

STRATEGIC PETROLEUM RESERVE DISCUSSION
DRAFT AND TITLE IV ENERGY EFFICIENCY

HEARING
BEFORE THE
SUBCOMMITTEE ON ENERGY AND POWER
OF THE
COMMITTEE ON ENERGY AND
COMMERCE
HOUSE OF REPRESENTATIVES
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CONTENTS

	Page
Hon. Ed Whitfield, a Representative in Congress from the Commonwealth of Kentucky, opening statement	1
Prepared statement	2
Hon. Bobby L. Rush, a Representative in Congress from the State of Illinois, opening statement	10
Hon. Frank Pallone, Jr., a Representative in Congress from the State of New Jersey, opening statement	13
Hon. Fred Upton, a Representative in Congress from the State of Michigan, prepared statement	135
WITNESSES	
Christopher A. Smith, Assistant Secretary for Fossil Energy, Department of Energy	3
Prepared statement	6
Christopher Peel, Corporate Senior Vice President and Chief Operating Officer, Rheem Manufacturing Company (on behalf of the Air-Conditioning, Heating, and Refrigeration Institute)	34
Prepared statement	37
Kateri Callahan, President, Alliance to Save Energy	45
Prepared statement	47
John W. Somerhalder II, Chairman, President, and CEO, AGL Resources (on behalf of the American Gas Association)	57
Prepared statement	59
Frank Thompson, President, Sweetwater Builders, Inc. (on behalf of the National Association of Home Builders)	65
Prepared statement	67
Elizabeth Noll, Energy Efficiency Advocate, Natural Resources Defense Council	80
Prepared statement	82
Answers to submitted questions	186
Rona Newmark, Vice President, Intelligent Efficiency Strategy, EMC Corp. (on behalf of the Information Technology Industry Council)	100
Prepared statement	102
Mark Wagner, Vice President, U.S. Government Relations, Johnson Controls, Inc. (on behalf of the Federal Performance Contracting Coalition)	107
Prepared statement	109
SUBMITTED MATERIAL	
Discussion draft of the Strategic Petroleum Mission Readiness Plan ¹	3
Discussion draft of Title IV—Energy Efficiency and Accountability ²	3
Statement of the American Public Gas Association	136
Statement of the Business Council for Sustainable Energy	143
Statement of the Geothermal Exchange Organization	148
Statement of the National Consumer Law Center	149
Statement of NiSource, Inc.	151
Statement of ASHRAE	154
Statement of the Alliance to Save Energy and the American Council for an Energy-efficient Economy	162
Statement of the United States Chamber of Commerce	164
Statement of the Leading Builders of America	165
Statement of the Retail Industry Leaders Association	169
Statements of the American Council for an Energy Efficient Economy, et al.	170

VI

	Page
Statement of the Center for American Progress	171
Statement of 500 architectural firms	177
Statement of Window & Door Manufacturers Association	184

¹ Available at: <http://docs.house.gov/meetings/IF/IF03/20150430/103401/BILLS-114pih-Strategicpetroleumreserveddiscussiondraft.pdf>.

² Available at: <http://docs.house.gov/meetings/IF/IF03/20150430/103401/BILLS-114pih-TitleIVenergyefficiencyandaccountabilitydiscussiondraft.pdf>.

STRATEGIC PETROLEUM RESERVE DISCUSSION DRAFT AND TITLE IV ENERGY EFFICIENCY

THURSDAY, APRIL 30, 2015

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ENERGY AND POWER,
COMMITTEE ON ENERGY AND COMMERCE,
Washington, DC.

The subcommittee met, pursuant to call, at 10:16 a.m., in room 2322 of the Rayburn House Office Building, Hon. Ed Whitfield (chairman of the subcommittee) presiding.

Members present: Representatives Whitfield, Olson, Barton, Shimkus, Latta, Harper, McKinley, Kinzinger, Johnson, Long, Ellmers, Flores, Mullin, Hudson, Rush, McNerney, Tonko, Engel, Green, Doyle, Sarbanes, Loeb sack, and Pallone (ex officio).

