging time, and form specified by the NAAQS in order to assess whether the region’s air quality is in attainment with the NAAQS.

When the measured concentrations of a criteria pollutant within a geographic region are below those permitted by the NAAQS, EPA designates the region as an attainment area for that pollutant, while regions where concentrations of criteria pollutants exceed Federal standards are called nonattainment areas. Former nonattainment areas that are now in compliance with the NAAQS are designated as maintenance areas. Each State with a nonattainment area is required to develop and implement a State Implementation Plan (SIP) documenting how the region will reach attainment levels within time periods specified in the CAA. For maintenance areas, the SIP must document how the State intends to maintain compliance with the NAAQS. When EPA revises a NAAQS, each State must revise its SIP to address how it plans to attain the new standard.

No Federal agency may “engage in, support in any way or provide financial assistance for, license or permit, or approve” any activity that does not

“conform” to a SIP or Federal Implementation Plan after EPA has approved or promulgated it.⁵⁵⁵ Further, no Federal agency may “approve, accept, or fund” any transportation plan, program, or project developed pursuant to title 23 or chapter 53 of title 49, U.S.C., unless the plan, program or project has been found to “conform” to any applicable implementation plan in effect.⁵⁵⁶ The purpose of these conformity requirements is to ensure that Federally sponsored or conducted activities do not interfere with meeting the emissions targets in SIPs, do not cause or contribute to new violations of the NAAQS, and do not impede the ability of a State to attain or maintain the NAAQS or delay any interim milestones. EPA has issued two sets of regulations to implement the conformity requirements:

(1) The Transportation Conformity Rule⁵⁵⁷ applies to transportation plans, programs, and projects that are developed, funded, or approved under title 23 or chapter 53 of title 49, U.S.C.

(2) The General Conformity Rule⁵⁵⁸ applies to all other Federal actions not covered under transportation conformity. The General Conformity Rule establishes emissions thresholds, or de minimis levels, for use in evaluating the conformity of an action that results in emissions increases.⁵⁵⁹ If the net increases of direct and indirect emissions exceed any of these thresholds, and the action is not otherwise exempt, then a conformity determination is required. The conformity determination can entail air quality modeling studies, consultation with EPA and State air quality agencies, and commitments to revise the SIP or to implement measures to mitigate air quality impacts.

The proposed CAFE standards and associated program activities are not developed, funded, or approved under title 23 or chapter 53 of title 49, U.S.C. Accordingly, this action and associated program activities are not subject to transportation conformity. Under the General Conformity Rule, a conformity determination is required where a Federal action would result in total direct and indirect emissions of a criteria pollutant or precursor originating in nonattainment or maintenance areas equaling or exceeding the rates specified in 40 CFR 93.153(b)(1) and (2). As explained

⁵⁵⁵ 42 U.S.C. 7506(c)(1).

⁵⁵⁶ 42 U.S.C. 7506(c)(2).

⁵⁵⁷ 40 CFR part 51, subpart T, and part 93, subpart A.

⁵⁵⁸ 40 CFR part 51, subpart W, and part 93, subpart B.

⁵⁵⁹ 40 CFR 93.153(b).

below, NHTSA's proposed action results in neither direct nor indirect emissions as defined in 40 CFR 93.152.

The General Conformity Rule defines direct emissions as “those emissions of a criteria pollutant or its precursors that are caused or initiated by the Federal action and originate in a nonattainment area and occur at the same time and place as the action and are reasonably foreseeable.”⁵⁶⁰ NHTSA's proposed action would set fuel economy standards for light-duty vehicles. It therefore would not cause or initiate direct emissions consistent with the meaning of the General Conformity Rule.⁵⁶¹ Indeed, the proposal in aggregate reduces emissions, and to the degree the model predicts small (and time-limited) increases, these increases are based on a theoretical response by individuals to fuel economy prices and savings, which are at best indirect.

Indirect emissions under the General Conformity Rule are those emissions of a criteria pollutant or its precursors: That are caused or initiated by the Federal action and originate in the same nonattainment or maintenance area but occur at a different time or place as the action; that are reasonably foreseeable; that the agency can practically control; and for which the agency has continuing program responsibility.⁵⁶² Each element of the definition must be met to qualify as indirect emissions. NHTSA has determined that, for purposes of general conformity, emissions (if any) that may result from the proposed fuel economy standards would not be caused by NHTSA's action, but rather would occur because of subsequent activities the agency cannot practically control. “[E]ven if a Federal licensing, rulemaking, or other approving action is a required initial step for a subsequent activity that causes emissions, such initial steps do not mean that a Federal agency can practically control any resulting emissions.”⁵⁶³

As the CAFE program uses performance-based standards, NHTSA cannot control the technologies vehicle manufacturers use to improve the fuel economy of passenger cars and light trucks. Furthermore, NHTSA cannot control consumer purchasing (which

affects average achieved fleetwide fuel economy) and driving behavior (*i.e.*, operation of motor vehicles, as measured by VMT). It is the combination of fuel economy technologies, consumer purchasing, and driving behavior that results in criteria pollutant or precursor emissions. For purposes of analyzing the environmental impacts of the proposal and alternatives under NEPA, NHTSA has made assumptions and estimates regarding all of these factors. The agency's SEIS projects that increases in air toxics and criteria pollutants would occur in some nonattainment areas under certain alternatives in the near term, although over the longer term, all action alternatives see improvements. However, the proposed standards and alternatives do not mandate specific manufacturer decisions, consumer purchasing, or driver behavior, and NHTSA cannot practically control any of them.⁵⁶⁴

In addition, NHTSA does not have the statutory authority to control the actual VMT by drivers. As the extent of emissions depends directly on the operation of motor vehicles, changes in any emissions that could result from NHTSA's proposed standards are not changes the agency can practically control or for which the agency has continuing program responsibility. Therefore, the proposed standards and alternative standards considered by NHTSA would not cause indirect emissions under the General Conformity Rule, and a general conformity determination is not required.

3. National Historic Preservation Act (NHPA)

The NHPA (54 U.S.C. 300101 *et seq.*) sets forth Government policies and procedures regarding “historic properties”—that is, districts, sites, buildings, structures, and objects included on or eligible for the National Register of Historic Places. Section 106 of the NHPA requires Federal agencies to “take into account” the effects of their actions on historic properties.⁵⁶⁵ NHTSA concludes that the NHPA is not applicable to this proposal because the promulgation of CAFE standards for light-duty vehicles is not the type of activity that has the potential to cause effects on historic properties. However, NHTSA includes a brief, qualitative discussion of the impacts of the

alternatives on historical and cultural resources in the SEIS.

4. Fish and Wildlife Conservation Act (FWCA)

The FWCA (16 U.S.C. 2901 *et seq.*) provides financial and technical assistance to States for the development, revision, and implementation of conservation plans and programs for nongame fish and wildlife. In addition, the Act encourages all Federal departments and agencies to utilize their statutory and administrative authorities to conserve and to promote conservation of nongame fish and wildlife and their habitats. NHTSA concludes that the FWCA does not apply to this proposal because it does not involve the conservation of nongame fish and wildlife and their habitats.

5. Coastal Zone Management Act (CZMA)

The Coastal Zone Management Act (16 U.S.C. 1451 *et seq.*) provides for the presentation, protection, development, and (where possible) restoration and enhancement of the Nation's coastal zone resources. Under the statute, States are provided with funds and technical assistance in developing coastal zone management programs. Each participating State must submit its program to the Secretary of Commerce for approval. Once the program has been approved, any activity of a Federal agency, either within or outside of the coastal zone, that affects any land or water use or natural resource of the coastal zone must be carried out in a manner that is consistent, to the maximum extent practicable, with the enforceable policies of the State's program.⁵⁶⁶

NHTSA concludes that the CZMA does not apply to this proposal because it does not involve an activity within, or outside of, the Nation's coastal zones that affects any land or water use or natural resource of the coastal zone. NHTSA has, however, conducted a qualitative review in its SEIS of the related direct, indirect, and cumulative impacts, positive or negative, of all the alternatives on potentially affected resources, including coastal zones.

6. Endangered Species Act (ESA)

Under Section 7(a)(2) of the ESA, Federal agencies must ensure that actions they authorize, fund, or carry out are “not likely to jeopardize the continued existence” of any federally listed threatened or endangered species or result in the destruction or adverse

⁵⁶⁰ 40 CFR 93.152.

⁵⁶¹ *Dep't of Transp. v. Pub. Citizen*, 541 U.S. at 772 (“[T]he emissions from the Mexican trucks are not ‘direct’ because they will not occur at the same time or at the same place as the promulgation of the regulations.”) NHTSA's action is to establish fuel economy standards for MYs 2024–2026 passenger cars and light trucks; an emissions increase, if any, would occur in a different place and well after promulgation of an eventual final rule.

⁵⁶² 40 CFR 93.152.

⁵⁶³ *Id.*

⁵⁶⁴ *See, e.g., Dep't of Transp. v. Pub. Citizen*, 541 U.S. 752, 772–73 (2004); *South Coast Air Quality Management District v. Federal Energy Regulatory Commission*, 621 F.3d 1085, 1101 (9th Cir. 2010).

⁵⁶⁵ Section 106 is codified at 54 U.S.C. 306108. Implementing regulations for the Section 106 process are located at 36 CFR part 800.

⁵⁶⁶ 16 U.S.C. 1456(c)(1)(A).

modification of the designated critical habitat of these species.⁵⁶⁷ If a Federal agency determines that an agency action may affect a listed species or designated critical habitat, it must initiate consultation with the appropriate Service—the U.S. Fish and Wildlife Service of the Department of the Interior and/or the National Oceanic and Atmospheric Administration’s National Marine Fisheries Service of the Department of Commerce, depending on the species involved—in order to ensure that the action is not likely to jeopardize the species or destroy or adversely modify designated critical habitat.⁵⁶⁸ Under this standard, the Federal agency taking action evaluates the possible effects of its action and determines whether to initiate consultation.⁵⁶⁹

Pursuant to Section 7(a)(2) of the ESA, NHTSA has considered the effects of the proposed standards and has reviewed applicable ESA regulations, case law, and guidance to determine what, if any, impact there might be to listed species or designated critical habitat. NHTSA has considered issues related to emissions of CO₂ and other GHGs, and issues related to non-GHG emissions. Based on this assessment, NHTSA determines that the action of setting CAFE standards does not require consultation under Section 7(a)(2) of the ESA. Accordingly, NHTSA has concluded its review of this action under Section 7 of the ESA.

7. Floodplain Management (Executive Order 11988 and DOT Order 5650.2)

These orders require Federal agencies to avoid the long- and short-term adverse impacts associated with the occupancy and modification of floodplains, and to restore and preserve the natural and beneficial values served by floodplains. Executive Order 11988 also directs agencies to minimize the impacts of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains through evaluating the potential effects of any actions the agency may take in a floodplain and ensuring that its program planning and budget requests reflect consideration of flood hazards and floodplain management. DOT Order 5650.2 sets forth DOT policies and procedures for implementing Executive Order 11988. The DOT order requires that the agency determine if a proposed action is within the limits of a base floodplain, meaning it is encroaching on the floodplain, and whether this

encroachment is significant. If significant, the agency is required to conduct further analysis of the proposed action and any practicable alternatives. If a practicable alternative avoids floodplain encroachment, then the agency is required to implement it.

In this proposal, NHTSA is not occupying, modifying, and/or encroaching on floodplains. NHTSA therefore concludes that the orders do not apply to this proposal. NHTSA has, however, conducted a review of the alternatives on potentially affected resources, including floodplains, in its SEIS.

8. Preservation of the Nation’s Wetlands (Executive Order 11990 and DOT Order 5660.1a)

These orders require Federal agencies to avoid, to the extent possible, undertaking or providing assistance for new construction located in wetlands unless the agency head finds that there is no practicable alternative to such construction and that the proposed action includes all practicable measures to minimize harms to wetlands that may result from such use. Executive Order 11990 also directs agencies to take action to minimize the destruction, loss, or degradation of wetlands in “conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities.” DOT Order 5660.1a sets forth DOT policy for interpreting Executive Order 11990 and requires that transportation projects “located in or having an impact on wetlands” should be conducted to assure protection of the Nation’s wetlands. If a project does have a significant impact on wetlands, an EIS must be prepared.

NHTSA is not undertaking or providing assistance for new construction located in wetlands. NHTSA therefore concludes that these orders do not apply to this proposal. NHTSA has, however, conducted a review of the alternatives on potentially affected resources, including wetlands, in its SEIS.

9. Migratory Bird Treaty Act (MTBA), Bald and Golden Eagle Protection Act (BGEPA), Executive Order 13186

The MTBA (16 U.S.C. 703–712) provides for the protection of certain migratory birds by making it illegal for anyone to “pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, offer for sale, sell, offer for barter, barter, offer to purchase, purchase, deliver for shipment, ship, export, import, cause to be shipped, exported, or imported, deliver for

transportation, carry or cause to be carried, or receive for shipment, transportation, carriage, or export” any migratory bird covered under the statute.⁵⁷⁰

The BGEPA (16 U.S.C. 668–668d) makes it illegal to “take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import” any bald or golden eagles.⁵⁷¹ Executive Order 13186, “Responsibilities of Federal Agencies to Protect Migratory Birds,” helps to further the purposes of the MBTA by requiring a Federal agency to develop a Memorandum of Understanding (MOU) with the Fish and Wildlife Service when it is taking an action that has (or is likely to have) a measurable negative impact on migratory bird populations.

NHTSA concludes that the MBTA, BGEPA, and Executive Order 13186 do not apply to this proposal because there is no disturbance, take, measurable negative impact, or other covered activity involving migratory birds or bald or golden eagles involved in this rulemaking.

10. Department of Transportation Act (Section 4(f))

Section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C. 303), as amended, is designed to preserve publicly owned park and recreation lands, waterfowl and wildlife refuges, and historic sites. Specifically, Section 4(f) provides that DOT agencies cannot approve a transportation program or project that requires the use of any publicly owned land from a public park, recreation area, or wildlife or waterfowl refuge of national, State, or local significance, unless a determination is made that:

(1) There is no feasible and prudent alternative to the use of land, and

(2) The program or project includes all possible planning to minimize harm to the property resulting from the use.

These requirements may be satisfied if the transportation use of a Section 4(f) property results in a de minimis impact on the area.

NHTSA concludes that Section 4(f) does not apply to this proposal because this rulemaking is not an approval of a transportation program nor project that requires the use of any publicly owned land.

⁵⁶⁷ 16 U.S.C. 1536(a)(2).

⁵⁶⁸ See 50 CFR 402.14.

⁵⁶⁹ See 51 FR 9926, 19949 (Jun. 3, 1986).

⁵⁷⁰ 16 U.S.C. 703(a).

⁵⁷¹ 16 U.S.C. 668(a).

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

Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” (Feb. 16, 1994), directs Federal agencies to “promote nondiscrimination in federal programs substantially affecting human health and the environment, and provide minority and low-income communities access to public information on, and an opportunity for public participation in, matters relating to human health or the environment.” E.O. 12898 also directs agencies to identify and consider any disproportionately high and adverse human health or environmental effects that their actions might have on minority and low-income communities and provide opportunities for community input in the NEPA process. CEQ has provided agencies with general guidance on how to meet the requirements of the E.O. as it relates to NEPA. A White House Environmental Justice Interagency Council established under E.O. 14008, “Tackling the Climate Crisis at Home and Abroad,” is expected to advise CEQ on ways to update E.O. 12898, including the expansion of environmental justice advice and recommendations. The White House Environmental Justice Interagency Council will advise on increasing environmental justice monitoring and enforcement.

Additionally, the 2021 DOT Order 5610.2(c), “U.S. Department of Transportation Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” (May 14, 2021), describes the process for DOT agencies to incorporate environmental justice principles in programs, policies, and activities. The DOT’s Environmental Justice Strategy specifies that environmental justice and fair treatment of all people means that no population be forced to bear a disproportionate burden due to transportation decisions, programs, and policies. It also defines the term *minority* and *low-income* in the context of DOT’s environmental justice analyses. *Minority* is defined as a person who is Black, Hispanic or Latino, Asian American, American Indian or Alaskan Native, or Native Hawaiian or other Pacific Islander. *Low-income* is defined

as a person whose household income is at or below the Department of Health and Human Services poverty guidelines. Low-income and minority populations may live in geographic proximity or be geographically dispersed/transient. In 2021, DOT reviewed and updated its environmental justice strategy to ensure that it continues to reflect its commitment to environmental justice principles and integrating those principles into DOT programs, policies, and activities.

Section VI and the SEIS discuss NHTSA’s consideration of environmental justice issues associated with this proposal.

12. Executive Order 13045: “Protection of Children From Environmental Health Risks and Safety Risks”

This action is subject to Executive Order 13045 (62 FR 19885, Apr. 23, 1997) because it is an economically significant regulatory action as defined by E.O. 12866, and NHTSA has reason to believe that the environmental health and safety risks related to this action, although small, may have a disproportionate effect on children. Specifically, children are more vulnerable to adverse health effects related to mobile source emissions, as well as to the potential long-term impacts of climate change. Pursuant to E.O. 13045, NHTSA must prepare an evaluation of the environmental health or safety effects of the planned regulation on children and an explanation of why the planned regulation is preferable to other potentially effect and reasonably feasible alternatives considered by NHTSA. Further, this analysis may be included as part of any other required analysis.

All of the action alternatives would reduce CO₂ emissions relative to the baseline and thus have positive effects on mitigating global climate change, and thus environmental and health effects associated with climate change. While environmental and health effects associated with criteria pollutant and toxic air pollutant emissions vary over time and across alternatives, negative effects, when estimated, are extremely small. This preamble and the SEIS discuss air quality, climate change, and their related environmental and health effects, noting where these would disproportionately affect children. In addition, Section VI of this preamble explains why NHTSA believes that the

proposed standards are preferable to other alternatives considered.

E. Regulatory Flexibility Act

Pursuant to the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever an agency is required to publish a notice of proposed rulemaking or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effect of the rule on small entities (*i.e.*, small businesses, small organizations, and small governmental jurisdictions). No regulatory flexibility analysis is required if the head of an agency certifies the rule will not have a significant economic impact on a substantial number of small entities. SBREFA amended the Regulatory Flexibility Act to require Federal agencies to provide a statement of the factual basis for certifying that a rule will not have a significant economic impact on a substantial number of small entities.

NHTSA has considered the impacts of this proposed rule under the Regulatory Flexibility Act and certifies that this proposed rule would not have a significant economic impact on a substantial number of small entities. The following is NHTSA’s statement providing the factual basis for this certification pursuant to 5 U.S.C. 605(b).

Small businesses are defined based on the North American Industry Classification System (NAICS) code.⁵⁷² One of the criteria for determining size is the number of employees in the firm. For establishments primarily engaged in manufacturing or assembling automobiles, as well as light duty trucks, the firm must have less than 1,500 employees to be classified as a small business. This rule would affect motor vehicle manufacturers. As shown in Table IX–1, the agency have identified 13 small manufacturers of passenger cars, light trucks, and SUVs of electric, hybrid, and internal combustion engines. NHTSA acknowledges that some newer manufacturers may not be listed. However, those new manufacturers tend to have transportation products that are not part of the light-duty vehicle fleet and have yet to start production of light-duty vehicles. Moreover, NHTSA does not believe that there are a “substantial number” of these newer companies.⁵⁷³

⁵⁷² Classified in NAICS under Subsector 336—Transportation Equipment Manufacturing for Automobile Manufacturing (336111), Light Truck

(336112), and Heavy Duty Truck Manufacturing (336120). <https://www.sba.gov/document/support-table-size-standards>.

⁵⁷³ 5 U.S.C. 605(b).

Table IX-1 – Small Domestic Vehicle Manufacturers

Manufacturers	Founded	Employees ⁵⁷⁴	Estimated Annual Production ⁵⁷⁵	Sale Price per Unit
Karma Automotive	2014	< 1,000	<100	\$95,000 to \$120,000
BXR Motors	2008	< 10	< 100	\$155,000 to \$185,000
Falcon Motorsports	2009	< 10	< 100	\$300,000 to \$400,000
Lucra Cars	2005	< 50	< 100	\$70,000 to \$220,000
Lyons Motor Car	2012	< 10	< 100	\$1,400,000
Rezvani Motors	2014	< 10	< 100	\$155,000 to \$260,000
Rossion Automotive	2007	< 50	< 100	\$90,000
Saleen	1984	< 200	< 100	\$100,000
Shelby American	1962	< 200	< 100	\$60,000 to \$250,000
Panoz	1988	< 50	< 100	\$155,000 to \$175,000
Faraday Future	2014	< 1,000	0	\$200,000 to \$300,000
SF Motors	2016	< 500	0	N/A
Workhorse Group	2007	< 200	0	\$52,000
Lordstown Motors	2019	<1,000	0	\$52,500

NHTSA believes that the proposed rulemaking would not have a significant economic impact on the small vehicle manufacturers because under 49 CFR part 525, passenger car manufacturers building fewer than 10,000 vehicles per year can petition NHTSA to have alternative standards set for those manufacturers. Listed manufacturers producing ICE vehicles do not currently meet the standard and must already petition the agency for relief. If the standard is raised, it has no meaningful impact on these manufacturers—they still must go through the same process and petition for relief. Given there already is a mechanism for relieving burden on small businesses, which is the purpose of the Regulatory Flexibility Act, a regulatory flexibility analysis was not prepared.

Further, small manufacturers of electric vehicles would not face a significant economic impact. The method for earning credits applies equally across manufacturers and does not place small entities at a significant competitive disadvantage. In any event, even if the rule had a “significant economic impact” on these small EV manufacturers, the amount of these companies is not “a substantial number.”⁵⁷⁶ For these reasons, their existence does not alter the agency’s analysis of the applicability of the Regulatory Flexibility Act.

⁵⁷⁴ Estimated number of employees as of June 2021, source: *LinkedIn.com* and other websites reporting company profiles.

⁵⁷⁵ Rough estimate of light duty vehicle production for model year 2020.

⁵⁷⁶ 5 U.S.C. 605.

F. Executive Order 13132 (Federalism)

Executive Order 13132 requires Federal agencies to develop an accountable process to ensure “meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications. The order defines the term “[p]olicies that have federalism implications” to include regulations that 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.” Under the order, agencies may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, unless the Federal Government provides the funds necessary to pay the direct compliance costs incurred by the State and local governments, or the agencies consult with State and local officials early in the process of developing the proposed regulation. NHTSA has complied with the order’s requirements and consulted directly with the California Air Resources Board in developing a number of elements of this proposal. This proposal would not impose direct compliance costs on State or local governments, because the only entities directly subject to the proposal are vehicle manufacturers.

With regard to the federalism implications of the proposal, NHTSA has spoken to this issue separately at 86 FR 25980 (May 12, 2021), “Corporate Average Fuel Economy (CAFE) Preemption,” notice of proposed rulemaking. Comments on preemption

of State and local laws related to fuel economy standards that are received to *this* NPRM will be deemed late comments to *that* NPRM (the comment period for which has closed) and will be considered as time permits.

G. Executive Order 12988 (Civil Justice Reform)

Pursuant to Executive Order 12988, “Civil Justice Reform” (61 FR 4729, Feb. 7, 1996), NHTSA has considered whether this rulemaking would have any retroactive effect. This proposal does not have any retroactive effect.

H. Executive Order 13175 (Consultation and Coordination With Indian Tribal Governments)

This proposal does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, Nov. 9, 2000). This proposal, if finalized, would be implemented at the Federal level and would impose compliance costs only on vehicle manufacturers. Thus, Executive Order 13175, which requires consultation with Tribal officials when agencies are developing policies that have “substantial direct effects” on Tribes and Tribal interests, should not apply to this proposal.

I. Unfunded Mandates Reform Act

Section 202 of the Unfunded Mandates Reform Act of 1995 (UMRA) requires Federal agencies to prepare a written assessment of the costs, benefits, and other effects of a proposed or final rule that includes a Federal mandate likely to result in the expenditure by State, local, or Tribal governments, in the aggregate, or by the private sector, of

more than \$100 million in any one year (adjusted for inflation with base year of 1995). Adjusting this amount by the implicit gross domestic product price deflator for 2018 results in \$153 million ($110.296/71.868 = 1.53$).⁵⁷⁷ Before promulgating a rule for which a written statement is needed, section 205 of UMRA generally requires NHTSA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objective of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows NHTSA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the agency publishes with the rule an explanation of why that alternative was not adopted.

This proposal would not result in the expenditure by State, local, or Tribal governments, in the aggregate, of more than \$153 million annually, but it will result in the expenditure of that magnitude by vehicle manufacturers and/or their suppliers. In developing this proposal, NHTSA considered alternative fuel economy standards both lower and higher than the preferred alternative. NHTSA tentatively concludes that the preferred alternative represents the least costly, most cost-effective, and least burdensome alternative that achieves the objectives of the proposal.

J. Regulation Identifier Number

The Department of Transportation assigns a regulation identifier number (RIN) to each regulatory action listed in the Unified Agenda of Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. The RIN contained in the heading at the beginning of this document may be used to find this action in the Unified Agenda.

K. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) requires NHTSA and EPA to evaluate and use existing voluntary consensus standards in its regulatory activities unless doing so would be inconsistent with applicable law (e.g., the statutory provisions regarding

NHTSA's vehicle safety authority) or otherwise impractical.⁵⁷⁸

Voluntary consensus standards are technical standards developed or adopted by voluntary consensus standards bodies. Technical standards are defined by the NTTAA as "performance-based or design-specific technical specification and related management systems practices." They pertain to "products and processes, such as size, strength, or technical performance of a product, process or material."

Examples of organizations generally regarded as voluntary consensus standards bodies include the American Society for Testing and Materials (ASTM), the Society of Automotive Engineers (SAE), and the American National Standards Institute (ANSI). If NHTSA does not use available and potentially applicable voluntary consensus standards, it is required by the Act to provide Congress, through OMB, an explanation of the reasons for not using such standards. There are currently no consensus standards that NHTSA administers relevant to this proposed CAFE standards.

L. Department of Energy Review

In accordance with 49 U.S.C. 32902(j)(1), NHTSA submitted this rule to the Department of Energy for review. The Department of Energy concluded that the standard would not adversely affect its conservation goals.

M. Paperwork Reduction Act

Under the procedures established by the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501, *et seq.*), Federal agencies must obtain approval from the OMB for each collection of information they conduct, sponsor, or require through regulations. A person is not required to respond to a collection of information by a Federal agency unless the collection displays a valid OMB control number.

NHTSA is seeking OMB's approval for a revision to NHTSA's existing information collection for its reporting requirements under the Corporate Average Fuel Economy (CAFE) program (OMB control number 2127-0019). These reporting requirements are necessary to ensure compliance with its CAFE program. As described in this NPRM, NHTSA is proposing changes to the CAFE program's standardized reporting templates for manufacturers to submit information to NHTSA on their vehicle production and CAFE credits used to comply with the CAFE standards. These changes, if adopted,

will result in additional burden to respondents.

The Information Collection Request (ICR) for a revision of an existing information collection described below has been forwarded to OMB for review and comment. In compliance with the requirements of the PRA, NHTSA asks for public comments on the following proposed collection of information for which the agency is seeking approval from OMB.

Title: Corporate Average Fuel Economy.

OMB Control Number: 2127-0019.

Form Numbers: NHTSA Form 1474 (CAFE Projections Reporting Template), NHTSA Form 1475 (CAFE Credit Template) and NHTSA Form 1621 (CAFE Credit Trade Template).

Type of Request: Revision of a currently approved collection.

Type of Review Requested: Regular.

Requested Expiration Date of Approval: Three years from date of approval.

Summary of the Collection of Information: As established by Congress under EPCA, and later amended by EISA, and implemented through NHTSA's regulations for automobile manufacturers complying with CAFE standards prescribed in 49 U.S.C. 32902, many types of reporting provisions exist as a part of the CAFE program. These reporting provisions are necessary for NHTSA to ensure manufacturers comply with CAFE standards and other CAFE requirements. Manufacturers are required to submit information on CAFE standards, exemptions, vehicles, technologies, and submit CAFE compliance test results. Manufacturers also provide information on any of the flexibilities and incentives they use during the model year to comply with CAFE standards.

More specifically, the current collection includes burden hours for small volume manufacturers to request exemptions allowing them to comply with lower alternative CAFE standards to accommodate mainly the sale of exotic sportscars. It also includes hours for manufacturers reporting information on corporate mergers and splits. Other required reporting includes manufacturers submitting information to NHTSA on CAFE credit transactions, plans and other documents associated with the costs of credit trades. In the April 30, 2020, final rule, to help manufacturers better organize credit information, NHTSA also issued a new standardized template for manufacturers to report credit transactions and to prepare credit trade documents. The template could generate the necessary documents that both parties would sign

⁵⁷⁷ Bureau of Economic Analysis, National Income and Product Accounts (NIPA), Table 1.1.9 Implicit Price Deflators for Gross Domestic Product. https://bea.gov/iTable/index_nipa.cfm.

⁵⁷⁸ 15 U.S.C. 272.

to facilitate credit trades as well as simplified the organization of other types of credit transactions in addition to correctly performing the necessary mathematical calculations. Finally, the current collection also includes hours for manufacturers to provide pre-model year (PMY) and mid-model year (MMY) CAFE reports to NHTSA and a standardized reporting template adopted in the April 30, 2020, final rule to help manufacturer submit these reports. PMY and MMY reports contain early projections of manufacturers' vehicle and fleet level data demonstrating how they intend to comply with CAFE standards.

As part of this rulemaking, NHTSA is amending its previously approved collection for CAFE-related collections of information. NHTSA is proposing making changes to its reporting template for PMY and MMY reports and adding a new template for reporting the cost of credit trades and is proposing to add the burden hours for these changes to this collection.

Manufacturers identified several changes that were needed to the CAFE reporting template to accommodate different types of vehicles which

NHTSA incorporated along with other functional changes.

Manufacturers have also expressed concern that disclosing trading terms may not be as simple as a spot purchase at a given price. As discussed in the April 30, 2020, final rule, manufacturers contend that a number of transactions for both CAFE and CO₂ credits involve a range of complexity due to numerous factors that are reflective of the marketplace, such as the volume of credits, compliance category, credit expiration date, a seller's compliance strategy, and even the CAFE penalty rate in effect at that time. In addition, manufacturers have a range of partnerships and cooperative agreements with their own competitors. Credit transactions can be an offshoot of these broader relationships, and difficult to price separately and independently. Thus, manufacturers argue that there may not be a reasonable, or even meaningful, presentation of market information in a transaction price. Therefore, NHTSA has developed a new template for capturing the price of credit trades that includes certain monetary and non-monetary terms of credit trading

contracts. NHTSA proposes that manufacturers start using the new template starting September 1, 2022.

Description of the Need for the Information and the Proposed Use of the Information: Regulated entities are required to respond to inquiries covered by this collection. 49 U.S.C. 32907. 49 CFR parts 525, 534, 536, and 537.

Affected Public: Respondents are manufacturers of engines and vehicles within the North American Industry Classification System (NAICS) and use the coding structure as defined by NAICS including codes 33611, 336111, 336112, 33631, 33631, 33632, 336320, 33635, and 336350 for motor vehicle and parts manufacturing.

Frequency of response: Variable, based on compliance obligation. Please see PRA supporting documentation in the docket for more detailed information.

Average burden time per response: Variable, based on compliance obligation. Please see PRA supporting documentation in the docket for more detailed information.

Number of respondents: 23.

1. Estimated Total Annual Burden Hours and Costs

Table IX-2 – Estimated Burden for Reporting Requirements

Applies to:	Manufacturer		Government	
	Hours	Cost	Hours	Cost
Prior Collection	4020.4	\$208,042.23	3,038.00	\$141,246.78
Current Collection	4286.7	\$224,964.52	3,038.00	\$154,490.83
Difference	266.3	\$16,921.98	0	\$13,244.05

Public Comments Invited: You are asked to comment on any aspects of this information collection, including (a) whether the proposed collection of information is necessary for the proper performance of the functions of the Department, including whether the information will have practical utility; (b) the accuracy of the Department's estimate of the burden of the proposed information collection; (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 the use of automated collection techniques or other forms of information technology.

Please submit any comments, identified by the docket number in the heading of this document, by the methods described in the **ADDRESSES** section of this document to NHTSA and

OMB. Although comments may be submitted during the entire comment period, comments received within 30 days of publication are most useful.

N. Privacy Act

In accordance with 5 U.S.C. 553(c), NHTSA is soliciting comments from the public to inform the rulemaking process better. These comments will post, without edit, to www.regulations.gov, as described in DOT's systems of records notice, DOT/ALL-14 FDMS, accessible through <https://www.transportation.gov/individuals/privacy/privacy-act-system-records-notices>. In order to facilitate comment tracking and response, NHTSA encourages commenters to provide their names or the names of their organizations; however, submission of names is completely optional.

List of Subjects in 49 CFR Parts 531, 533, 536, and 537

Fuel economy, Reporting and recordkeeping requirements.

Regulatory Text

For the reasons discussed in the preamble, the National Highway Traffic Safety Administration proposes to amend 49 CFR chapter V as follows:

- 1. Revise part 531 to read as follows:

PART 531—PASSENGER AUTOMOBILE AVERAGE FUEL ECONOMY STANDARDS

- Sec.
- 531.1 Scope.
- 531.2 Purpose.
- 531.3 Applicability.
- 531.4 Definitions.
- 531.5 Fuel economy standards.
- 531.6 Measurement and calculation procedures.

Appendix A to Part 531—Example of Calculating Compliance Under § 531.5(c)

Authority: 49 U.S.C. 32902; delegation of authority at 49 CFR 1.95.

§ 531.1 Scope.

This part establishes average fuel economy standards pursuant to section 502 (a) and (c) of the Motor Vehicle Information and Cost Savings Act, as amended, for passenger automobiles.

§ 531.2 Purpose.

The purpose of this part is to increase the fuel economy of passenger automobiles by establishing minimum

levels of average fuel economy for those vehicles.

§ 531.3 Applicability.

This part applies to manufacturers of passenger automobiles.

§ 531.4 Definitions.

(a) *Statutory terms.* (1) The terms *average fuel economy*, *manufacture*, *manufacturer*, and *model year* are used as defined in section 501 of the Act.

(2) The terms *automobile* and *passenger automobile* are used as defined in section 501 of the Act and in accordance with the determination in part 523 of this chapter.

(b) *Other terms.* As used in this part, unless otherwise required by the context—

(1) *Act* means the Motor Vehicle Information and Cost Savings Act, as amended by Pub. L. 94–163.

(2) [Reserved]

§ 531.5 Fuel economy standards.

(a) Except as provided in paragraph (f) of this section, each manufacturer of passenger automobiles shall comply with the fleet average fuel economy standards in Table 1 to this paragraph (a), expressed in miles per gallon, in the model year specified as applicable:

Table 1 to Paragraph (a)

Model year	Average fuel economy standard (miles per gallon)
1978	18.0
1979	19.0
1980	20.0
1981	22.0
1982	24.0
1983	26.0
1984	27.0
1985	27.5
1986	26.0
1987	26.0
1988	26.0
1989	26.5
1990 - 2010	27.5

(b) For model year 2011, a manufacturer's passenger automobile

fleet shall comply with the fleet average fuel economy level calculated for that

model year according to Figure 1 to this

paragraph (b) and the appropriate values in Table 2 to this paragraph (b).

Figure 1 to Paragraph (b)

$$Required_Fuel_Economy_Level = \frac{N}{\sum_i \frac{N_i}{T_i}}$$

Where:

N is the total number (sum) of passenger automobiles produced by a manufacturer;

N_i is the number (sum) of the *i*th passenger automobile model produced by the manufacturer; and
T_i is the fuel economy target of the *i*th model passenger automobile, which is

determined according to the following formula, rounded to the nearest hundredth:

$$\frac{1}{\frac{1}{a} + \left(\frac{1}{b} - \frac{1}{a}\right) \frac{e^{(x-c)d}}{1 + e^{(x-c)d}}}$$

Where:

Parameters *a*, *b*, *c*, and *d* are defined in Table 2 of this paragraph (b);
e = 2.718; and

x = footprint (in square feet, rounded to the nearest tenth) of the vehicle model.

Table 2 to Paragraph (b)-Parameters for the Passenger Automobile Fuel Economy Targets

Model year	Parameters			
	<i>a</i> (mpg)	<i>b</i> (mpg)	<i>c</i> (gal/mi/ft ²)	<i>d</i> (gal/mi)
2011	31.20	24.00	51.41	1.91

(c) For model years 2012–2026, a manufacturer’s passenger automobile fleet shall comply with the fleet average

fuel economy level calculated for that model year according to Figure 2 to this

paragraph (c) and the appropriate values in Table 3 to this paragraph (c).

Figure 2 to Paragraph (c)

$$CAFE_{required} = \frac{\sum_i PRODUCTION_i}{\sum_i \frac{PRODUCTION_i}{TARGET_i}}$$

Where:

CAFE_{required} is the fleet average fuel economy standard for a given fleet (domestic passenger automobiles or import passenger automobiles);

Subscript *i* is a designation of multiple groups of automobiles, where each group’s designation, *i.e.*, *i* = 1, 2, 3, etc., represents automobiles that share a unique model type and footprint within

the applicable fleet, either domestic passenger automobiles or import passenger automobiles;
Production_i is the number of passenger automobiles produced for sale in the United States within each *i*th designation, *i.e.*, which share the same model type and footprint; and
TARGET_i is the fuel economy target in miles per gallon (mpg) applicable to the

footprint of passenger automobiles within each *i*th designation, *i.e.*, which share the same model type and footprint, calculated according to Figure 3 to this paragraph (c) and rounded to the nearest hundredth of a mpg, *i.e.*, 35.455 = 35.46 mpg, and the summations in the numerator and denominator are both performed over all models in the fleet in question.

Figure 3 to Paragraph (c)

$$TARGET = \frac{1}{MIN \left[MAX \left(c \times FOOTPRINT + d, \frac{1}{a} \right), \frac{1}{b} \right]}$$

Where:

TARGET is the fuel economy target (in mpg) applicable to vehicles of a given footprint (*FOOTPRINT*, in square feet);

Parameters *a*, *b*, *c*, and *d* are defined in Table 3 to this paragraph (c); and

The *MIN* and *MAX* functions take the minimum and maximum, respectively, of the included values.