Staff present: Nick Abraham, Legislative Associate, Energy and Power; Charlotte Baker, Deputy Communications Director; Will Batson, Legislative Clerk; Allison Busbee, Policy Coordinator, Energy and Power; Patrick Currier, Counsel, Energy and Power; Tom Hassenboehler, Chief Counsel, Energy and Power; Brandon Moon ey, Professional Staff Member, Energy and Power; Caitlin Haberman, Democratic Professional Staff Member; Rick Kessler, Democratic Senior Advisor and Staff Director, Energy and Environment; and John Marshall, Democratic Policy Coordinator.

OPENING STATEMENT OF HON. ED WHITFIELD, A REPRESENTATIVE IN CONGRESS FROM THE COMMONWEALTH OF KENTUCKY

Mr. WHITFIELD. Today the committee is going to continue its work on the discussion draft of our energy bill that we have been working on with the Democrats. We began the dialogue last week with a hearing on the energy work force title to the bill, and today we are going to be focusing on the Strategic Petroleum Reserve and the energy efficiency part of the legislation.

The current debate over the SPR is a familiar one to those who have witnessed how America's dramatically changing energy landscape has rendered many existing policies out of date. The Strategic Petroleum Reserve was created under the Energy Policy and Conservation Act of 1975, and has since served as an insurance policy in the form of an emergency stockpile of oil. However, much has changed over the last 40 years, and there is bipartisan agreement that we are overdue to update the SPR to reflect the needs of 2015 and beyond.

One of the problems that we are having, of course, relates to infrastructure issues associated with the SPR. Specifically, the oil boom is underway near the SPR's location in Louisiana and Texas, and is already stretching the local infrastructure to its limits. This raises questions whether there is sufficient infrastructure available to successfully draw down the SPR in the case of an emergency. DOE and others have found that the 40 year old stockpile is in a poor state of repair, raising doubts about whether it is ready to be utilized in a timely and efficient manner. There are also questions about the legal trigger tapping the SPR, and whether it constrains the President from anticipating problems justifying a release. So we are going to be looking at lot at the SPR, and we appreciate our witness here today, who will address that issue.

The bill also will contain a number of energy efficiency provisions. Many of them certainly deal with the way the Federal Government, by far the nation's largest energy user, can do more for less. This includes provisions that would certainly emphasize the importance of energy savings performance contract for Federal facilities. There are also requirements for DOE to look into potential energy savings from Federal data centers, and through the use of thermal insulation, as well as other ideas that may help reduce Federal energy expenditures.

So we have two panels of witnesses this morning. On the second panel I think we have five or six witnesses. The first we have our guest from the Federal Government, who I will introduce in just a minute, but with that, I will yield back the balance of my time.

[The prepared statement of Mr. Whitfield follows:]

PREPARED STATEMENT OF HON. ED WHITFIELD

Today, this subcommittee continues its work on the discussion draft of our bipartisan energy bill. We began the dialogue last week with a hearing on the energy workforce title to the bill. And now, we move on to the provisions dealing with the Strategic Petroleum Reserve (SPR) and energy efficiency.

The current debate over the SPR is a familiar one to those who have witnessed how America's dramatically-changed energy landscape has rendered many existing policies out of date. The SPR was created under the Energy Policy and Conservation Act of 1975, and has since served as an insurance policy in the form of an emergency stockpile of oil. However, much has changed over the last 40 years, and there is bipartisan agreement that we are overdue to update the SPR to reflect the needs of 2015 and beyond.

For one thing, fears of increased dependence on oil from unfriendly producers and unstable regions has been replaced by the reality of growing American production as well as rising imports from Canada. The risk remains of a supply disruption necessitating an SPR release, but the nature and extent of the risk has changed.

In addition, as noted in the Department of Energy's recent Quadrennial Energy Review, there are many infrastructure issues associated with the SPR. Specifically, the oil boom is underway near the SPR's locations in Louisiana and Texas and is already stretching the local infrastructure to its limits. This raises questions whether there is sufficient infrastructure available to successfully draw down the SPR in an emergency. Further, DOE and others have found that the 40-year old stockpile is in a poor state of repair, raising doubts about whether it is ready to be utilized in a timely and efficient manner. There are also questions about the legal trigger for tapping the SPR and whether it constrains the President from anticipating problems justifying a release.