**Table 3 to Paragraph (c)—Parameters for the Passenger Automobile Fuel Economy Targets,
MYs 2012-2026**

Model year	Parameters			
	<i>a</i> (mpg)	<i>b</i> (mpg)	<i>c</i> (gal/mi/ft ²)	<i>d</i> (gal/mi)
2012	35.95	27.95	0.0005308	0.006057
2013	36.80	28.46	0.0005308	0.005410
2014	37.75	29.03	0.0005308	0.004725
2015	39.24	29.90	0.0005308	0.003719
2016	41.09	30.96	0.0005308	0.002573
2017	43.61	32.65	0.0005131	0.001896
2018	45.21	33.84	0.0004954	0.001811
2019	46.87	35.07	0.0004783	0.001729
2020	48.74	36.47	0.0004603	0.001643
2021	49.48	37.02	0.000453	0.00162
2022	50.24	37.59	0.000447	0.00159
2023	51.00	38.16	0.000440	0.00157
2024	55.44	41.48	0.000405	0.00144
2025	60.26	45.08	0.000372	0.00133
2026	65.60	49.00	0.000343	0.00122

(d) In addition to the requirements of paragraphs (b) and (c) of this section, each manufacturer shall also meet the

minimum fleet standard for domestically manufactured passenger

automobiles expressed in Table 4 to this paragraph (d):

**Table 4 to Paragraph (d)—Minimum Fuel Economy Standards for Domestically
Manufactured Passenger Automobiles, MYs 2011-2026**

Model year	Minimum standard
2011	27.8
2012	30.7
2013	31.4
2014	32.1
2015	33.3
2016	34.7
2017	36.7
2018	38.0
2019	39.4
2020	40.9
2021	39.9
2022	40.6
2023	41.1
2024	44.4
2025	48.2
2026	52.4

(e) The following manufacturers shall comply with the standards indicated in

paragraphs (e)(1) through (15) of this section for the specified model years:

(1) *Avanti Motor Corporation.*

Table 5 to Paragraph (e)(1)--Average Fuel Economy Standard

Model year	Miles per gallon
1978	16.1
1979	14.5
1980	15.8
1981	18.2
1982	18.2
1983	16.9
1984	16.9
1985	16.9

(2) *Rolls-Royce Motors, Inc.*

Table 6 to Paragraph (e)(1)--Average Fuel Economy Standard

Model year	Miles per gallon
1978	10.7
1979	10.8
1980	11.1

1981	10.7
1982	10.6
1983	9.9
1984	10.0
1985	10.0
1986	11.0
1987	11.2
1988	11.2
1989	11.2
1990	12.7
1991	12.7
1992	13.8
1993	13.8
1994	13.8
1995	14.6
1996	14.6
1997	15.1
1998	16.3
1999	16.3

(3) *Checker Motors Corporation.*

Table 7 to Paragraph (e)(3)--Average Fuel Economy Standard

Model year	Miles per gallon
1978	17.6
1979	16.5
1980	18.5
1981	18.3
1982	18.4

(4) *Aston Martin Lagonda, Inc.*

Table 8 to Paragraph (e)(4)--Average Fuel Economy Standard

Model year	Miles per gallon
1979	11.5
1980	12.1
1981	12.2
1982	12.2
1983	11.3
1984	11.3
1985	11.4

(5) *Excalibur Automobile Corporation.*

Table 9 to Paragraph (e)(5)--Average Fuel Economy Standard

Model year	Miles per gallon
1978	11.5
1979	11.5
1980	16.2
1981	17.9
1982	17.9
1983	16.6
1984	16.6
1985	16.6

(6) *Lotus Cars Ltd.*

Table 10 to Paragraph (e)(6)--Average Fuel Economy Standard

Model year	Miles per gallon
1994	24.2
1995	23.3

(7) *Officine Alfieri Maserati, S.p.A.*

Table 11 to Paragraph (e)(7)--Average Fuel Economy Standard

Model year	Miles per gallon
1978	12.5
1979	12.5

(8) *Lamborghini of North America.*

Table 12 to Paragraph (e)(8)--Average Fuel Economy Standard

Model year	Miles per gallon
1983	13.7
1984	13.7

(9) *LondonCoach Co., Inc.*

Table 13 to Paragraph (e)(9)--Average Fuel Economy Standard

Model year	Miles per gallon
1985	21.0
1986	21.0
1987	21.0

(10) *Automobili Lamborghini S.p.A./
Vector Aeromotive Corporation.*

Table 14 to Paragraph (e)(10)--Average Fuel Economy Standard

Model year	Miles per gallon
1995	12.8
1996	12.6
1997	12.5

(11) *Dutcher Motors, Inc.*

Table 15 to Paragraph (e)(11)--Average Fuel Economy Standard

Model year	Miles per gallon
1986	16.0
1987	16.0
1988	16.0
1992	17.0
1993	17.0
1994	17.0
1995	17.0

(12) *MedNet, Inc.*

Table 16 to Paragraph (e)(12)--Average Fuel Economy Standard

Model year	Miles per gallon
1996	17.0
1997	17.0
1998	17.0

(13) *Vector Aeromotive Corporation.*

Table 17 to Paragraph (e)(13)--Average Fuel Economy Standard

Model year	Miles per gallon
1998	12.1

(14) *Qvale Automotive Group Srl.*

Table 18 to Paragraph (e)(14)--Average Fuel Economy Standard

Model year	Miles per gallon
2000	22.0
2001	22.0

(15) *Spyker Automobielen B.V.*

Table 19 to Paragraph (e)(15)--Average Fuel Economy Standard

Model year	Miles per gallon
2006	18.9
2007	18.9

§ 531.6 Measurement and calculation procedures.

(a) The fleet average fuel economy performance of all passenger automobiles that are manufactured by a manufacturer in a model year shall be determined in accordance with procedures established by the Administrator of the Environmental Protection Agency (EPA) under 49 U.S.C. 32904 and set forth in 40 CFR part 600.

(b) For model years 2017 and later, a manufacturer is eligible to increase the fuel economy performance of passenger cars in accordance with procedures established by the EPA set forth in 40 CFR part 600, subpart F, including any adjustments to fuel economy the EPA allows, such as for fuel consumption improvements related to air conditioning efficiency and off-cycle technologies. Manufacturers must provide reporting on these technologies as specified in 49 CFR 537.7 by the required deadlines.

(1) *Efficient air conditioning technologies.* A manufacturer that seeks to increase its fleet average fuel economy performance through the use of technologies that improve the efficiency of air conditioning systems must follow the requirements in 40 CFR 86.1868–12. Fuel consumption improvement values resulting from the

use of those air conditioning systems must be determined in accordance with 40 CFR 600.510–12(c)(3)(i).

(2) *Off-cycle technologies on EPA’s predefined list or using 5-cycle testing.* A manufacturer that seeks to increase its fleet average fuel economy performance through the use of off-cycle technologies must follow the requirements in 40 CFR 86.1869–12. A manufacturer is eligible to gain fuel consumption improvements for predefined off-cycle technologies in accordance with 40 CFR 86.1869–12(b) or for technologies tested using the EPA’s 5-cycle methodology in accordance with 40 CFR 86.1869–12(c). The fuel consumption improvement is determined in accordance with 40 CFR 600.510–12(c)(3)(ii).

(3) *Off-cycle technologies using the alternative EPA-approved methodology.* A manufacturer is eligible to increase its fuel economy performance through use of an off-cycle technology requiring an application request made to the EPA in accordance with 40 CFR 86.1869–12(d).

(i) *Eligibility under the corporate average fuel economy (CAFE) program requires compliance with paragraphs (b)(3)(i)(A) through (C) of this section.* Paragraphs (b)(3)(i)(A), (B), and (D) of this section apply starting in model year 2024.

(A) A manufacturer seeking to increase its fuel economy performance

using the alternative methodology for an off-cycle technology, if prior to the applicable model year, must submit to EPA a detailed analytical plan and be approved (*i.e.*, for its planned test procedure and model types for demonstration) in accordance with 40 CFR 86.1869–12(d).

(B) A manufacturer seeking to increase its fuel economy performance using the alternative methodology for an off-cycle technology must also submit an official credit application to EPA and obtain approval in accordance with 40 CFR 86.1869–12(e) prior to September of the given model year.

(C) Manufacturer’s plans, applications, and requests approved by the EPA must be made in consultation with the National Highway Traffic Safety Administration (NHTSA). To expedite NHTSA’s consultation with the EPA, a manufacturer must concurrently submit its application to NHTSA if the manufacturer is seeking off-cycle fuel economy improvement values under the CAFE program for those technologies. For off-cycle technologies that are covered under 40 CFR 86.1869–12(d), NHTSA will consult with the EPA regarding NHTSA’s evaluation of the specific off-cycle technology to ensure its impact on fuel economy and the suitability of using the off-cycle

technology to adjust the fuel economy performance.

(D) A manufacturer may request an extension from NHTSA for more time to obtain an EPA approval. Manufacturers should submit their requests 30 days before the deadlines in paragraphs (b)(3)(i)(A) through (C) of this section. Requests should be submitted to NHTSA's Director of the Office of Vehicle Safety Compliance at *cafe@dot.gov*.

(ii) *Review and approval process.* NHTSA will provide its views on the suitability of using the off-cycle technology to adjust the fuel economy performance to the EPA. NHTSA's evaluation and review will consider:

(A) Whether the technology has a direct impact upon improving fuel economy performance;

(B) Whether the technology is related to crash-avoidance technologies, safety critical systems or systems affecting safety-critical functions, or technologies

designed for the purpose of reducing the frequency of vehicle crashes;

(C) Information from any assessments conducted by the EPA related to the application, the technology and/or related technologies; and

(D) Any other relevant factors.

(iii) *Safety.* (A) Technologies found to be defective, or identified as a part of NHTSA's safety defects program, and technologies that are not performing as intended, will have the values of approved off-cycle credits removed from the manufacturer's credit balance or adjusted if the manufacturers can remedy the defective technology. NHTSA will consult with the manufacturer to determine the amount of the adjustment.

(B) Approval granted for innovative and off-cycle technology credits under NHTSA's fuel efficiency program does not affect or relieve the obligation to comply with the Vehicle Safety Act (49 U.S.C. Chapter 301), including the

"make inoperative" prohibition (49 U.S.C. 30122), and all applicable Federal motor vehicle safety standards issued thereunder (FMVSSs) (49 CFR part 571). In order to generate off-cycle or innovative technology credits manufacturers must state—

(1) That each vehicle equipped with the technology for which they are seeking credits will comply with all applicable FMVSS(s); and

(2) Whether or not the technology has a fail-safe provision. If no fail-safe provision exists, the manufacturer must explain why not and whether a failure of the innovative technology would affect the safety of the vehicle.

Appendix A to Part 531—Example of Calculating Compliance Under § 531.5(c)

Assume a hypothetical manufacturer (Manufacturer X) produces a fleet of domestic passenger automobiles in MY 2012 as follows:

TABLE I TO APPENDIX A

Model type				Description	Actual measured fuel economy (mpg)	Volume
Group	Carline name	Basic engine (L)	Transmission class			
1	PC A FWD	1.8	A5	2-door sedan	34.0	1,500
2	PC A FWD	1.8	M6	2-door sedan	34.6	2,000
3	PC A FWD	2.5	A6	4-door wagon	33.8	2,000
4	PC A AWD	1.8	A6	4-door wagon	34.4	1,000
5	PC A AWD	2.5	M6	2-door hatchback	32.9	3,000
6	PC B RWD	2.5	A6	4-door wagon	32.2	8,000
7	PC B RWD	2.5	A7	4-door sedan	33.1	2,000
8	PC C AWD	3.2	A7	4-door sedan	30.6	5,000
9	PC C FWD	3.2	M6	2-door coupe	28.5	3,000
Total						27,500

Note to this Table I: Manufacturer X's required fleet average fuel economy standard level would first be calculated by determining the fuel economy targets applicable to each unique model type and footprint combination for model type groups 1-9 as illustrated in Table II to this appendix:

Manufacturer X calculates a fuel economy target standard for each unique model type and footprint combination.

TABLE II TO APPENDIX A

Model type				Description	Base tire size	Wheelbase (inches)	Track width F&R average (inches)	Footprint (ft ²)	Volume	Fuel economy target standard (mpg)
Group	Carline name	Basic engine (L)	Transmission class							
1	PC A FWD	1.8	A5	2-door sedan	205/75 R14	99.8	61.2	42.4	1,500	35.01
2	PC A FWD	1.8	M6	2-door sedan	215/70 R15	99.8	60.9	42.2	2,000	35.14
3	PC A FWD	2.5	A6	4-door wagon	215/70 R15	100.0	60.9	42.3	2,000	35.08
4	PC A AWD	1.8	A6	4-door wagon	235/60 R15	100.0	61.2	42.5	1,000	35.95
5	PC A AWD	2.5	M6	2-door hatchback	225/65 R16	99.6	59.5	41.2	3,000	35.81
6	PC B RWD	2.5	A6	4-door wagon	265/55 R18	109.2	66.8	50.7	8,000	30.33
7	PC B RWD	2.5	A7	4-door sedan	235/65 R17	109.2	67.8	51.4	2,000	29.99
8	PC C AWD	3.2	A7	4-door sedan	265/55 R18	111.3	67.8	52.4	5,000	29.52

9	PC C	3.2	M6	2-door	225/65	111.3	67.2	51.9	3,000	29.76
	FWD			coupe	R16					
Total									27,500	

Note to this Table II: With the appropriate fuel economy targets determined for each unique model type and footprint combination, Manufacturer X's required fleet average fuel economy standard would be calculated as illustrated in Figure 1 to this appendix:

Figure 1 to Appendix A—Calculation of Manufacturer X's Fleet Average Fuel Economy Standard using Table II to Appendix A

$$\begin{aligned}
 & \text{Fleet Average Fuel Economy Standard} \\
 & = \frac{(\text{Manufacturer's Domestic Passenger Automobile Production for Applicable Model Year})}{\sum_i \left(\frac{\text{Group}_1 \text{ Production}}{\text{Group}_1 \text{ Target Standard}} + \frac{\text{Group}_2 \text{ Production}}{\text{Group}_{12a} \text{ Target Standard}} + \dots + \frac{\text{Group}_9 \text{ Production}}{\text{Group}_9 \text{ Target Standard}} \right)} \\
 & \text{Fleet Average Fuel Economy Standard} \\
 & \quad (27,500) \\
 & = \frac{1500}{35.01} + \frac{2000}{35.14} + \frac{2000}{35.08} + \frac{1000}{35.95} + \frac{3000}{35.81} + \frac{8000}{30.33} + \frac{2000}{29.99} + \frac{5000}{29.52} + \frac{3000}{29.79} = 31.6 \text{ mpg}
 \end{aligned}$$

Figure 2 to Appendix A—Calculation of Manufacturer X's Actual Fleet Average Fuel Economy Performance Level using Table I to Appendix A

$$\begin{aligned}
 & \text{Fleet Average Fuel Economy Performance} \\
 & = \frac{(\text{Manufacturer's Domestic Passenger Automobile Production for Applicable Model Year})}{\sum_i \left(\frac{\text{Group}_1 \text{ Production}}{\text{Group}_1 \text{ Performance}} + \frac{\text{Group}_2 \text{ Production}}{\text{Group}_2 \text{ Performance}} + \dots + \frac{\text{Group}_9 \text{ Production}}{\text{Group}_9 \text{ Performance}} \right)} \\
 & \text{Fleet Average Fuel Economy Performance} \\
 & \quad (27,500) \\
 & = \frac{1500}{34.0} + \frac{2000}{34.6} + \frac{2000}{33.8} + \frac{1000}{34.4} + \frac{3000}{32.9} + \frac{8000}{32.2} + \frac{2000}{33.1} + \frac{5000}{30.6} + \frac{3000}{28.5} = 32.0 \text{ mpg}
 \end{aligned}$$

Note to Figure 2 to this appendix: Since the actual fleet average fuel economy performance of Manufacturer X's fleet is 32.0 mpg, as compared to its required fleet fuel economy standard of 31.6 mpg, Manufacturer X complied with the CAFE standard for MY 2012 as set forth in §531.5(c).

2. Revise part 533 to read as follows:

PART 533—LIGHT TRUCK FUEL ECONOMY STANDARDS

- Sec.
 - 533.1 Scope.
 - 533.2 Purpose.
 - 533.3 Applicability.
 - 533.4 Definitions.
 - 533.5 Requirements.
 - 533.6 Measurement and calculation procedures.
- Appendix A to Part 533—Example of Calculating Compliance Under § 533.5(i)

Authority: 49 U.S.C. 32902; delegation of authority at 49 CFR 1.95.

§ 533.1 Scope.

This part establishes average fuel economy standards pursuant to section 502(b) of the Motor Vehicle Information and Cost Savings Act, as amended, for light trucks.

§ 533.2 Purpose.

The purpose of this part is to increase the fuel economy of light trucks by establishing minimum levels of average fuel economy for those vehicles.

§ 533.3 Applicability.

This part applies to manufacturers of light trucks.

§ 533.4 Definitions.

(a) *Statutory terms.* (1) The terms *average fuel economy*, *average fuel economy standard*, *fuel economy*, *import*, *manufacture*, *manufacturer*, and *model year* are used as defined in section 501 of the Act.

(2) The term *automobile* is used as defined in section 501 of the Act and in accordance with the determinations in part 523 of this chapter.

(3) The term *domestically manufactured* is used as defined in section 503(b)(2)(E) of the Act.

(b) *Other terms.* As used in this part, unless otherwise required by the context—

(1) *Act* means the Motor Vehicle Information Cost Savings Act, as amended by Public Law 94–163.

(2) *Light truck* is used in accordance with the determinations in part 523 of this chapter.

(3) *Captive import* means with respect to a light truck, one which is not domestically manufactured but which is imported in the 1980 model year or

thereafter by a manufacturer whose principal place of business is in the United States.

(4) *4-wheel drive, general utility vehicle* means a 4-wheel drive, general purpose automobile capable of off-highway operation that has a wheelbase of not more than 280 centimeters, and that has a body shape similar to 1977 Jeep CJ–5 or CJ–7, or the 1977 Toyota Land Cruiser.

(5) *Basic engine* means a unique combination of manufacturer, engine displacement, number of cylinders, fuel system (as distinguished by number of carburetor barrels or use of fuel injection), and catalyst usage.

(6) *Limited product line light truck* means a light truck manufactured by a manufacturer whose light truck fleet is powered exclusively by basic engines which are not also used in passenger automobiles.

§ 533.5 Requirements.

(a) Each manufacturer of light trucks shall comply with the following fleet average fuel economy standards, expressed in miles per gallon, in the model year specified as applicable:

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Table 1 to Paragraph (a)

Model year	2-wheel drive light trucks		4-wheel drive light trucks		Limited product line light trucks
	Captive imports	Other	Captive imports	Other	
1979	17.2	15.8			
1980	16.0	16.0	14.0	14.0	14.0
1981	16.7	16.7	15.0	15.0	14.5

Table 2 to Paragraph (a)

Model year	Combined standard		2-wheel drive light trucks		4-wheel drive light trucks	
	Captive imports	Others	Captive imports	Others	Captive imports	Others
1982	17.5	17.5	18.0	18.0	16.0	16.0
1983	19.0	19.0	19.5	19.5	17.5	17.5
1984	20.0	20.0	20.3	20.3	18.5	18.5
1985	19.5	19.5	19.7	19.7	18.9	18.9
1986	20.0	20.0	20.5	20.5	19.5	19.5
1987	20.5	20.5	21.0	21.0	19.5	19.5
1988	20.5	20.5	21.0	21.0	19.5	19.5
1989	20.5	20.5	21.5	21.5	19.0	19.0
1990	20.0	20.0	20.5	20.5	19.0	19.0
1991	20.2	20.2	20.7	20.7	19.1	19.1

Table 3 to Paragraph (a)

Model year	Combined standard	
	Captive imports	Other
1992	20.2	20.2
1993	20.4	20.4
1994	20.5	20.5
1995	20.6	20.6

Table 4 to Paragraph (a)

Model year	Standard
2001	20.7
2002	20.7
2003	20.7
2004	20.7
2005	21.0
2006	21.6
2007	22.2
2008	22.5
2009	23.1
2010	23.5

Figure 1 to Paragraph (a)

$$Required_Fuel_Economy_Level = \frac{N}{\sum_i \frac{N_i}{T_i}}$$

Where:

N is the total number (sum) of light trucks produced by a manufacturer;
N_i is the number (sum) of the *i*th light truck model type produced by a manufacturer; and
T_i is the fuel economy target of the *i*th light truck model type, which is determined

according to the following formula, rounded to the nearest hundredth:

$$T = \frac{1}{\frac{1}{a} + \left(\frac{1}{b} - \frac{1}{a}\right) \frac{e^{(x-c)d}}{1 + e^{(x-c)d}}}$$

Where:

Parameters *a*, *b*, *c*, and *d* are defined in Table 5 to this paragraph (a);
e = 2.718; and
x = footprint (in square feet, rounded to the nearest tenth) of the model type.

Table 5 to Paragraph (a)—Parameters for the Light Truck Fuel Economy Targets for MYs

2008-2011

Model year	Parameters			
	<i>a</i> (mpg)	<i>b</i> (mpg)	<i>c</i> (gal/mi/ft ²)	<i>d</i> (gal/mi)
2008	28.56	19.99	49.30	5.58
2009	30.07	20.87	48.00	5.81
2010	29.96	21.20	48.49	5.50
2011	27.10	21.10	56.41	4.28

Figure 2 to Paragraph (a)

$$CAFE_{required} = \frac{\sum_i PRODUCTION_i}{\sum_i \frac{PRODUCTION_i}{TARGET_i}}$$

Where:

CAFE_{required} is the fleet average fuel economy standard for a given light truck fleet;
 Subscript *i* is a designation of multiple groups of light trucks, where each

group's designation, *i.e.*, *i* = 1, 2, 3, etc., represents light trucks that share a unique model type and footprint within the applicable fleet;

Production_i is the number of light trucks produced for sale in the United States within each *i*th designation, *i.e.*, which share the same model type and footprint; and

TARGET_i is the fuel economy target in miles per gallon (mpg) applicable to the

footprint of light trucks within each *i*th designation, *i.e.*, which share the same model type and footprint, calculated according to either Figure 3 or Figure 4 to this paragraph (a), as appropriate, and rounded to the nearest hundredth of a mpg, *i.e.*, 35.455 = 35.46 mpg, and the summations in the numerator and denominator are both performed over all models in the fleet in question.

Figure 3 to Paragraph (a)

$$TARGET = \frac{1}{\text{MIN} \left[\text{MAX} \left(c \times FOOTPRINT + d, \frac{1}{a} \right), \frac{1}{b} \right]}$$

Where:

TARGET is the fuel economy target (in mpg) applicable to vehicles of a given footprint (*FOOTPRINT*, in square feet);

Parameters *a*, *b*, *c*, and *d* are defined in Table 6 to this paragraph (a); and

The *MIN* and *MAX* functions take the minimum and maximum, respectively, of the included values.

Table 6 to Paragraph (a)—Parameters for the Light Truck Fuel Economy Targets for MYs 2012-2016

Model year	Parameters			
	<i>a</i> (mpg)	<i>b</i> (mpg)	<i>c</i> (gal/mi/ft ²)	<i>d</i> (gal/mi)
2012	29.82	22.27	0.0004546	0.014900
2013	30.67	22.74	0.0004546	0.013968
2014	31.38	23.13	0.0004546	0.013225
2015	32.72	23.85	0.0004546	0.011920
2016	34.42	24.74	0.0004546	0.010413

Figure 4 to Paragraph (a)

TARGET

$$= \text{MAX} \left(\frac{1}{\text{MIN} \left[\text{MAX} \left(c \times \text{FOOTPRINT} + d, \frac{1}{a} \right), \frac{1}{b} \right]}, \frac{1}{\text{MIN} \left[\text{MAX} \left(g \times \text{FOOTPRINT} + h \frac{1}{e} \right), \frac{1}{f} \right]} \right)$$

Where:

TARGET is the fuel economy target (in mpg) applicable to vehicles of a given footprint (*FOOTPRINT*, in square feet);

Parameters *a*, *b*, *c*, *d*, *e*, *f*, *g*, and *h* are defined in Table 7 to this paragraph (a); and

The *MIN* and *MAX* functions take the minimum and maximum, respectively, of the included values.

Table 7 to Paragraph (a)—Parameters for the Light Truck Fuel Economy Targets for MYs 2017-2026

Model year	Parameters							
	<i>a</i> (mpg)	<i>b</i> (mpg)	<i>c</i> (gal/mi/ft ²)	<i>d</i> (gal/mi)	<i>e</i> (mpg)	<i>f</i> (mpg)	<i>g</i> (gal/mi/ft ²)	<i>h</i> (gal/mi)
2017	36.26	25.09	0.0005484	0.005097	35.10	25.09	0.0004546	0.009851
2018	37.36	25.20	0.0005358	0.004797	35.31	25.20	0.0004546	0.009682
2019	38.16	25.25	0.0005265	0.004623	35.41	25.25	0.0004546	0.009603
2020	39.11	25.25	0.0005140	0.004494	35.41	25.25	0.0004546	0.009603
2021	39.71	25.63	0.000506	0.00443	NA	NA	NA	NA
2022	40.31	26.02	0.000499	0.00436	NA	NA	NA	NA
2023	40.93	26.42	0.000491	0.00429	NA	NA	NA	NA
2024	44.48	26.74	0.000452	0.00395	NA	NA	NA	NA
2025	48.35	29.07	0.000416	0.00364	NA	NA	NA	NA
2026	52.56	31.60	0.000382	0.00334	NA	NA	NA	NA

(b)(1) For model year 1979, each manufacturer may:

(i) Combine its 2- and 4-wheel drive light trucks and comply with the average fuel economy standard in paragraph (a) of this section for 2-wheel drive light trucks; or

(ii) Comply separately with the two standards specified in paragraph (a) of this section.

(2) For model year 1979, the standard specified in paragraph (a) of this section for 4-wheel drive light trucks applies only to 4-wheel drive general utility vehicles. All other 4-wheel drive light trucks in that model year shall be included in the 2-wheel drive category for compliance purposes.

(c) For model years 1980 and 1981, manufacturers of limited product line light trucks may:

(1) Comply with the separate standard for limited product line light trucks; or

(2) Comply with the other standards specified in paragraph (a) of this section, as applicable.

(d) For model years 1982–91, each manufacturer may:

(1) Combine its 2- and 4-wheel drive light trucks (segregating captive import and other light trucks) and comply with the combined average fuel economy standard specified in paragraph (a) of this section; or

(2) Comply separately with the 2-wheel drive standards and the 4-wheel drive standards (segregating captive

import and other light trucks) specified in paragraph (a) of this section.

(e) For model year 1992, each manufacturer shall comply with the average fuel economy standard specified in paragraph (a) of this section (segregating captive import and other light trucks).

(f) For each model year 1996 and thereafter, each manufacturer shall combine its captive imports with its other light trucks and comply with the fleet average fuel economy standard in paragraph (a) of this section.

(g) For model years 2008–2010, at a manufacturer’s option, a manufacturer’s light truck fleet may comply with the fuel economy standard calculated for each model year according to Figure 1 to paragraph (a) of this section and the

appropriate values in Table 5 to paragraph (a) of this section, with said option being irrevocably chosen for that model year and reported as specified in § 537.8 of this chapter.

(h) For model year 2011, a manufacturer's light truck fleet shall comply with the fleet average fuel economy standard calculated for that model year according to Figure 1 to paragraph (a) of this section and the appropriate values in Table 5 to paragraph (a) of this section.

(i) For model years 2012–2016, a manufacturer's light truck fleet shall comply with the fleet average fuel economy standard calculated for that model year according to Figures 2 and 3 to paragraph (a) of this section and the appropriate values in Table 6 to paragraph (a) of this section.

(j) For model years 2017–2025, a manufacturer's light truck fleet shall comply with the fleet average fuel economy standard calculated for that model year according to Figures 2 and 4 to paragraph (a) of this section and the appropriate values in Table 7 to paragraph (a) of this section.

§ 533.6 Measurement and calculation procedures.

(a) Any reference to a class of light trucks manufactured by a manufacturer shall be deemed—

(1) To include all light trucks in that class manufactured by persons who control, are controlled by, or are under common control with, such manufacturer; and

(2) To include only light trucks which qualify as non-passenger vehicles in accordance with 49 CFR 523.5 based upon the production measurements of the vehicles as sold to dealerships; and

(3) To exclude all light trucks in that class manufactured (within the meaning of paragraph (a)(1) of this section) during a model year by such manufacturer which are exported prior to the expiration of 30 days following the end of such model year.

(b) The fleet average fuel economy performance of all light trucks that are manufactured by a manufacturer in a model year shall be determined in accordance with procedures established by the Administrator of the Environmental Protection Agency (EPA) under 49 U.S.C. 32904 and set forth in 40 CFR part 600.

(c) For model years 2017 and later, a manufacturer is eligible to increase the fuel economy performance of light trucks in accordance with procedures established by the EPA set forth in 40 CFR part 600, subpart F, including any adjustments to fuel economy the EPA allows, such as for fuel consumption

improvements related to air conditioning efficiency, off-cycle technologies, and hybridization and other performance-based technologies for full-size pickup trucks that meet the requirements specified in 40 CFR 86.1803. Manufacturers must provide reporting on these technologies as specified in 49 CFR 537.7 by the required deadlines.

(1) *Efficient air conditioning technologies.* A manufacturer that seeks to increase its fleet average fuel economy performance through the use of technologies that improve the efficiency of air conditioning systems must follow the requirements in 40 CFR 86.1868–12. Fuel consumption improvement values resulting from the use of those air conditioning systems must be determined in accordance with 40 CFR 600.510–12(c)(3)(i).

(2) *Incentives for advanced full-size light-duty pickup trucks.* The eligibility of a manufacturer to increase its fuel economy using hybridized and other performance-based technologies for full-size pickup trucks must follow 40 CFR 86.1870–12 and the fuel consumption improvement of these full-size pickup truck technologies must be determined in accordance with 40 CFR 600.510–12(c)(3)(iii). Manufacturers may also combine incentives for full size pickups and dedicated alternative fueled vehicles when calculating fuel economy performance values in 40 CFR 600.510–12.

(3) *Off-cycle technologies on EPA's predefined list or using 5-cycle testing.* A manufacturer that seeks to increase its fleet average fuel economy performance through the use of off-cycle technologies must follow the requirements in 40 CFR 86.1869–12. A manufacturer is eligible to gain fuel consumption improvements for predefined off-cycle technologies in accordance with 40 CFR 86.1869–12(b) or for technologies tested using the EPA's 5-cycle methodology in accordance with 40 CFR 86.1869–12(c). The fuel consumption improvement is determined in accordance with 40 CFR 600.510–12(c)(3)(ii).

(4) *Off-cycle technologies using the alternative EPA-approved methodology.* A manufacturer is eligible to increase its fuel economy performance through use of an off-cycle technology requiring an application request made to the EPA in accordance with 40 CFR 86.1869–12(d).

(i) *Eligibility under the corporate average fuel economy (CAFE) program requires compliance with paragraphs (c)(4)(i)(A) through (C) of this section.* Paragraphs (c)(4)(i)(A) through (C) of this section apply starting in model year 2024.

(A) A manufacturer seeking to increase its fuel economy performance using the alternative methodology for an off-cycle technology, if prior to the applicable model year, must submit to EPA a detailed analytical plan and be approved (*i.e.*, for its planned test procedure and model types for demonstration) in accordance with 40 CFR 86.1869–12(d).

(B) A manufacturer seeking to increase its fuel economy performance using the alternative methodology for an off-cycle technology must also submit an official credit application to EPA and obtain approval in accordance with 40 CFR 86.1869–12(e) prior to September of the given model year.

(C) Manufacturer's plans, applications and requests approved by the EPA must be made in consultation with the National Highway Traffic Safety Administration (NHTSA). To expedite NHTSA's consultation with the EPA, a manufacturer must concurrently submit its application to NHTSA if the manufacturer is seeking off-cycle fuel economy improvement values under the CAFE program for those technologies. For off-cycle technologies that are covered under 40 CFR 86.1869–12(d), NHTSA will consult with the EPA regarding NHTSA's evaluation of the specific off-cycle technology to ensure its impact on fuel economy and the suitability of using the off-cycle technology to adjust the fuel economy performance.

(ii) *Review and approval process.* NHTSA will provide its views on the suitability of using the off-cycle technology to adjust the fuel economy performance to the EPA. NHTSA's evaluation and review will consider:

(A) Whether the technology has a direct impact upon improving fuel economy performance;

(B) Whether the technology is related to crash-avoidance technologies, safety critical systems or systems affecting safety-critical functions, or technologies designed for the purpose of reducing the frequency of vehicle crashes;

(C) Information from any assessments conducted by the EPA related to the application, the technology and/or related technologies; and

(D) Any other relevant factors.

(E) NHTSA will collaborate to host annual meetings with EPA at least once by July 30th before the model year begins to provide general guidance to the industry on past off-cycle approvals.

(iii) *Safety.* (A) Technologies found to be defective, or identified as a part of NHTSA's safety defects program, and technologies that are not performing as intended, will have the values of approved off-cycle credits removed from

the manufacturer’s credit balance or adjusted if the manufacturers can remedy the defective technology. NHTSA will consult with the manufacturer to determine the amount of the adjustment.

(B) Approval granted for innovative and off-cycle technology credits under NHTSA’s fuel efficiency program does not affect or relieve the obligation to comply with the Vehicle Safety Act (49 U.S.C. Chapter 301), including the

“make inoperative” prohibition (49 U.S.C. 30122), and all applicable Federal motor vehicle safety standards issued thereunder (FMVSSs) (49 CFR part 571). In order to generate off-cycle or innovative technology credits manufacturers must state—

(1) That each vehicle equipped with the technology for which they are seeking credits will comply with all applicable FMVSS(s); and

(2) Whether or not the technology has a fail-safe provision. If no fail-safe

provision exists, the manufacturer must explain why not and whether a failure of the innovative technology would affect the safety of the vehicle.

Appendix A to Part 533—Example of Calculating Compliance Under § 533.5(i)

Assume a hypothetical manufacturer (Manufacturer X) produces a fleet of light trucks in MY 2012 as follows:

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TABLE I TO APPENDIX A

Model type				Description	Actual measured fuel economy (mpg)	Volume
Group	Carline name	Basic engine (L)	Transmission class			
1	Pickup A 2WD	4	A5	Reg cab, MB	27.1	800
2	Pickup B 2WD	4	M5	Reg cab, MB	27.6	200
3	Pickup C 2WD	4.5	A5	Reg cab, LB	23.9	300

4	Pickup C 2WD	4	M5	Ext cab, MB	23.7	400
5	Pickup C 4WD	4.5	A5	Crew cab, SB	23.5	400
6	Pickup D 2WD	4.5	A6	Crew cab, SB	23.6	400
7	Pickup E 2WD	5	A6	Ext cab, LB	22.7	500
8	Pickup E 2WD	5	A6	Crew cab, MB	22.5	500
9	Pickup F 2WD	4.5	A5	Reg cab, LB	22.5	1,600
10	Pickup F 4WD	4.5	A5	Ext cab, MB	22.3	800
11	Pickup F 4WD	4.5	A5	Crew cab, SB	22.2	800
Total	6,700					

Note to this Table I: Manufacturer X's required fleet average fuel economy standard level would first be calculated by determining the fuel economy targets applicable to each unique model type and footprint combination for model type groups 1-11 as illustrated in Table II to this appendix.

Manufacturer X calculates a fuel economy target standard for each unique model type and footprint combination.

TABLE II TO APPENDIX A

Model type				Description	Base tire size	Wheelbase (inches)	Track width F&R average (inches)	Footprint (ft ²)	Volume	Fuel economy target standard (mpg)
Group	Carline name	Basic engine (L)	Transmission class							
1	Pickup A 2WD	4	A5	Reg cab, MB	235/75R1 5	100.0	68.8	47.8	800	27.30
2	Pickup B 2WD	4	M5	Reg cab, MB	235/75R1 5	100.0	68.2	47.4	200	27.44
3	Pickup C 2WD	4.5	A5	Reg cab, LB	255/70R1 7	125.0	68.8	59.7	300	23.79
4	Pickup C 2WD	4	M5	Ext cab, MB	255/70R1 7	125.0	68.8	59.7	400	23.79
5	Pickup C 4WD	4.5	A5	Crew cab, SB	275/70R1 7	150.0	69.0	71.9	400	22.27
6	Pickup D 2WD	4.5	A6	Crew cab, SB	255/70R1 7	125.0	68.8	59.7	400	23.79
7	Pickup E 2WD	5	A6	Ext cab, LB	255/70R1 7	125.0	68.8	59.7	500	23.79
8	Pickup E 2WD	5	A6	Crew cab, MB	285/70R1 7	125.0	69.2	60.1	500	23.68
9	Pickup F 2WD	4.5	A5	Reg cab, LB	255/70R1 7	125.0	68.9	59.8	1,600	23.76

10	Pickup F 4WD	4.5	A5	Ext cab, MB	275/70R1 7	150.0	69.0	71.9	800	22.27
11	Pickup F 4WD	4.5	A5	Crew cab, SB	285/70R1 7	150.0	69.2	72.1	800	22.27
Total									6,700	

Note to this Table II: With the appropriate fuel economy targets determined for each unique model type and footprint combination, Manufacturer X's required fleet average fuel economy standard would be calculated as illustrated in Figure 1 to this appendix:

Figure 1 to Appendix A--Calculation of Manufacturer X's Fleet Average Fuel Economy Standard using Table II of Appendix A

$$\begin{aligned}
 & \text{Fleet Average Fuel Economy Standard} \\
 & \text{(Manufacturer's light truck Production for Applicable Model Year)} \\
 = & \frac{\sum_i \left(\frac{\text{Group}_1 \text{ Production}}{\text{Group}_1 \text{ Target Standard}} + \frac{\text{Group}_{2a} \text{ Production}}{\text{Group}_2 \text{ Target Standard}} + \dots + \frac{\text{Group}_{11} \text{ Production}}{\text{Group}_{11} \text{ Target Standard}} \right)}{\text{Fleet Average Fuel Economy Standard}} \\
 & \text{(6,700)} \\
 = & \frac{800}{27.30} + \frac{200}{27.44} + \frac{300}{23.79} + \frac{400}{23.79} + \frac{400}{22.27} + \frac{400}{23.79} + \frac{500}{23.79} + \frac{500}{23.68} + \frac{1600}{23.76} + \frac{800}{22.27} + \frac{800}{22.27} \\
 & = 23.7 \text{ mpg}
 \end{aligned}$$

FIGURE 2 TO APPENDIX A—CALCULATION OF MANUFACTURER X'S ACTUAL FLEET AVERAGE FUEL ECONOMY PERFORMANCE LEVEL USING TABLE I OF APPENDIX A

$$\begin{aligned}
 & \text{Fleet Average Fuel Economy Performance} \\
 & \text{(Manufacturer's Light Truck Production for Applicable Model Year)} \\
 = & \frac{\sum_i \left(\frac{\text{Group}_1 \text{ Production}}{\text{Group}_1 \text{ Performance}} + \frac{\text{Group}_2 \text{ Production}}{\text{Group}_2 \text{ Performance}} + \dots + \frac{\text{Group}_{11} \text{ Production}}{\text{Group}_{11} \text{ Performance}} \right)}{\text{Fleet Average Fuel Economy Performance}} \\
 & \text{(6,700)} \\
 = & \frac{800}{27.1} + \frac{200}{27.6} + \frac{300}{23.9} + \frac{400}{23.7} + \frac{400}{23.5} + \frac{400}{23.6} + \frac{500}{22.7} + \frac{500}{22.5} + \frac{1600}{22.5} + \frac{800}{22.3} + \frac{800}{22.2} = 23.3 \text{ mpg}
 \end{aligned}$$

NOTE TO FIGURE 2 TO THIS APPENDIX: Since the actual fleet average fuel economy performance of Manufacturer X's fleet is 23.3 mpg, as compared to its required fleet fuel economy standard of 23.7 mpg, Manufacturer X did not comply with the CAFE standard for MY 2012 as set forth in §533.5(i).