The SPR provisions in the discussion draft require DOE to conduct a strategic review of the SPR with an eye towards reforming the program for the near and long-term. This review will address issues about the proper size, configuration, and location of the SPR, as well as any necessary repairs and infrastructure additions to the system. It will also explore potential legal changes regarding what triggers an

SPR release. This review will help Congress as we consider the next steps in updating the nation's emergency oil stockpile.

The bill also contains a number of energy efficiency provisions. Many of them deal with ways for the federal government, by far the nation's largest energy user, to do more with less. This includes provisions that would help expand the use of energy savings performance contracts for federal facilities. There are also requirements for DOE to look into potential energy savings from federal data centers and through the use of thermal insulation, as well as other ideas that may help reduce federal energy expenditures. It also eliminates the potentially costly and unrealistic requirement that federal buildings use no fossil fuel generated energy by 2030.

The draft bill also contains measures affecting the private sector, which has been the source of most energy efficiency breakthroughs over the years. This includes greater legal certainty for the Energy Star program, the inclusion of Smart Grid capability on Energy Guide labels, and voluntary verification programs for several appliances. It also clarifies DOE's role in setting model building codes, and prevents a proposed residential gas furnace efficiency standard from being finalized until the agency gathers more evidence on whether it is technologically feasible and economically justified.

Both SPR and energy efficiency are two topics on which we should be able to agree on the path forward. I look forward to a discussion on these critical components of our energy bill.

[The discussion draft of the Strategic Petroleum Mission Readiness Plan is available at: <http://docs.house.gov/meetings/IF/IF03/20150430/103401/BILLS-114pih-Strategicpetroleumreservediscussiondraft.pdf>.]

[The discussion draft of Title IV—Energy Efficiency and Accountability is available at: <http://docs.house.gov/meetings/IF/IF03/20150430/103401/BILLS-114pih-TitleIVenergyefficiencyandaccountabilitydiscussiondraft.pdf>.]

Mr. WHITFIELD. Mr. McNerney, are you going to be making a statement for your side, or is Mr. Rush going to—

Mr. MCNERNEY. Thank you, Mr. Chairman. No, I don't have a prepared statement at this point.

Mr. WHITFIELD. Sorry?

Mr. MCNERNEY. I don't have a prepared statement—

Mr. WHITFIELD. OK. All right. Is there anyone else on our side that would like to make a statement this morning? OK. I will tell you what we will do, when Mr. Rush gets here, we will give him an opportunity to make an opening statement. But, at this time, I would like to introduce our only witness on the first panel, and that is Christopher Smith, who is the Assistant Secretary for Fossil Energy at the Department of Energy.

Mr. Smith, thank you very much for being with us again, and I would like to recognize you for 5 minutes for your opening statement. So be sure the microphone is on, and, as you know, the red light will come on when your 5 minutes is up, so thank you very much.

STATEMENT OF CHRISTOPHER A. SMITH, ASSISTANT SECRETARY FOR FOSSIL ENERGY, DEPARTMENT OF ENERGY

Mr. SMITH. Well, thank you very much, Mr. Chairman, for giving me the opportunity to appear before this Committee. Chairman Whitfield, Ranking Member Rush, and members of the Committee, it is my pleasure to appear before you today to discuss the Strategic Petroleum Reserve. The Strategic Petroleum Reserve provides strategic and economic security against foreign and domestic dis-

ruptions in the oil supply by an emergency stockpile of crude oil. It also fulfills United States obligations under the International Energy Program, which avails the United States of International Energy Agency assistance through its Coordinated Energy Emergency Response Plan.

As you know, earlier this month the Department announced the award of contracts for the purchase of crude oil sold during last year's sale. Under terms of these contracts, which were funded by the \$239 million in receipts from the test sale, BP Products North America and Noble Americas will deliver more than two million barrels to the reserve's Bryan Mound site in Freeport, Texas. Deliveries are expected to be completed by July 31.

I would like to elaborate on the 2014 test sale, because it did a couple of important things. First, it resulted in the delivery of nearly five million barrels of crude oil over a 47 day period, and brought in more than \$460 million in receipts. A portion of those receipts was used to fund the Northeast Gasoline Supply Reserve, which was established as a result of Superstorm Sandy in 2012. This reserve consists of one million barrels of government owned gasoline stored in three locations in the Northeast. At the same time, the test sale evaluated drawdown and sales procedures, and validated the operational capability to draw down the Strategic Petroleum Reserve.