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■ 3. Revise part 536 to read as follows:

PART 536—TRANSFER AND TRADING OF FUEL ECONOMY CREDITS

Sec.

- 536.1 Scope.
- 536.2 Application.
- 536.3 Definitions.
- 536.4 Credits.
- 536.5 Trading infrastructure.
- 536.6 Treatment of credits earned prior to model year 2011.
- 536.7 Treatment of carryback credits.
- 536.8 Conditions for trading of credits.
- 536.9 Use of credits with regard to the domestically manufactured passenger automobile minimum standard.
- 536.10 Treatment of dual-fuel and alternative fuel vehicles—consistency with 49 CFR part 538.

Authority: 49 U.S.C. 32903; delegation of authority at 49 CFR 1.95.

§ 536.1 Scope.

This part establishes regulations governing the use and application of corporate average fuel economy (CAFE) credits up to three model years before and five model years after the model year in which the credit was earned. It also specifies requirements for manufacturers wishing to transfer fuel economy credits between their fleets and for manufacturers and other persons wishing to trade fuel economy credits to achieve compliance with prescribed fuel economy standards.

§ 536.2 Application.

This part applies to all credits earned (and transferable and tradable) for exceeding applicable average fuel economy standards in a given model year for domestically manufactured passenger cars, imported passenger cars, and light trucks.

§ 536.3 Definitions.

(a) *Statutory terms.* All terms defined in 49 U.S.C. 32901(a) are used pursuant to their statutory meaning.

(b) *Other terms.* As used in the part:
Above standard fuel economy means, with respect to a compliance category, that the automobiles manufactured by a manufacturer in that compliance category in a particular model year have greater average fuel economy (calculated in a manner that reflects the incentives for alternative fuel automobiles per 49 U.S.C. 32905) than that manufacturer's fuel economy standard for that compliance category and model year.

Adjustment factor means a factor used to adjust the value of a traded or transferred credit for compliance purposes to ensure that the compliance value of the credit when used reflects the total volume of oil saved when the credit was earned.

Below standard fuel economy means, with respect to a compliance category, that the automobiles manufactured by a manufacturer in that compliance category in a particular model year have lower average fuel economy (calculated in a manner that reflects the incentives for alternative fuel automobiles per 49 U.S.C. 32905) than that manufacturer's fuel economy standard for that compliance category and model year.

Compliance means a manufacturer achieves compliance in a particular compliance category when:

(1)(i) The average fuel economy of the vehicles in that category exceed or meet the fuel economy standard for that category; or

(ii) The average fuel economy of the vehicles in that category do not meet the fuel economy standard for that category, but the manufacturer proffers a sufficient number of valid credits, adjusted for total oil savings, to cover the gap between the average fuel economy of the vehicles in that category and the required average fuel economy.

(2) A manufacturer achieves compliance for its fleet if the conditions in paragraph (1)(i) or (ii) of this definition are simultaneously met for all compliance categories.

Compliance category means any of three categories of automobiles subject to Federal fuel economy regulations. The three compliance categories recognized by 49 U.S.C. 32903(g)(6) are domestically manufactured passenger automobiles, imported passenger automobiles, and non-passenger automobiles ("light trucks").

Credit holder (or holder) means a legal person that has valid possession of credits, either because they are a manufacturer who has earned credits by exceeding an applicable fuel economy standard, or because they are a designated recipient who has received credits from another holder. Credit holders need not be manufacturers, although all manufacturers may be credit holders.

Credits (or fuel economy credits) means an earned or purchased allowance recognizing that the average fuel economy of a particular manufacturer's vehicles within a particular compliance category and model year exceeds that manufacturer's fuel economy standard for that compliance category and model year. One credit is equal to $\frac{1}{10}$ of a mile per gallon above the fuel economy standard per one vehicle within a compliance category. Credits are denominated according to model year in which they are earned (vintage), originating manufacturer, and compliance category.

Expiry date means the model year after which fuel economy credits may no longer be used to achieve compliance with fuel economy regulations. Expiry dates are calculated in terms of model years: For example, if a manufacturer earns credits for model year 2011, these credits may be used for compliance in model years 2008–2016.

Fleet means all automobiles that are manufactured by a manufacturer in a particular model year and are subject to fuel economy standards under 49 CFR parts 531 and 533. For the purposes of this part, a manufacturer's fleet means all domestically manufactured and imported passenger automobiles and non-passenger automobiles ("light trucks"). "Work trucks" and medium and heavy trucks are not included in this definition for purposes of this part.

Light truck means the same as "non-passenger automobile," as that term is defined in 49 U.S.C. 32901(a)(17), and as "light truck," as that term is defined at 49 CFR 523.5.

Originating manufacturer means the manufacturer that originally earned a particular credit. Each credit earned will be identified with the name of the originating manufacturer.

Trade means the receipt by the National Highway Traffic Safety Administration (NHTSA) of an instruction from a credit holder to place one of its credits in the account of another credit holder. A credit that has been traded can be identified because the originating manufacturer will be a different party than the current credit holder. Traded credits are moved from one credit holder to the recipient credit holder within the same compliance category for which the credits were originally earned. If a credit has been traded to another credit holder and is subsequently traded back to the originating manufacturer, it will be deemed not to have been traded for compliance purposes.

Transfer means the application by a manufacturer of credits earned by that manufacturer in one compliance category or credits acquired by trade (and originally earned by another manufacturer in that category) to achieve compliance with fuel economy standards with respect to a different compliance category. For example, a manufacturer may purchase light truck credits from another manufacturer, and transfer them to achieve compliance in the manufacturer's domestically manufactured passenger car fleet. Subject to the credit transfer limitations of 49 U.S.C. 32903(g)(3), credits can also be transferred across compliance categories and banked or saved in that category to be carried forward or

backwards later to address a credit shortfall.

Vintage means, with respect to a credit, the model year in which the credit was earned.

§ 536.4 Credits.

(a) *Type and vintage.* All credits are identified and distinguished in the accounts by originating manufacturer, compliance category, and model year of origin (vintage).

(b) *Application of credits.* All credits earned and applied are calculated, per 49 U.S.C. 32903(c), in tenths of a mile per gallon by which the average fuel economy of vehicles in a particular compliance category manufactured by a manufacturer in the model year in which the credits are earned exceeds the applicable average fuel economy standard, multiplied by the number of

vehicles sold in that compliance category. However, credits that have been traded between credit holders or transferred between compliance categories are valued for compliance purposes using the adjustment factor specified in paragraph (c) of this section, pursuant to the “total oil savings” requirement of 49 U.S.C. 32903(f)(1).

(c) *Adjustment factor.* When traded or transferred and used, fuel economy credits are adjusted to ensure fuel oil savings is preserved. For traded credits, the user (or buyer) must multiply the calculated adjustment factor by the number of shortfall credits it plans to offset in order to determine the number of equivalent credits to acquire from the earner (or seller). For transferred credits, the user of credits must multiply the calculated adjustment factor by the

number of shortfall credits it plans to offset in order to determine the number of equivalent credits to transfer from the compliance category holding the available credits. The adjustment factor is calculated according to the following formula:

$$A = \left(\frac{VMT_u * MPG_{ae} * MPG_{se}}{VMT_e * MPG_{au} * MPG_{su}} \right)$$

Where:

A = Adjustment factor applied to traded and transferred credits. The quotient shall be rounded to 4 decimal places.

VMT_e = Lifetime vehicle miles traveled as provided in the following table for the model year and compliance category in which the credit was earned.

VMT_u = Lifetime vehicle miles traveled as provided in the following table for the model year and compliance category in which the credit is used for compliance.

Table 1 to Paragraph (c)

Model year	Lifetime Vehicle Miles Traveled (VMT)					
	2012	2013	2014	2015	2016	2017-2025
Passenger Cars	177,238	177,366	178,652	180,497	182,134	195,264
Light Trucks	208,471	208,537	209,974	212,040	213,954	225,865

MPG_{se} = Required fuel economy standard for the originating (earning) manufacturer, compliance category, and model year in which the credit was earned.

MPG_{ae} = Actual fuel economy for the originating manufacturer, compliance category, and model year in which the credit was earned.

MPG_{su} = Required fuel economy standard for the user (buying) manufacturer, compliance category, and model year in which the credit is used for compliance.

MPG_{au} = Actual fuel economy for the user manufacturer, compliance category, and model year in which the credit is used for compliance.

§ 536.5 Trading infrastructure.

(a) *Accounts.* NHTSA maintains “accounts” for each credit holder. The account consists of a balance of credits in each compliance category and vintage held by the holder.

(b) *Who may hold credits.* Every manufacturer subject to fuel economy standards under 49 CFR part 531 or 533 is automatically an account holder. If the manufacturer earns credits pursuant to this part, or receives credits from

another party, so that the manufacturer’s account has a non-zero balance, then the manufacturer is also a credit holder. Any party designated as a recipient of credits by a current credit holder will receive an account from NHTSA and become a credit holder, subject to the following conditions:

(1) A designated recipient must provide name, address, contacting information, and a valid taxpayer identification number or Social Security number;

(2) NHTSA does not grant a request to open a new account by any party other than a party designated as a recipient of credits by a credit holder; and

(3) NHTSA maintains accounts with zero balances for a period of time, but reserves the right to close accounts that have had zero balances for more than one year.

(c) *Automatic debits and credits of accounts.* (1) To carry credits forward, backward, transfer credits, or trade credits into other credit accounts, a manufacturer or credit holder must

submit a credit instruction to NHTSA. A credit instruction must detail and include:

(i) The credit holder(s) involved in the transaction.

(ii) The originating credits described by the amount of the credits, compliance category and the vintage of the credits.

(iii) The recipient credit account(s) for banking or applying the originating credits described by the compliance category(ies), model year(s), and if applicable the adjusted credit amount(s) and adjustment factor(s).

(iv) For trades, a contract authorizing the trade signed by the manufacturers or credit holders or by managers legally authorized to obligate the sale and purchase of the traded credits.

(2) Upon receipt of a credit instruction from an existing credit holder, NHTSA verifies the presence of sufficient credits in the account(s) of the credit holder(s) involved as applicable and notifies the credit holder(s) that the credits will be debited from and/or

credited to the accounts involved, as specified in the credit instruction. NHTSA determines if the credits can be debited or credited based upon the amount of available credits, accurate application of any adjustment factors and the credit requirements prescribed by this part that are applicable at the time the transaction is requested.

(3) After notifying the credit holder(s), all accounts involved are either credited or debited, as appropriate, in line with the credit instruction. Traded credits identified by a specific compliance category are deposited into the recipient's account in that same compliance category and model year. If a recipient of credits as identified in a credit instruction is not a current account holder, NHTSA establishes the credit recipient's account, subject to the conditions described in paragraph (b) of this section, and adds the credits to the newly-opened account.

(4) NHTSA will automatically delete unused credits from holders' accounts when those credits reach their expiry date.

(5) Starting January 1, 2022, manufacturers or credit holders issuing credit instructions or providing credit allocation plans as specified in paragraph (d) of this section, must use and submit the NHTSA Credit Template fillable form (Office of Management and Budget (OMB) Control No. 2127-0019, NHTSA Form 1475). The NHTSA Credit Template is available for download on NHTSA's website. If a credit instruction includes a trade, the NHTSA Credit Template must be signed by managers legally authorized to obligate the sale and/or purchase of the traded credits from both parties to the trade. The NHTSA Credit Template signed by both parties to the trade serves as an acknowledgement that the parties have agreed to trade credits, and does not dictate terms, conditions, or other business obligations of the parties. Manufacturers must submit the template along with other requested information through the CAFE email, *cafe@dot.gov*. NHTSA reserves the right to request additional information from the parties regarding the terms of the trade.

(6) Starting September 1, 2022, manufacturers or credit holders trading credits must use and submit the NHTSA Credit Value Reporting Template fillable form (OMB Control No. 2127-0019, NHTSA Form 1621). The NHTSA Credit Template is available for download on NHTSA's website. The template will provide NHTSA with the price paid for the credits including a description of any other monetary or non-monetary terms affecting the price of the traded credits, such as any technology

exchanged or shared for the credits, any other non-monetary payment for the credits, or any other agreements related to the trade. Manufacturers must submit the template along with other requested information through the CAFE email, *cafe@dot.gov*. NHTSA reserves the right to request additional information from the parties regarding the terms of the trade.

(7) NHTSA will consider claims that information submitted to the agency under this section is entitled to confidential treatment under 5 U.S.C. 552(b) and under the provisions of part 512 of this chapter if the information is submitted in accordance with the procedures of part 512.

(d) *Compliance.* (1) NHTSA assesses compliance with fuel economy standards each year, utilizing the certified and reported CAFE data provided by the Environmental Protection Agency (EPA) for enforcement of the CAFE program pursuant to 49 U.S.C. 32904(e). Credit values are calculated based on the CAFE data from the EPA. If a particular compliance category within a manufacturer's fleet has above standard fuel economy, NHTSA adds credits to the manufacturer's account for that compliance category and vintage in the appropriate amount by which the manufacturer has exceeded the applicable standard.

(2) If a manufacturer's vehicles in a particular compliance category have below standard fuel economy, NHTSA will provide written notification to the manufacturer that it has failed to meet a particular fleet target standard. The manufacturer will be required to confirm the shortfall and must either: Submit a plan indicating how it will allocate existing credits or earn, transfer and/or acquire credits; or pay the appropriate civil penalty. The manufacturer must submit a plan or payment within 60 days of receiving agency notification.

(3) Credits used to offset shortfalls are subject to the three- and five-year limitations as described in § 536.6.

(4) Transferred credits are subject to the limitations specified by 49 U.S.C. 32903(g)(3) and this part.

(5) The value, when used for compliance, of any credits received via trade or transfer is adjusted, using the adjustment factor described in § 536.4(c), pursuant to 49 U.S.C. 32903(f)(1).

(6) Credit allocation plans received from a manufacturer will be reviewed and approved by NHTSA. Starting in model year 2022, use the NHTSA Credit Template and the Credit Trade Cost Template (OMB Control No. 2127-0019,

NHTSA Forms 1475 and 1621) to record the credit transactions and the costs for any credit trades requested in the credit allocation plan. The template is a fillable form that has an option for recording and calculating credit transactions for credit allocation plans. The template calculates the required adjustments to the credits. The credit allocation plan and the completed transaction templates must be submitted to NHTSA. NHTSA will approve the credit allocation plan unless it finds that the proposed credits are unavailable or that it is unlikely that the plan will result in the manufacturer earning sufficient credits to offset the subject credit shortfall. If the plan is approved, NHTSA will revise the respective manufacturer's credit account accordingly. If the plan is rejected, NHTSA will notify the respective manufacturer and request a revised plan or payment of the appropriate fine.

(e) *Reporting.* (1) NHTSA periodically publishes the names and credit holdings of all credit holders. NHTSA does not publish individual transactions, nor respond to individual requests for updated balances from any party other than the account holder.

(2) NHTSA issues an annual credit status letter to each party that is a credit holder at that time. The letter to a credit holder includes a credit accounting record that identifies the credit status of the credit holder including any activity (earned, expired, transferred, traded, carry-forward and carry-back credit transactions/allocations) that took place during the identified activity period.

§ 536.6 Treatment of credits earned prior to model year 2011.

(a) Credits earned in a compliance category before model year 2008 may be applied by the manufacturer that earned them to carryback plans for that compliance category approved up to three model years prior to the year in which the credits were earned, or may be applied to compliance in that compliance category for up to three model years after the year in which the credits were earned.

(b) Credits earned in a compliance category during and after model year 2008 may be applied by the manufacturer that earned them to carryback plans for that compliance category approved up to three years prior to the year in which the credits were earned, or may be held or applied for up to five model years after the year in which the credits were earned.

(c) Credits earned in a compliance category prior to model year 2011 may not be transferred or traded.

§ 536.7 Treatment of carryback credits.

(a) Carryback credits earned in a compliance category in any model year may be used in carryback plans approved by NHTSA, pursuant to 49 U.S.C. 32903(b), for up to three model years prior to the year in which the credit was earned.

(b) For purposes of this part, NHTSA will treat the use of future credits for compliance, as through a carryback plan, as a deferral of penalties for non-compliance with an applicable fuel economy standard.

(c) If NHTSA receives and approves a manufacturer's carryback plan to earn future credits within the following three model years in order to comply with current regulatory obligations, NHTSA will defer levying fines for non-compliance until the date(s) when the manufacturer's approved plan indicates that credits will be earned or acquired to achieve compliance, and upon receiving confirmed CAFE data from EPA. If the manufacturer fails to acquire or earn sufficient credits by the plan dates, NHTSA will initiate compliance proceedings.

(d) In the event that NHTSA fails to receive or approve a plan for a non-compliant manufacturer, NHTSA will levy fines pursuant to statute. If within three years, the non-compliant manufacturer earns or acquires additional credits to reduce or eliminate the non-compliance, NHTSA will reduce any fines owed, or repay fines to the extent that credits received reduce the non-compliance.

(e) No credits from any source (earned, transferred and/or traded) will be accepted in lieu of compliance if those credits are not identified as originating within one of the three model years after the model year of the confirmed shortfall.

§ 536.8 Conditions for trading of credits.

(a) *Trading of credits.* If a credit holder wishes to trade credits to another party, the current credit holder and the receiving party must jointly issue an instruction to NHTSA, identifying the quantity, vintage, compliance category, and originator of the credits to be traded. If the recipient is not a current account holder, the recipient must provide sufficient information for NHTSA to establish an account for the recipient. Once an account has been established or identified for the recipient, NHTSA completes the trade by debiting the transferor's account and crediting the recipient's account. NHTSA will track the quantity, vintage, compliance category, and originator of all credits held or traded by all account-holders.

(b) *Trading between and within compliance categories.* For credits earned in model year 2011 or thereafter, and used to satisfy compliance obligations for model year 2011 or thereafter:

(1) Manufacturers may use credits originally earned by another manufacturer in a particular compliance category to satisfy compliance obligations within the same compliance category.

(2) Once a manufacturer acquires by trade credits originally earned by another manufacturer in a particular compliance category, the manufacturer may transfer the credits to satisfy its compliance obligations in a different compliance category, but only to the extent that the CAFE increase attributable to the transferred credits does not exceed the limits in 49 U.S.C. 32903(g)(3). For any compliance category, the sum of a manufacturer's transferred credits earned by that manufacturer and transferred credits obtained by that manufacturer through trade must not exceed that limit.

(c) *Changes in corporate ownership and control.* Manufacturers must inform NHTSA of corporate relationship changes to ensure that credit accounts are identified correctly and credits are assigned and allocated properly.

(1) In general, if two manufacturers merge in any way, they must inform NHTSA how they plan to merge their credit accounts. NHTSA will subsequently assess corporate fuel economy and compliance status of the merged fleet instead of the original separate fleets.

(2) If a manufacturer divides or divests itself of a portion of its automobile manufacturing business, it must inform NHTSA how it plans to divide the manufacturer's credit holdings into two or more accounts. NHTSA will subsequently distribute holdings as directed by the manufacturer, subject to provision for reasonably anticipated compliance obligations.

(3) If a manufacturer is a successor to another manufacturer's business, it must inform NHTSA how it plans to allocate credits and resolve liabilities per 49 CFR part 534.

(d) *No short or forward sales.* NHTSA will not honor any instructions to trade or transfer more credits than are currently held in any account. NHTSA will not honor instructions to trade or transfer credits from any future vintage (*i.e.*, credits not yet earned). NHTSA will not participate in or facilitate contingent trades.

(e) *Cancellation of credits.* A credit holder may instruct NHTSA to cancel

its currently held credits, specifying the originating manufacturer, vintage, and compliance category of the credits to be cancelled. These credits will be permanently null and void; NHTSA will remove the specific credits from the credit holder's account, and will not reissue them to any other party.

(f) *Errors or fraud in earning credits.* If NHTSA determines that a manufacturer has been credited, through error or fraud, with earning credits, NHTSA will cancel those credits if possible. If the manufacturer credited with having earned those credits has already traded them when the error or fraud is discovered, NHTSA will hold the receiving manufacturer responsible for returning the same or equivalent credits to NHTSA for cancellation.

(g) *Error or fraud in trading.* In general, all trades are final and irrevocable once executed, and may only be reversed by a new, mutually-agreed transaction. If NHTSA executes an erroneous instruction to trade credits from one holder to another through error or fraud, NHTSA will reverse the transaction if possible. If those credits have been traded away, the recipient holder is responsible for obtaining the same or equivalent credits for return to the previous holder.

§ 536.9 Use of credits with regard to the domestically manufactured passenger automobile minimum standard.

(a) Each manufacturer is responsible for compliance with both the minimum standard and the attribute-based standard.

(b) In any particular model year, the domestically manufactured passenger automobile compliance category credit excess or shortfall is determined by comparing the actual CAFE value against either the required standard value or the minimum standard value, whichever is larger.

(c) Transferred or traded credits may not be used, pursuant to 49 U.S.C. 32903(g)(4) and (f)(2), to meet the domestically manufactured passenger automobile minimum standard specified in 49 U.S.C. 32902(b)(4) and in 49 CFR 531.5(d).

(d) If a manufacturer's average fuel economy level for domestically manufactured passenger automobiles is lower than the attribute-based standard, but higher than the minimum standard, then the manufacturer may achieve compliance with the attribute-based standard by applying credits.

(e) If a manufacturer's average fuel economy level for domestically manufactured passenger automobiles is lower than the minimum standard, then the difference between the minimum

standard and the manufacturer's actual fuel economy level may only be relieved by the use of credits earned by that manufacturer within the domestic passenger car compliance category which have not been transferred or traded. If the manufacturer does not have available earned credits to offset a credit shortage below the minimum standard then the manufacturer can submit a carry-back plan that indicates sufficient future credits will be earned in its domestic passenger car compliance category or will be subject to penalties.

§ 536.10 Treatment of dual-fuel and alternative fuel vehicles—consistency with 49 CFR part 538.

(a) Statutory alternative fuel and dual-fuel vehicle fuel economy calculations are treated as a change in the underlying fuel economy of the vehicle for purposes of this part, not as a credit that may be transferred or traded. Improvements in alternative fuel or dual fuel vehicle fuel economy as calculated pursuant to 49 U.S.C. 32905 and limited by 49 U.S.C. 32906 are therefore attributable only to the particular compliance category and model year to which the alternative or dual-fuel vehicle belongs.

(b) If a manufacturer's calculated fuel economy for a particular compliance category, including any statutorily-required calculations for alternative fuel and dual fuel vehicles, is higher or lower than the applicable fuel economy standard, manufacturers will earn credits or must apply credits or pay civil penalties equal to the difference between the calculated fuel economy level in that compliance category and the applicable standard. Credits earned are the same as any other credits, and may be held, transferred, or traded by the manufacturer subject to the limitations of the statute and this part.

(c) For model years (MYs) up to and including MY 2019, if a manufacturer builds enough dual fuel vehicles (except plug-in hybrid electric vehicles) to improve the calculated fuel economy in a particular compliance category by more than the limits set forth in 49 U.S.C. 32906(a), the improvement in fuel economy for compliance purposes is restricted to the statutory limit. Manufacturers may not earn credits nor reduce the application of credits or fines for calculated improvements in fuel economy based on dual fuel vehicles beyond the statutory limit.

(d) For model years 2020 and beyond, a manufacturer must calculate the fuel economy of dual fueled vehicles in accordance with 40 CFR 600.510–12(c).

■ 4. Revise part 537 to read as follows:

PART 537—AUTOMOTIVE FUEL ECONOMY REPORTS

Sec.

- 537.1 Scope.
- 537.2 Purpose.
- 537.3 Applicability.
- 537.4 Definitions.
- 537.5 General requirements for reports.
- 537.6 General content of reports.
- 537.7 Pre-model year and mid-model year reports.
- 537.8 Supplementary reports.
- 537.9 Determination of fuel economy values and average fuel economy.
- 537.10 Incorporating documents into reports.
- 537.11 Public inspection of information.
- 537.12 Confidential information.

Authority: 49 U.S.C. 32907, delegation of authority at 49 CFR 1.95.

§ 537.1 Scope.

This part establishes requirements for automobile manufacturers to submit reports to the National Highway Traffic Safety Administration (NHTSA) regarding their efforts to improve automotive fuel economy.

§ 537.2 Purpose.

The purpose of this part is to obtain information to aid the National Highway Traffic Safety Administration in valuating automobile manufacturers' plans for complying with average fuel economy standards and in preparing an annual review of the average fuel economy standards.

§ 537.3 Applicability.

This part applies to automobile manufacturers, except for manufacturers subject to an alternate fuel economy standard under section 502(c) of the Act.

§ 537.4 Definitions.

(a) *Statutory terms.* (1) The terms *average fuel economy standard*, *fuel*, *manufacture*, and *model year* are used as defined in section 501 of the Act.

(2) The term *manufacturer* is used as defined in section 501 of the Act and in accordance with part 529 of this chapter.

(3) The terms *average fuel economy*, *fuel economy*, and *model type* are used as defined in subpart A of 40 CFR part 600.

(4) The terms *automobile*, *automobile capable of off-highway operation*, and *passenger automobile* are used as defined in section 501 of the Act and in accordance with the determinations in part 523 of this chapter.

(b) *Other terms.* (1) The term *loaded vehicle weight* is used as defined in subpart A of 40 CFR part 86.

(2) The terms *axle ratio*, *base level*, *body style*, *car line*, *combined fuel*

economy, *engine code*, *equivalent test weight*, *gross vehicle weight*, *inertia weight*, *transmission class*, and *vehicle configuration* are used as defined in subpart A of 40 CFR part 600.

(3) The term *light truck* is used as defined in part 523 of this chapter and in accordance with determinations in part 523.

(4) The terms *approach angle*, *axle clearance*, *brakeover angle*, *cargo carrying volume*, *departure angle*, *passenger carrying volume*, *running clearance*, and *temporary living quarters* are used as defined in part 523 of this chapter.

(5) The term *incomplete automobile manufacturer* is used as defined in part 529 of this chapter.

(6) As used in this part, unless otherwise required by the context:

(i) *Act* means the Motor Vehicle Information and Cost Savings Act (Pub. L. 92–513), as amended by the Energy Policy and Conservation Act (Pub. L. 94–163).

(ii) *Administrator* means the Administrator of the National Highway Traffic Safety Administration or the Administrator's delegate.

(iii) *Current model year* means:

(A) In the case of a pre-model year report, the full model year immediately following the period during which that report is required by § 537.5(b) to be submitted.

(B) In the case of a mid-model year report, the model year during which that report is required by § 537.5(b) to be submitted.

(iv) *Average* means a production-weighted harmonic average.

(v) *Total drive ratio* means the ratio of an automobile's engine rotational speed (in revolutions per minute) to the automobile's forward speed (in miles per hour).

§ 537.5 General requirements for reports.

(a) For each current model year, each manufacturer shall submit a pre-model year report, a mid-model year report, and, as required by § 537.8, supplementary reports.

(b)(1) The pre-model year report required by this part for each current model year must be submitted during the month of December (e.g., the pre-model year report for the 1983 model year must be submitted during December, 1982).

(2) The mid-model year report required by this part for each current model year must be submitted during the month of July (e.g., the mid-model year report for the 1983 model year must be submitted during July 1983).

(3) Each supplementary report must be submitted in accordance with § 537.8(c).

(c) Each report required by this part must:

(1) Identify the report as a pre-model year report, mid-model year report, or supplementary report as appropriate;

(2) Identify the manufacturer submitting the report;

(3) State the full name, title, and address of the official responsible for preparing the report;

(4) Be submitted on CD-ROM for confidential reports provided in accordance with § 537.12 and by email for non-confidential (*i.e.*, redacted) versions of reports. The content of reports must be provided in a PDF or MS Word format except for the information required in § 537.7 which must be provided in a MS Excel format. Submit 2 copies of the CD-ROM to: Administrator, National Highway Traffic Administration, 1200 New Jersey Avenue SW, Washington, DC 20590, and submit reports electronically to the following secure email address: cafe@dot.gov;

(5) Identify the current model year;

(6) Be written in the English language; and

(7)(i) Specify any part of the information or data in the report that the manufacturer believes should be withheld from public disclosure as trade secret or other confidential business information.

(ii) With respect to each item of information or data requested by the manufacturer to be withheld under 5 U.S.C. 552(b)(4) and 15 U.S.C. 2005(d)(1), the manufacturer shall:

(A) Show that the item is within the scope of sections 552(b)(4) and 2005(d)(1);

(B) Show that disclosure of the item would result in significant competitive damage;

(C) Specify the period during which the item must be withheld to avoid that damage; and

(D) Show that earlier disclosure would result in that damage.

(d) Beginning with model year 2023, each manufacturer shall generate reports required by this part using the NHTSA CAFE Projections Reporting Template (Office of Management and Budget (OMB) Control No. 2127-0019, NHTSA Form 1474). The template is a fillable form.

(1) *Report type selection.* Select the option to identify the report as a pre-model year report, mid-model year report, or supplementary report as appropriate.

(2) *Required information.* Complete all required information for the manufacturer and for all vehicles produced for the current model year required to comply with corporate

average fuel economy (CAFE) standards. Identify the manufacturer submitting the report, including the full name, title, and address of the official responsible for preparing the report and a point of contact to answer questions concerning the report.

(3) *Report generation.* Use the template to generate confidential and non-confidential reports for all the domestic and import passenger cars and light truck fleet produced by the manufacturer for the current model year. Manufacturers must submit a request for confidentiality in accordance with part 512 of this chapter to withhold projected production sales volume estimates from public disclosure. If the request is granted, NHTSA will withhold the projected production sales volume estimates from public disclosure until all the vehicles produced by the manufacturer have been made available for sale (usually one year after the current model year).

(4) *Report submission.* Submit confidential reports and requests for confidentiality to NHTSA on CD-ROM in accordance with § 537.12. Email copies of non-confidential (*i.e.*, redacted) reports to NHTSA's secure email address: cafe@dot.gov. Requests for confidentiality must be submitted in a PDF or MS Word format. Submit 2 copies of the CD-ROM to: Administrator, National Highway Traffic Administration, 1200 New Jersey Avenue SE, Washington, DC 20590, and submit emailed reports electronically to the following secure email address: cafe@dot.gov.

(5) *Confidentiality requests.* Manufacturers can withhold information on projected production sales volumes under 5 U.S.C. 552(b)(4) and 15 U.S.C. 2005(d)(1). In accordance, the manufacturer must:

(i) Show that the item is within the scope of sections 552(b)(4) and 2005(d)(1);

(ii) Show that disclosure of the item would result in significant competitive damage;

(iii) Specify the period during which the item must be withheld to avoid that damage; and

(iv) Show that earlier disclosure would result in that damage.

(e) Each report required by this part must be based upon all information and data available to the manufacturer 30 days before the report is submitted to the Administrator.

§ 537.6 General content of reports.

(a) *Pre-model year and mid-model year reports.* Except as provided in paragraph (c) of this section, each pre-model year report and the mid-model

year report for each model year must contain the information required by § 537.7(a).

(b) *Supplementary report.* Except as provided in paragraph (c) of this section, each supplementary report for each model year must contain the information required by § 537.7(a)(1) and (2), as appropriate for the vehicle fleets produced by the manufacturer, in accordance with § 537.8(b)(1), (2), (3), and (4) as appropriate.

(c) *Exceptions.* The pre-model year report, mid-model year report, and supplementary report(s) submitted by an incomplete automobile manufacturer for any model year are not required to contain the information specified in § 537.7(c)(4)(xv) through (xviii) and (c)(5). The information provided by the incomplete automobile manufacturer under § 537.7(c) shall be according to base level instead of model type or carline.

§ 537.7 Pre-model year and mid-model year reports.

(a) *Report content.* (1) Provide a report with the information required by paragraphs (b) and (c) of this section for each domestic and import passenger automobile fleet, as specified in part 531 of this chapter, for the current model year.

(2) Provide a report with the information required by paragraphs (b) and (c) of this section for each light truck fleet, as specified in part 533 of this chapter, for the current model year.

(3) For model year 2023 and later, for passenger cars specified in part 531 of this chapter and light trucks specified in part 533 of this chapter, provide the information for pre-model and mid-model year reports in accordance with the NHTSA CAFE Projections Reporting Template (OMB Control No. 2127-0019, NHTSA Form 1474). The required reporting template can be downloaded from NHTSA's website.

(b) *Projected average and required fuel economy.* (1) State the projected average fuel economy for the manufacturer's automobiles determined in accordance with § 537.9 and based upon the fuel economy values and projected sales figures provided under paragraph (c)(2) of this section.

(2) State the projected final average fuel economy that the manufacturer anticipates having if changes implemented during the model year will cause that average to be different from the average fuel economy projected under paragraph (b)(1) of this section.

(3) State the projected required fuel economy for the manufacturer's passenger automobiles and light trucks determined in accordance with

§§ 531.5(c) and 533.5 of this chapter and based upon the projected sales figures provided under paragraph (c)(2) of this section. For each unique model type and footprint combination of the manufacturer's automobiles, provide the information specified in paragraphs (b)(3)(i) and (ii) of this section in tabular form. List the model types in order of increasing average inertia weight from top to bottom down the left side of the table and list the information categories in the order specified in paragraphs (b)(3)(i) and (ii) of this section from left to right across the top of the table. Other formats, such as those accepted by the EPA, which contain all the information in a readily identifiable format are also acceptable. For model year 2023 and later, for each unique model type and footprint combination of the manufacturer's automobiles, provide the information specified in paragraphs (b)(3)(i) and (ii) of this section in accordance with the CAFE Projections Reporting Template (OMB Control No. 2127-0019, NHTSA Form 1474).

(i) In the case of passenger automobiles:

(A) Beginning model year 2013, base tire as defined in § 523.2 of this chapter;

(B) Beginning model year 2013, front axle, rear axle, and average track width as defined in § 523.2 of this chapter;

(C) Beginning model year 2013, wheelbase as defined in § 523.2 of this chapter; and

(D) Beginning model year 2013, footprint as defined in § 523.2 of this chapter.

(E) The fuel economy target value for each unique model type and footprint entry listed in accordance with the equation provided in part 531 of this chapter.

(ii) In the case of light trucks:

(A) Beginning model year 2013, base tire as defined in § 523.2 of this chapter;

(B) Beginning model year 2013, front axle, rear axle, and average track width as defined in § 523.2 of this chapter;

(C) Beginning model year 2013, wheelbase as defined in § 523.2 of this chapter; and

(D) Beginning model year 2013, footprint as defined in § 523.2 of this chapter.

(E) The fuel economy target value for each unique model type and footprint entry listed in accordance with the equation provided in part 533 of this chapter.

(4) State the projected final required fuel economy that the manufacturer anticipates having if changes implemented during the model year will cause the targets to be different from the target fuel economy projected under paragraph (b)(3) of this section.

(5) State whether the manufacturer believes that the projections it provides under paragraphs (b)(2) and (4) of this section, or if it does not provide an average or target under paragraphs (b)(2) and (4), the projections it provides under paragraphs (b)(1) and (3) of this section, sufficiently represent the manufacturer's average and target fuel economy for the current model year for purposes of the Act. In the case of a manufacturer that believes that the projections are not sufficiently representative for the purposes of the preceding sentence, state the specific nature of any reason for the insufficiency and the specific additional testing or derivation of fuel economy values by analytical methods believed by the manufacturer necessary to eliminate the insufficiency and any plans of the manufacturer to undertake that testing or derivation voluntarily and submit the resulting data to the Environmental Protection Agency under 40 CFR 600.509.

(c) *Model type and configuration fuel economy and technical information.* (1) For each model type of the manufacturer's automobiles, provide the information specified in paragraph (c)(2) of this section in tabular form. List the model types in order of increasing average inertia weight from top to bottom down the left side of the table and list the information categories in the order specified in paragraph (c)(2) of this section from left to right across the top of the table. For model year 2023 and later, CAFE reports required by this part, shall for each model type of the manufacturer's automobiles, provide the information in specified in paragraph (c)(2) of this section in accordance with the NHTSA CAFE Projections Reporting Template (OMB Control No. 2127-0019, NHTSA Form 1474) and list the model types in order of increasing average inertia weight from top to bottom.