I would like to talk about that drawdown capability for a moment. The Strategic Petroleum Reserve is a network of 60 operational caverns at four sites in Louisiana and Texas, with a total design capacity of 713 million barrels of crude oil, and currently holding 691 million barrels available for release in the event of a supply disruption. The infrastructure and equipment to support drawdown, including storage caverns and well bores, is both large and complex. This aging infrastructure, which has performed capably to meet every emergency release throughout the SPR's history, requires progressive—requires progressively more maintenance every year, and is in need of modernization.

With regard to modernization, the Department has initiated work on a comprehensive long term strategic review of the Strategic Petroleum Reserve in response to changing market and energy security dynamics. This review will be guided by the recommendations contained in reports conducted by the GAO and the Department's Inspector General. It will also be informed by the recommendations from the Administration's recently released quadrennial energy review.

The QER underscores the Administration's support for an effective Strategic Petroleum Reserve modernization program that would address infrastructure issues, and reflect current market and energy security concerns. Specific recommendations include investing as much as \$2 million to increase the incremental distribution capacity of the Strategic Petroleum Reserve, and implementing a life extension program for key Strategic Petroleum Reserve components, including surface infrastructure and additional brine drive caverns. The QER also recommends that Congress update the Strategic Petroleum Reserve's release authorities in the Energy Policy and Conservation Act to expressly include disruptions in the global oil market as release triggers to revise release requirements. Fi-

nally, the QER recommends the integration of the President's authorities to release products from the refined petroleum product reserve into a single unified authority. These release authorities should be tailored to the purpose of a product reserve, which may differ in some respects from the purposes of a crude oil reserve.

With that, Mr. Chairman, I would be happy to answer any questions that the subcommittee may have.

[The prepared statement of Mr. Smith follows:]

**Statement of Christopher Smith
Assistant Secretary for Fossil Energy
U.S. Department of Energy**

Before the

**Subcommittee on Energy and Power
Committee on Energy and Commerce
U.S. House of Representatives**

Strategic Petroleum Reserve

April 30, 2015

Chairman Whitfield, Ranking Member Rush, and Members of the Committee, it is my pleasure to appear before you today to discuss the Department of Energy's (DOE) Strategic Petroleum Reserve (SPR).

SPR Background

The SPR provides strategic and economic security against foreign and domestic disruptions in oil supplies via an emergency stockpile of crude oil. It also fulfills U.S. obligations under the International Energy Program, which avails the U.S. of International Energy Agency assistance through its coordinated energy emergency response plans, and provides a defense against energy supply disruptions.

The SPR is a network of 60 operational caverns at four storage sites in Louisiana and Texas, with a total design capacity of 713.5 million barrels and 115 operational wellbores. It currently holds 691 million barrels of crude oil available for release in the event of a petroleum supply disruption. The SPR caverns are connected to three distribution networks—Seaway, Texoma, and Capline—that distribute SPR oil through pipelines and marine terminals to Gulf Coast refineries, inland refineries, and refineries on the East and West Coasts. Cavern operating costs are less than \$0.25 per barrel per year, which are the lowest costs among oil stockpiling countries.

The infrastructure and equipment to support a drawdown across the SPR is both large and complex. In addition to the storage caverns and wellbores, these include:

- 16 above ground storage tanks holding crude oil, waste oil, and firefighting water;

- 80 pumps for crude oil, brine, raw water, and firefighting systems;
- 33 heat exchangers; 21 brine disposal wells;
- A crude oil degasification plant;
- More than 5,400 valves; and
- Over 200 miles of crude oil, brine disposal, and raw water pipeline that must be maintained.

Much of this aging infrastructure, which has performed capably to meet every emergency release throughout the SPR's history, is at the end of its design life and life extension investments will be needed in the near future.

Program Highlights

In 2014, the SPR performed an operational Test Sale that was conducted to evaluate the drawdown and sales procedure capabilities of the Reserve in the Texoma distribution system, which has been impacted due to significant changes in domestic crude oil production, increased imports of Canadian crude oil, and changes to crude oil distribution infrastructure upon which the SPR relies. The SPR completed delivery of 4,998,146 barrels of crude oil over a 47 day period, resulting in \$468,564,599 in receipts. The Test Sale was successful in evaluating the drawdown and sales procedures, and validated the operational capability to drawdown the SPR. In particular, it identified a need to conduct analyses of potential commercial infrastructure investments and options to ensure future marine distribution capability of the SPR.

A portion of the receipts from the Test Sale (\$227,744,500) was used to fund the requirements of the Northeast Gasoline Supply Reserve (NGSR). The NGSR was established as a result of Superstorm Sandy in 2012. It consists of one million barrels of government-owned gasoline ready for blending with ethanol and stored in leased commercial storage terminals at three locations in the Northeast U.S.: 700,000 barrels are stored in the New York Harbor area at two separate locations; 200,000 barrels are stored at a terminal in Revere, Massachusetts; and 100,000 barrels are stored at a terminal in South Portland, Maine.

The NGSR, which became operational in August 2014, remains at full readiness and prepared for an emergency drawdown at the direction of the President.

On April 9, 2015, in compliance with section 161(g)(6) of the Energy Policy and Conservation Act of 1975 (EPCA), the Department announced the award of contracts for the repurchase of crude oil sold during the 2014 Test Sale. Under terms of the contracts, which were funded by \$239.2 million in receipts from the sale, BP Products North America, Inc. will deliver 2,197,500 barrels and Noble Americas will deliver 2,000,000 barrels to the Reserve's Bryan Mound site in Freeport, Texas. Deliveries are expected to be completed by July 31, 2015.

SPR Modernization

The SPR remains an important protection against serious oil supply disruptions and the associated price increases in domestic petroleum and petroleum products. However, the global environment in which it operates has changed markedly since its creation in the 1970s. At that time, the mission of the SPR was to avoid “national energy supply shortages” (i.e., a loss of supply to U.S. refineries). Today, the impacts of an overall supply disruption of global oil markets would have the same effect on domestic petroleum product prices, regardless of U.S. oil import levels or whether or not U.S. refineries import crude oil from disrupted countries.

In response to these changing dynamics, the Department has initiated work on a comprehensive long-term strategic review of the SPR. The review will examine future SPR requirements regarding the size, composition, and geographic location of the Reserve; and determine the impact of these requirements on future SPR surface, below-ground, and distribution infrastructure. This review will be informed by the recommendations contained in final review reports¹ on the SPR conducted by the Government Accountability Office (GAO) and the Department of Energy’s Inspector General (IG) Office. It will also be informed by the recommendations contained in the Administration’s recently-released Quadrennial Energy Review (QER). Analytical methodology will be consistent with the requirements of OMB Circular A-94.

Related QER Recommendations

The QER underscores the need for an effective SPR modernization program that reflects current global oil markets, U.S. market conditions, the nature of energy security in an interconnected world, and addresses SPR distribution infrastructure and life extension of key SPR infrastructure components. It outlines a program that would address physical infrastructure issues and revise the statutory basis for releasing the SPR. Addressing these issues will ensure the maximum readiness of the SPR to meet the Nation’s strategic petroleum requirements during a disruption. Specific recommendations include the following²:

Invest to optimize the SPR’s emergency response capability: DOE should make investments to optimize the ability of the SPR to protect the U.S. economy in an energy supply emergency. It is anticipated that \$1.5–\$2.0 billion is needed to increase the incremental distribution capacity of the SPR by adding dedicated marine loading dock capacity at the Gulf Coast terminus of the SPR

¹ Reports:

The Department of Energy Inspector General. “Audit Report: The Strategic Petroleum Reserve’s Drawdown Readiness.” July 2014. <http://energy.gov/sites/prod/files/2014/07/f17/DOE-IG-0916.pdf>

U.S. Government Accountability Office. “Changing Crude Oil Markets: Allowing Exports Could Reduce Consumer Fuel Prices, and the Size of the Strategic Reserves Should Be Reexamined.” September 2014. <http://www.gao.gov/products/GAO-14-807>.

² http://energy.gov/sites/prod/files/2015/04/f22/QER%20ch4%20final_0.pdf

distribution systems, as well as undertaking a life extension program for key SPR components, including surface infrastructure and additional brine-drive caverns. This work should be preceded by DOE analyzing appropriate SPR size and configuration and carrying out detailed engineering studies.