(2)(i) Combined fuel economy; and

(ii) Projected sales for the current model year and total sales of all model types.

(3) For pre-model year reports only through model year 2022, for each vehicle configuration whose fuel economy was used to calculate the fuel economy values for a model type under paragraph (c)(2) of this section, provide the information specified in paragraph (c)(4) of this section in accordance with the NHTSA CAFE Projections Reporting Template (OMB Control No. 2127-0019, NHTSA Form 1474).

(4)(i) Loaded vehicle weight;

(ii) Equivalent test weight;

(iii) Engine displacement, liters;

(iv) SAE net rated power, kilowatts;

(v) SAE net horsepower;

(vi) Engine code;

(vii) Fuel system (number of carburetor barrels or, if fuel injection is used, so indicate);

(viii) Emission control system;

(ix) Transmission class;

(x) Number of forward speeds;

(xi) Existence of overdrive (indicate yes or no);

(xii) Total drive ratio (N/V);

(xiii) Axle ratio;

(xiv) Combined fuel economy;

(xv) Projected sales for the current model year;

(xvi)(A) In the case of passenger automobiles:

(1) Interior volume index, determined in accordance with subpart D of 40 CFR part 600; and

(2) Body style;

(B) In the case of light trucks:

(1) Passenger-carrying volume; and

(2) Cargo-carrying volume;

(xvii) Frontal area;

(xviii) Road load power at 50 miles per hour, if determined by the manufacturer for purposes other than compliance with this part to differ from the road load setting prescribed in 40 CFR 86.177-11(d); and

(xix) Optional equipment that the manufacturer is required under 40 CFR parts 86 and 600 to have actually installed on the vehicle configuration, or the weight of which must be included in the curb weight computation for the vehicle configuration, for fuel economy testing purposes.

(5) For each model type of automobile which is classified as a non-passenger vehicle (light truck) under part 523 of this chapter, provide the following data:

(i) For an automobile designed to perform at least one of the following functions in accordance with § 523.5(a) of this chapter indicate (by "yes" or "no" for each function) whether the vehicle can:

(A) Transport more than 10 persons (if yes, provide actual designated seating positions);

(B) Provide temporary living quarters (if yes, provide applicable conveniences as defined in § 523.2 of this chapter);

(C) Transport property on an open bed (if yes, provide bed size width and length);

(D) Provide, as sold to the first retail purchaser, greater cargo-carrying than passenger-carrying volume, such as in a cargo van and quantify the value which should be the difference between the values provided in paragraphs (c)(4)(xvi)(B)(1) and (2) of this section; if a vehicle is sold with a second-row seat, its cargo-carrying volume is determined with that seat installed, regardless of whether the manufacturer has described that seat as optional; or

(E) Permit expanded use of the automobile for cargo-carrying purposes or other non-passenger-carrying purposes through:

(1) For non-passenger automobiles manufactured prior to model year 2012, the removal of seats to permit expanded use of the automobile for cargo-carrying purposes or other non-passenger-carrying purposes through means provided by the automobile's manufacturer or with simple tools, such as screwdrivers and wrenches, so as to create a flat, floor level, surface extending from the forward-most point of installation of those seats to the rear of the automobile's interior; or

(2) For non-passenger automobiles manufactured in model year 2008 and beyond, for vehicles equipped with at least 3 rows of designated seating positions as standard equipment, permit expanded use of the automobile for cargo-carrying purposes or other nonpassenger-carrying purposes through the removal or stowing of foldable or pivoting seats so as to create a flat, leveled cargo surface extending from the forward-most point of installation of those seats to the rear of the automobile's interior.

(ii) For an automobile capable of off-highway operation, identify which of the features below qualify the vehicle as off-road in accordance with § 523.5(b) of this chapter and quantify the values of each feature:

(A) 4-wheel drive; or

(B) A rating of more than 6,000 pounds gross vehicle weight; and

(C) Has at least four of the following characteristics calculated when the automobile is at curb weight, on a level surface, with the front wheels parallel to the automobile's longitudinal centerline, and the tires inflated to the manufacturer's recommended pressure. The exact value of each feature should be quantified:

(1) Approach angle of not less than 28 degrees.

(2) Breakover angle of not less than 14 degrees.

(3) Departure angle of not less than 20 degrees.

(4) Running clearance of not less than 20 centimeters.

(5) Front and rear axle clearances of not less than 18 centimeters each.

(6) The fuel economy values provided under paragraphs (c)(2) and (4) of this section shall be determined in accordance with § 537.9.

(7) Identify any air-conditioning (AC), off-cycle, and full-size pick-up truck technologies used each model year to calculate the average fuel economy specified in 40 CFR 600.510–12.

(i) Provide a list of each air conditioning efficiency improvement technology utilized in your fleet(s) of vehicles for each model year. For each technology identify vehicles by make and model types that have the technology, which compliance category those vehicles belong to and the number of vehicles for each model equipped with the technology. For each compliance category (domestic passenger car, import passenger car, and light truck), report the air conditioning fuel consumption improvement value in gallons/mile in accordance with the equation specified in 40 CFR 600.510–12(c)(3)(i).

(ii) Provide a list of off-cycle efficiency improvement technologies utilized in your fleet(s) of vehicles for each model year that is pending or approved by the EPA. For each technology identify vehicles by make and model types that have the technology, which compliance category those vehicles belong to, the number of vehicles for each model equipped with the technology, and the associated off-cycle credits (grams/mile) available for each technology. For each compliance category (domestic passenger car, import passenger car, and light truck), calculate the fleet off-cycle fuel consumption improvement value in gallons/mile in accordance with the equation specified in 40 CFR 600.510–12(c)(3)(ii).

(iii) Provide a list of full-size pickup trucks in your fleet that meet the mild and strong hybrid vehicle definitions as specified in 40 CFR 86.1803–01. For each mild and strong hybrid type, identify vehicles by make and model types that have the technology, the number of vehicles produced for each model equipped with the technology, the total number of full-size pickup trucks produced with and without the technology, the calculated percentage of hybrid vehicles relative to the total number of vehicles produced, and the associated full-size pickup truck credits (grams/mile) available for each technology. For the light truck compliance category, calculate the fleet pickup truck fuel consumption improvement value in gallons/mile in accordance with the equation specified in 40 CFR 600.510–12(c)(3)(iii).

§ 537.8 Supplementary reports.

(a)(1) Except as provided in paragraph (d) of this section, each manufacturer whose most recently submitted semiannual report contained an average fuel economy projection under § 537.7(b)(2) or, if no average fuel economy was projected under that section, under § 537.7(b)(1), that was not

less than the applicable average fuel economy standard and who now projects an average fuel economy which is less than the applicable standard shall file a supplementary report containing the information specified in paragraph (b)(1) of this section.

(2) Except as provided in paragraph (d) of this section, each manufacturer that determines that its average fuel economy for the current model year as projected under § 537.7(b)(2) or, if no average fuel economy was projected under § 537.7(b)(2), as projected under § 537.7(b)(1), is less representative than the manufacturer previously reported it to be under § 537.7(b)(3), this section, or both, shall file a supplementary report containing the information specified in paragraph (b)(2) of this section.

(3) For model years through 2022, each manufacturer whose pre-model or mid-model year report omits any of the information specified in § 537.7(b) or (c) shall file a supplementary report containing the information specified in paragraph (b)(3) of this section.

(4) Starting model year 2023, each manufacturer whose pre-model or mid-model year report omits any of the information shall resubmit the information with other information required in accordance with the NHTSA CAFE Projections Reporting Template (OMB Control No. 2127–0019, NHTSA Form 1474).

(b)(1) The supplementary report required by paragraph (a)(1) of this section must contain:

(i) Such revisions of and additions to the information previously submitted by the manufacturer under this part regarding the automobiles whose projected average fuel economy has decreased as specified in paragraph (a)(1) of this section as are necessary—

(A) To reflect the decrease and its cause; and

(B) To indicate a new projected average fuel economy based upon these additional measures.

(ii) An explanation of the cause of the decrease in average fuel economy that led to the manufacturer's having to submit the supplementary report required by paragraph (a)(1) of this section.

(2) The supplementary report required by paragraph (a)(2) of this section must contain:

(i) A statement of the specific nature of and reason for the insufficiency in the representativeness of the projected average fuel economy;

(ii) A statement of specific additional testing or derivation of fuel economy values by analytical methods believed by the manufacturer necessary to eliminate the insufficiency; and

(iii) A description of any plans of the manufacturer to undertake that testing or derivation voluntarily and submit the resulting data to the Environmental Protection Agency under 40 CFR 600.509.

(3) The supplementary report required by paragraph (a)(3) of this section must contain:

(i) All of the information omitted from the pre-model year report under § 537.6(c)(2); and

(ii) Such revisions of and additions to the information submitted by the manufacturer in its pre-model year report regarding the automobiles produced during the current model year as are necessary to reflect the information provided under paragraph (b)(3)(i) of this section.

(4) The supplementary report required by paragraph (a)(4) of this section must contain:

(i) All information omitted from the pre-model or mid-model year reports under § 537.6(c)(2); and

(ii) Such revisions of and additions to the information submitted by the manufacturer in its pre-model or mid-model year reports regarding the automobiles produced during the current model year as are necessary to reflect the information provided under paragraph (b)(4)(i) of this section.

(c)(1) Each report required by paragraph (a)(1), (2), (3), or (4) of this section must be submitted in accordance with § 537.5(c) not more than 45 days after the date on which the manufacturer determined, or could have determined with reasonable diligence, that the report was required.

(2) [Reserved]

(d) A supplementary report is not required to be submitted by the manufacturer under paragraph (a)(1) or (2) of this section:

(1) With respect to information submitted under this part before the most recent semiannual report submitted by the manufacturer under this part; or

(2) When the date specified in paragraph (c) of this section occurs:

(i) During the 60-day period immediately preceding the day by which the mid-model year report for the current model year must be submitted by the manufacturer under this part; or

(ii) After the day by which the pre-model year report for the model year

immediately following the current model year must be submitted by the manufacturer under this part.

(e) For model years 2008, 2009, and 2010, each manufacturer of light trucks, as that term is defined in 49 CFR 523.5, shall submit a report, not later than 45 days following the end of the model year, indicating whether the manufacturer is opting to comply with 49 CFR 533.5(f) or (g).

§ 537.9 Determination of fuel economy values and average fuel economy.

(a) *Vehicle subconfiguration fuel economy values.* (1) For each vehicle subconfiguration for which a fuel economy value is required under paragraph (c) of this section and has been determined and approved under 40 CFR part 600, the manufacturer shall submit that fuel economy value.

(2) For each vehicle subconfiguration specified in paragraph (a)(1) of this section for which a fuel economy value approved under 40 CFR part 600, does not exist, but for which a fuel economy value determined under 40 CFR part 600 exists, the manufacturer shall submit that fuel economy value.

(3) For each vehicle subconfiguration specified in paragraph (a)(1) of this section for which a fuel economy value has been neither determined nor approved under 40 CFR part 600, the manufacturer shall submit a fuel economy value based on tests or analyses comparable to those prescribed or permitted under 40 CFR part 600 and a description of the test procedures or analytical methods used.

(4) For each vehicle configuration for which a fuel economy value is required under paragraph (c) of this section and has been determined and approved under 40 CFR part 600, the manufacturer shall submit that fuel economy value.

(b) *Base level and model type fuel economy values.* For each base level and model type, the manufacturer shall submit a fuel economy value based on the values submitted under paragraph (a) of this section and calculated in the same manner as base level and model type fuel economy values are calculated for use under subpart F of 40 CFR part 600.

(c) *Average fuel economy.* Average fuel economy must be based upon fuel economy values calculated under

paragraph (b) of this section for each model type and must be calculated in accordance with subpart F of 40 CFR part 600, except that fuel economy values for running changes and for new base levels are required only for those changes made or base levels added before the average fuel economy is required to be submitted under this part.

§ 537.10 Incorporating documents into reports.

(a) A manufacturer may incorporate by reference in a report required by this part any document other than a report, petition, or application, or portion thereof submitted to any Federal department or agency more than two model years before the current model year.

(b) A manufacturer that incorporates by references a document not previously submitted to the National Highway Traffic Safety Administration shall append that document to the report.

(c) A manufacturer that incorporates by reference a document shall clearly identify the document and, in the case of a document previously submitted to the National Highway Traffic Safety Administration, indicate the date on which and the person by whom the document was submitted to this agency.

§ 537.11 Public inspection of information.

Except as provided in § 537.12, any person may inspect the information and data submitted by a manufacturer under this part in the docket section of the National Highway Traffic Safety Administration. Any person may obtain copies of the information available for inspection under this section in accordance with the regulations of the Secretary of Transportation in part 7 of this title.

§ 537.12 Confidential information.

(a) *Granting confidential treatment.* Information made available under § 537.11 for public inspection does not include information for which confidentiality is requested under § 537.5(c)(7), is granted in accordance with section 505 of the Act and section 552(b) of Title 5 of the United States Code and is not subsequently released under paragraph (c) of this section in accordance with section 505 of the Act.

(b) *Denial of confidential treatment.* When the Administrator denies a manufacturer's request under § 537.5(c)(7) for confidential treatment of information, the Administrator gives the manufacturer written notice of the denial and reasons for it. Public disclosure of the information is not made until after the ten-day period

immediately following the giving of the notice.

(c) *Release of confidential information.* After giving written notice to a manufacturer and allowing ten days, when feasible, for the manufacturer to respond, the Administrator may make available for public inspection any information submitted under this part that is relevant to a proceeding under the Act,

including information that was granted confidential treatment by the Administrator pursuant to a request by the manufacturer under § 537.5(c)(7).

Issued on August 5, 2021, in Washington, DC, under authority delegated in 49 CFR 1.95

Steven S. Cliff,

Acting Administrator.

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Part III

The President

Proclamation 10242—National Childhood Cancer Awareness Month, 2021
Proclamation 10243—National Ovarian Cancer Awareness Month, 2021
Proclamation 10244—National Preparedness Month, 2021
Proclamation 10245—National Prostate Cancer Awareness Month, 2021
Proclamation 10246—National Recovery Month, 2021
Proclamation 10247—National Sickle Cell Awareness Month, 2021
Proclamation 10248—National Wilderness Month, 2021

Presidential Documents

Title 3—

Proclamation 10242 of August 31, 2021

The President

National Childhood Cancer Awareness Month, 2021

By the President of the United States of America

A Proclamation

For millions of American families—including my own—the fight against cancer is personal. When a person you love is diagnosed with cancer, it stops your heart and throws your world off of its axis. That fear and heartache is only compounded when cancer strikes a child.

Across America, thousands of courageous children and adolescents diagnosed with cancer each year are facing life-threatening struggles. They are cared for by loving families, friends, volunteers, and health care teams who band together to support our most vulnerable patients as they face their cancer journey. During National Childhood Cancer Awareness Month, we honor the young lives taken too soon, as well as the growing number of young cancer survivors, some of whom may face serious health challenges throughout their lifetimes. We recognize the remarkable progress made in treatment and survivorship, and rededicate ourselves to the development of more effective therapies so that all children have the chance to live long and healthy lives.

Despite the extraordinary advancements medical science has made in recent years, cancer remains the second leading cause of death in the United States—and the leading cause of death by disease for American children between infancy and age 15. Cancer is cruel and spares no age. It inflicts an incalculable toll on young patients and their loved ones. Though improvement has been made in some areas, survival rates for all childhood cancers remain too low. A growing number of childhood cancer survivors are experiencing longer life expectancies, but far too many continue to face significant long-term physical, emotional, and cognitive effects due to their cancer and treatment. As a Nation, we must do more to better understand the causes of pediatric cancer, improve treatment, and enhance the lifelong well-being of survivors.

When I lost my son Beau to cancer after his courageous fight, I buried a part of my soul deep in the Earth. Too many families know that feeling too well—at any age, it leaves a black hole in your heart. In 2016, President Obama and I created the Cancer Moonshot Initiative to end cancer as we know it. Now, as President, I remain committed to that mission—and I will continue to invest in the critical research and care needed to defeat this devastating disease. That is why I am asking the Congress to launch the Advanced Research Projects Agency for Health—or ARPA-H—at the National Institutes of Health, to develop breakthroughs that prevent, detect, and treat cancer and other deadly diseases.

Our Nation is already seeing the progress of investing in pediatric cancer research and technology. We are improving our understanding of pediatric cancers that are particularly difficult to treat, and extending the promise of immune-based treatments for children and adolescents. We are seeing advancements in precision medicine approaches to treating childhood cancers—including progress on understanding how tumors respond to existing therapies. The National Cancer Institute (NCI) is leading the Childhood Cancer Data Initiative, which brings together the Nation's childhood cancer research, advocacy, and care communities to ensure that we “learn from

every child” with cancer by consistently gathering data in a way that protects patient privacy while allowing for rapid sharing of insights among researchers. This will enable us to accelerate progress and deliver effective treatments and cures to more children. Additionally, the Food and Drug Administration’s Pediatric Oncology program works with stakeholders to accelerate and support the timely, efficient development of safe and effective new drugs and biological products to treat cancers in children.

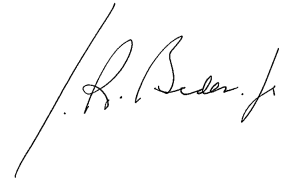
Many parents and family members feel terrified and overwhelmed following a child’s cancer diagnosis. To support families and pediatric caretakers, the NCI has resources available, including online and print materials and videos, to help families understand treatment options and provide information to help them navigate the cancer journey. Visit www.cancer.gov to learn more or talk to trained information specialists with the NCI Cancer Information Service in the United States at 1–800–4–CANCER.

My Administration is also committed to protecting childhood cancer patients and their families through the Affordable Care Act, which provides critical protections for individuals facing cancer, including children. Because of the Affordable Care Act, most insurance companies are now prohibited from limiting or denying coverage to young cancer patients participating in clinical research studies. And children who have recovered from cancer can no longer be denied insurance coverage based on the fact that they have a pre-existing condition.

During National Childhood Cancer Awareness Month, we pay tribute to the health care professionals, researchers, private philanthropies, social support organizations, and patient advocacy groups who work together with families across the country to provide hope and help to children diagnosed with cancer and to develop better treatments. Together, we will carry on their work—and build a future in which cancer no longer threatens the lives of our Nation’s children.

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 September 2021 as National Childhood Cancer Awareness Month. I encourage citizens, government agencies, private businesses, nonprofit organizations, the media, and other interested groups to increase awareness of what Americans can do to support the fight against childhood cancer.

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

A handwritten signature in black ink, appearing to read "Joe Biden", written in a cursive style.

Presidential Documents

Proclamation 10243 of August 31, 2021

National Ovarian Cancer Awareness Month, 2021

By the President of the United States of America

A Proclamation

Every year, thousands of women in the United States are diagnosed with ovarian cancer. Like all cancers, ovarian cancer is brutal and cruel, inflicting pain and hardship for women and their families. Like so many families, my family and I know the pain of cancer all too well. During National Ovarian Cancer Awareness Month, we honor the courage of those affected by ovarian cancer and renew our commitment to fighting this illness that takes the lives of far too many women. We also recommit to improving and promoting early cancer detection, investing in cancer research, and ensuring that every woman has equitable access to the care they need and deserve.

Ovarian cancer is rare and deadly. Because there is no early ovarian cancer screening test, many women are diagnosed with this disease at an advanced stage. And despite ovarian cancer rates being highest among white women, Black women are more likely to die from this disease because of lack of access to health care, socioeconomic disparities, and other causes still under study.

To help women understand the risk of developing ovarian cancer, the Centers for Disease Control and Prevention (CDC) provides tools and resources to learn about the risk factors that increase the likelihood of being diagnosed with this disease. Risk factors for ovarian cancer include a family history of breast or ovarian cancer. Any woman who thinks she is at risk of ovarian cancer or who experiences persistent symptoms, including abdominal or pelvic pain, pressure, swelling, or bloating should talk with her health care provider. The CDC's *Inside Knowledge about Gynecologic Cancer*, which includes resources for ovarian cancer, also helps women recognize the warning signs and seek medical care. To learn more about ovarian cancer, visit www.cancer.gov/types/ovarian and www.cdc.gov/cancer.

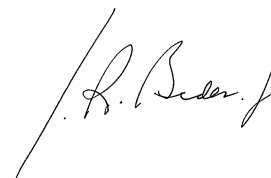
The effort to eliminate ovarian cancer is taking place on all fronts, from laboratory research on cancer prevention, screening and early detection, diagnosis, treatment, and supportive care, to clinical research studies, clinical trials, and public health and awareness efforts. Through the leadership of the National Cancer Institute at the National Institutes of Health (NIH), scientists are focused on research to maintain and improve the quality and length of life for women with ovarian cancer. My Administration plans to build on these efforts by supporting investments in research and technology to develop new ways to detect ovarian cancer early, and improve treatment strategies. To push for these groundbreaking discoveries and innovative treatments, I have called for the creation of an Advanced Research Projects Agency for Health at the NIH—or ARPA-H—which would invest \$6.5 billion to develop breakthroughs that prevent, detect, and treat cancer and other deadly diseases. I am committed to doing everything I can to end cancer as we know it, and to bring together the human, financial, and knowledge resources necessary to make the breakthroughs that will dramatically advance our progress against cancer and deliver hope and health to the world.

My Administration is also dedicated to protecting ovarian cancer patients through the Affordable Care Act (ACA). Because of the ACA, insurance companies are banned from dropping a woman's coverage because she has a pre-existing condition such as ovarian cancer. The ACA also covers "well-woman visits" to a primary care physician and gynecologist that include a full checkup, with no copayments or deductibles. These visits focus on preventive care for women and may help detect ovarian cancer as early as possible.

As we observe National Ovarian Cancer Awareness Month, we are united in our goal to end ovarian cancer, and to improve the lives of all women carrying the burden of this disease—including the lives of their families and loved ones. We are also united in our support of the researchers, advocates, and health care professionals who are working tirelessly for new solutions to prevent, detect, and treat ovarian cancer, and to improve the overall health and well-being of all women.

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 September 2021 as National Ovarian Cancer Awareness Month. I call upon the women of the United States to speak with their doctors and health care providers to learn more about ovarian cancer. I encourage citizens, government agencies, private businesses, nonprofit organizations, the media, and other interested groups to increase awareness of what Americans can do to detect and treat ovarian cancer.

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



Presidential Documents

Proclamation 10244 of August 31, 2021

National Preparedness Month, 2021

By the President of the United States of America

A Proclamation

In the past year, our Nation has faced both unpredictable and unprecedented challenges. The 2020 hurricane season was the most active on record. Severe winter storms and record-breaking heat waves interrupted our power sector, and the climate crisis fueled historic drought, water scarcity, and dangerous heat waves, which in turn have helped supercharge the wildfires ravaging the West. All of this has come on top of the ongoing pain and struggle of COVID-19, which has impacted every community across the Nation. Becoming more disaster-resilient as a country—and more prepared as a people—is essential for our continued strength and security. During National Preparedness Month, we encourage all Americans to take the important steps to prepare for natural and human-made threats and to ensure that all our communities are ready for any emergency.

My Administration is committed to taking bold action to prepare for and address the dangers posed by climate change. We have put the climate crisis and the communities most vulnerable to it at the center of our domestic and foreign policy. We are investing in weather forecasting and climate research to strengthen our understanding of how our changing climate is altering severe weather and drought, and we are ensuring that every community has the resources to prepare for and respond to these increasingly dangerous storms. We are also investing in helping developing nations adapt and build their own resilience in the face of climate change.

At home, we are making a once-in-a-generation investment in upgrading our infrastructure so that it is more resilient to the challenges of today, and we are mitigating climate change by building up an American-made clean power economy for tomorrow. That is why I am committed to making a historic commitment to resilience through the Bipartisan Infrastructure Deal to upgrade and modernize our power grid, invest in mass transit and vehicle electrification, and fund environmental cleanup.

I am also rallying the world to join the United States in committing to greater climate ambition. The United States has rejoined the Paris Climate Agreement, and we are leading the charge for stronger global action to cut greenhouse gas pollution and avert the worst impacts of climate change while we still have the chance. The United States is leading by example and creating good, high-paying jobs in the process by harnessing the economic opportunities of climate action.

As we prepare for natural disasters and address the accelerating climate crisis, we must also remain vigilant to prevent, detect, and respond to infectious disease threats, including the COVID-19 pandemic and threats that will arise in the future. Even as more than 174 million Americans have been fully vaccinated—with hundreds of thousands continuing to get vaccinated each day—the more transmissible Delta variant is spreading, particularly among unvaccinated individuals. I continue to call on Americans to protect themselves and those around them by getting vaccinated. The vaccines are safe. They are effective. And together, we can save lives.

The theme of this year's National Preparedness Month is "Prepare to Protect." During the past year, natural disasters have sent our communities into

turmoil, and we have seen the particularly devastating toll they take on disadvantaged, low-income communities and people of color. Beyond the physical damage done by natural disasters, these storms also exact an emotional toll on their victims, from the pain of losing a loved one to the pressure caused by financial setbacks. Therefore, we must all prepare to better protect ourselves and our communities against both immediate crises and their residual effects.

During National Preparedness Month, we also recognize the bravery and the sacrifices of our first responders, who are our first line of defense in so many crises. This month, as we prepare to commemorate the 20th anniversary of the horrific terrorist attacks of September 11, 2001, we honor the lives that were lost and the heroism that was displayed by both first responders and ordinary citizens to respond, and we reaffirm our responsibility to never forget.

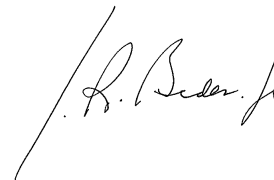
This month, we must each do our part—we must all Prepare to Protect. I call on everyone to get vaccinated, turn on emergency alerts on your smartphone, pack an emergency go-bag, and encourage others in your community to do the same.

For assistance in getting prepared, visit the Federal Emergency Management Agency's Ready campaign at www.Ready.gov or www.Listo.gov for Spanish-speakers for free information and resources to help you and your family "Prepare to Protect."

National Preparedness Month is a call to action to all parts of our government, industrial and commercial sectors, academia, non-governmental organizations, civic groups, religious institutions, and families. By working together today, we can ensure that our Nation is prepared for the natural and human-made threats of tomorrow.

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 September 2021 as National Preparedness Month. I encourage all Americans to recognize the importance of preparedness and work together to enhance our resilience and readiness.

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



Presidential Documents

Proclamation 10245 of August 31, 2021

National Prostate Cancer Awareness Month, 2021

By the President of the United States of America

A Proclamation

In 2021, over 248,500 Americans have been diagnosed with prostate cancer. Even as we make tremendous advancements in cancer research and treatment, prostate cancer is the second most commonly diagnosed cancer and the second-leading cause of cancer deaths among our Nation's fathers, sons, husbands, and brothers. Today, one in eight men in the United States will be diagnosed with prostate cancer in his lifetime—often without any previous signs or symptoms. During National Prostate Cancer Awareness Month, we rededicate ourselves to supporting those diagnosed with prostate cancer through research, education, and access to prevention, treatment, and follow-up care and support. Together, we can increase awareness of this cancer, and improve the care and well-being of those impacted by this disease.

Awareness of the risk factors of prostate cancer can help men make informed choices about their health with their primary health care providers—especially for men over the age of 65, men who have a family history of prostate cancer, and Black men who have a higher chance of developing and suffering from prostate cancer. I encourage all men and their families to learn the latest information on prostate cancer at www.cancer.gov/types/prostate and www.cdc.gov/cancer/prostate. I also encourage every American to get recommended cancer screenings, check-ups, and treatments from your health care providers. Most importantly, talk to your doctor about your risks for developing prostate cancer.

My Administration continues to push for groundbreaking discoveries and innovative treatments to end cancer as we know it. That is why I am working to create an Advanced Research Projects Agency for Health at the National Institutes of Health—or ARPA-H—which would invest 6.5 billion dollars to develop breakthroughs that prevent, detect, and treat cancer and other deadly diseases.

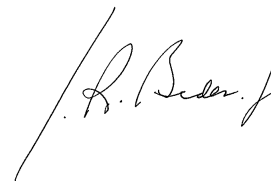
I am also committed to funding research to expand prevention and treatment of prostate cancer specifically. Today, researchers funded by the National Cancer Institute are working to advance our understanding of how to prevent, detect, and treat prostate cancer. The National Institutes of Health and partners in the private sector have launched the largest-ever coordinated research effort to investigate environmental and genetic factors related to prostate cancer to better understand why it disproportionately impacts Black men. And we are working on methods to prepare more advanced early detection tests and clinical trials to develop and enhance treatments for all men.

My Administration will also continue to protect and fight to build on the Affordable Care Act (ACA) and the important protections it provides for all Americans, including for men with prostate cancer. The ACA prohibits insurance companies from restrictive annual dollar limits on benefits, and it prohibits insurers from denying coverage or charging higher premiums to patients with prostate cancer—or any other pre-existing medical condition. The ACA also helps ensure that every man with prostate cancer receives quality health care.

Our Nation has made exceptional progress in the fight against cancer, and I am committed to doing everything I can to bring together the knowledge, as well as the human and financial resources necessary to advance that progress. We owe every person who has lost their battle with this disease, every person living with this disease, and every person who may one day be diagnosed with it, our continued work to defeat it. During National Prostate Cancer Awareness Month, let us renew our efforts to save lives and spare suffering by accelerating our work to end cancer as we know it.

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 September 2021 as National Prostate Cancer Awareness Month. I encourage citizens, government agencies, private businesses, nonprofit organizations, and other interested groups to join in activities that will increase awareness of what Americans can do to prevent and cure prostate cancer.

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

A handwritten signature in black ink, appearing to read "J. R. Biden Jr.", written in a cursive style.

Presidential Documents

Proclamation 10246 of August 31, 2021

National Recovery Month, 2021

By the President of the United States of America

A Proclamation

The COVID–19 pandemic has taken an enormous toll on the lives of the American people, especially those struggling with substance use disorder. While many have continued on their path towards recovery, even while facing the additional physical, emotional, and economic hardships brought about by the pandemic, others have struggled. During National Recovery Month, we celebrate the millions of Americans who have achieved recovery and reaffirm our commitment to helping more Americans overcome substance use disorder and reach recovery. We also support those who are still struggling to achieve recovery and dedicate ourselves to overcoming these challenges together.

This year’s theme, “Recovery is For Everyone: Every Person, Every Family, Every Community,” emphasizes that recovery is possible for all Americans. My Administration honors the many pathways to recovery and will support individuals and their families at every step along their journey, in whatever form it takes. Everyone can support and encourage those working toward recovery.

The work ahead includes making treatment and recovery support services accessible to all Americans. My American Rescue Plan delivered nearly \$4 billion to strengthen and expand mental health and substance use disorder services. My Administration will also continue to work to expand employment opportunities for people in recovery and foster the development of recovery-ready workplace policies and cultures. Helping those in recovery to attain economic opportunity and mobility will not only improve their well-being but also benefit our Nation as a whole. These investments will lay the foundation upon which more Americans—of all backgrounds and in every community—can build and maintain long-term recovery.

While opportunities for recovery should be available for everyone, those with substance use disorders in racially-diverse, Tribal, rural, and other underserved communities often lack access to the support services that they need to receive treatment and sustain their recovery. Research also shows that a treatment gap lingers between people of color and their white neighbors. People of color not only have less access to support services for addiction but are also subject to harsher penalties when addiction leads to interaction with the criminal justice system. To address this, my Administration launched a Government-wide approach to advancing equity, including in our public health and criminal justice approaches to drug policy.

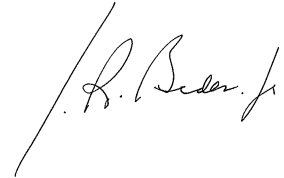
When we make the appropriate support and service systems available to everyone and embrace those seeking to rejoin and contribute to our communities, we put sustained recovery within reach of more people. When we welcome Americans in recovery into our schools, homes, and workplaces with open arms, our Nation becomes stronger, healthier, and more inclusive.

During National Recovery Month, we also honor and thank those who have helped our Nation heal and build back better. In the face of unprecedented challenges this past year, our Nation’s health care providers have delivered essential care and hope to individuals, families, and communities in need. On the frontlines of the addiction epidemic, they have ensured our Nation’s

system of care remains intact, facilitating treatment and recovery. As always, we celebrate the resilience and courage of the recovery community, which serves as a reminder that recovery is possible for everyone.

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 September 2021 as National Recovery Month. I call upon all citizens, government agencies, private businesses, nonprofit organizations, and other groups to take action to promote recovery and improve the health of our Nation.

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

A handwritten signature in black ink, appearing to read "Joe Biden", with a long, sweeping underline that extends to the left and then curves back under the signature.

Presidential Documents

Proclamation 10247 of August 31, 2021

National Sickle Cell Awareness Month, 2021

By the President of the United States of America

A Proclamation

Today, 100,000 Americans live with sickle cell disease (SCD). The genetic disease, named for the sickle-shaped red blood cells it causes, leads to severe pain, serious infections, and organ damage. The severity of SCD varies, with many people facing a shortened life expectancy and a host of recurring, debilitating, and expensive health problems.

This condition also disproportionately affects Black and Brown Americans, with an estimated 1 in 365 Black Americans and 1 in 14,000 Hispanic Americans suffering from it. As President, I am committed to supporting those who have been hit the hardest by SCD. And during National Sickle Cell Awareness month, our Nation reaffirms our commitment to improving the quality of life and health outcomes for all individuals living with SCD.

Our Nation's extraordinary medical professionals and scientists are working tirelessly to find a cure and develop improved treatments for SCD. Recent scientific advances have led to effective approaches for managing SCD and preventing complications, including new drug therapies approved by the Food and Drug Administration. And while current treatments may not be universally effective, researchers continue to improve existing treatments, such as bone marrow transplants that can effectively cure SCD in some patients. The National Institutes of Health (NIH) has continued supporting SCD research, education, and capacity building, including the "Cure Sickle Cell Initiative" to accelerate safe, effective, and scalable gene therapies to cure the disease. As a result of the many advances and medical breakthroughs in genetic therapies and research, we are now closer to finding a cure for all SCD patients.

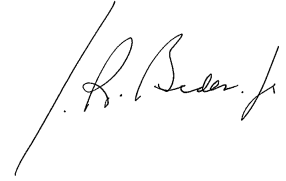
My Administration is committed to following science, delivering breakthroughs, eliminating health disparities facing communities of color and other underserved communities, and promoting the health and wellness of all Americans.

We will continue our efforts to improve the lives and livelihoods of individuals struggling with SCD by improving access to quality health care, collaborating with our partners in the public and private sectors, adhering to the guidance of scientific experts and researchers, and supporting all families affected by SCD.

This month, we celebrate the progress made in treating Americans suffering from SCD and we stand together to improve the health of those living with this disease.

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 September 2021 as National Sickle Cell Awareness Month. I call upon the people of the United States to learn more about the progress we are making to reduce the burden of this disease on our fellow Americans.

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

A handwritten signature in black ink, appearing to read "Joe Biden", written in a cursive style.

Presidential Documents

Proclamation 10248 of August 31, 2021

National Wilderness Month, 2021

By the President of the United States of America

A Proclamation

America's public lands and waters, awe-inspiring landscapes, and cultural sites reflect a deep and abiding connection to our natural heritage. Our lands and waters are rich with diverse plant and animal life, and we are privileged to be able to enjoy irreplaceable national treasures that amaze us, inspire us, fill us with pride, support our lives and livelihoods, and belong to all of us in equal measure.

During National Wilderness Month, we affirm that our Nation's public lands and waters must be accessible to all Americans, we recognize that our lands and waters can revitalize the soul and solidify our respect for the natural wonders that surround us and the earth we share, and we recommit to their preservation and protection, today and for future generations.

The Wilderness Act, signed into law by President Lyndon B. Johnson in 1964, opened a new chapter in American conservation by creating the National Wilderness Preservation System. The primary goal of the act is to preserve the places "where the earth and its community of life are untrammelled." Today, the National Wilderness Preservation System includes more than 800 wilderness areas spanning more than 111 million acres. These wilderness areas are located within national forests, parks, wildlife refuges, and conservation lands and waters. During the COVID-19 pandemic, many Americans turned to these areas for physical recreation, mental well-being, and inspiration, and our public lands and waters became places of healing and sanctuary.

But our natural wonders are at risk. Now more than ever, we must come together to combat the climate crisis and unprecedented acceleration of species extinction, to protect and conserve our great outdoors before it is too late. Since taking office, I have recommitted the United States to the Paris Climate Agreement, pushed for stronger action to cut greenhouse gas pollution, and resolved to strengthen our resilience against rising temperatures. Additionally, my Administration's historic "America the Beautiful" initiative sets a national conservation goal to invest in, conserve, connect, and restore at least 30 percent of the Nation's lands and waters by 2030. These diverse landscapes and waterways are vital in so many ways: they provide homes to fish and wildlife, and hold resources that sustain our own lives, counteract the damaging impacts of climate change, and underpin our global economy.

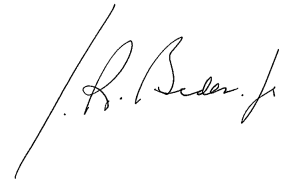
We also recognize that not all Americans have access to our public lands. My Administration is committed to ensuring that all peoples and communities have clean air and clean water, and receive the additional physical, spiritual, and economic benefits that our great wilderness provides. As the original stewards of these lands, Tribal Nations and Indigenous communities have a sacred connection and deep understanding of our Nation's wilderness areas, and the history of America's public lands has too often involved broken promises to the Native peoples who have lived on them since time immemorial. I am committed to working in partnership with Tribal, State, and local partners to find solutions to our most pressing conservation and

stewardship challenges, and to honoring the special relationship of Tribes to their ancestral sacred lands. This work is urgent.

During National Wilderness Month, let us strengthen our connection to the American wilderness areas, support their designation and protection, and work to preserve the stories they tell, the memories they create, and the heritage they reflect for all Americans for generations to come.

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 September 2021 as National Wilderness Month. I encourage all Americans to experience our Nation's outdoor heritage, to recreate responsibly and to leave no trace, to celebrate the value of preserving an enduring resource of wilderness, and to strengthen our commitment to protecting these vital lands and waters now and for future generations.

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



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Federal Register

Vol. 86, No. 169

Friday, September 3, 2021

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