Update SPR release authorities to reflect modern oil markets: Congress should update the SPR release authorities in EPCA to make them more flexible. EPCA's definition of a "severe energy supply interruption" should expressly include criteria focused specifically on disruptions in the global oil market, regardless of whether they resulted in a loss of oil imports to the United States. In addition, the requirement that a severe increase in the price of petroleum products *has resulted* from such emergency situation should be changed to a requirement that a severe price increase *will likely result* from such emergency situation.

Support other U.S. actions related to energy security infrastructures that reflect a broader and collective view of energy security: The U.S. should continue to consult with allies and key energy trading partners on energy security issues, as well as support actions related to energy infrastructures that are consistent with U.S. interests and G-7 principles on energy security.

To ensure the strongest possible response to regional supply disruptions and vulnerabilities, the QER includes a recommendation to integrate the authorities of the President to release products from the Northeast Home Heating Fuel Reserve and the Northeast Gasoline Supply Reserve into a single, unified authority. These release authorities should be aligned and should be tailored to the purposes of a product reserve, as opposed to a crude oil reserve.³

Mr. Chairman, and members of the Committee, this completes my prepared statement. I would be happy to answer any questions you may have at this time.

³ http://energy.gov/sites/prod/files/2015/04/f22/QER%20ch2%20final_1.pdf

Mr. WHITFIELD. Mr. Smith, thank you very much, and at this time I would like to recognize Mr. Rush for his opening statement.

OPENING STATEMENT OF HON. BOBBY L. RUSH, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Mr. RUSH. I want to thank you, Mr. Chairman, and, Mr. Chairman, I want to welcome our esteemed witness. Thank you for holding this hearing today on two very important, but yet completely unrelated issues, the SPR and the energy efficiency standards.

Mr. Chairman, I agree with the underlying assumption that it is time to engage in a comprehensive review of the SPR, which was originally authorized under the Energy Policy and Conservation Act of 1975 in order to reduce the domestic impact of a disruption in supplies of petroleum products due to unforeseen or unavoidable circumstances. And I commend Secretary—for initiating the process to conduct a comprehensive review of the SPR, following both in July 2014 DOE Office of Inspector General report, and the GAO office study issued in September of last year, recommending that the Department do so.

Mr. Chairman, circumstances have changed significantly since the SPR was established back in the 1970s, so it makes sense to examine future SPR requirements regarding size, composition, and geographic location to make sure that the country is better suited to deal with any potential and future disruptions. Additionally, what little funding comes from—I think it also behooves us to consider the resources necessary to operate the SPR, and to ensure its long term sustainability in order to preserve the infrastructure and the maintenance of these sites.

Mr. Chairman, as for the other panel, regarding a completely different topic, I must say that I hope that we will hold an additional hearing on DOE energy efficiency standards, where members will have an opportunity to hear from the agency in a direct manner. While engaging industry and other stakeholders as we will do today should be a part of the process, that should not preclude having agency officials come before this Committee to inform members on the reasoning, and the justification, behind promulgating the very standards that are under discussion.

Mr. Chairman, many of the energy efficiency measures contained in the draft bill are non-controversial, and are bipartisan in nature, such as Section 4114, which modifies the definition of renewables to include thermal energy under the Federal renewable energy purchase requirements established in Section 203 of EPAC 2005. This language represents an example of DOE, industry, and energy efficiency advocates all working together to come up with a legislative fix that all sides have agreed to.

However, there are other provisions, similar provisions, as a matter of fact, of this bill that are not bipartisan, and do not reflect agreement on the part of the various stakeholders. For instance, Section 4115, which would repeal a key portion of Section 433 of the Energy Independence and Security Act, the provision that requires Federal buildings to be designed to result in decreased consumption of fossil fuels by 2013, is one section, among others, that we will definitely have to examine further and continue to work on before we reach bipartisan consensus.

Mr. Chairman, as this is only a discussion draft, and will undergo significant changes, I am satisfied with engaging today's expert witnesses so that we may be better informed on how to improve this draft as we move forward through the legislative process. But, Mr. Chairman, we need to have additional hearings and additional work. I know that you will agree with me, Mr. Chairman. With that, I yield back the balance of my time.

Mr. WHITFIELD. Gentleman yields back the balance of his time, and at this point, Mr. Smith, we once again thank you for your statement, and I will recognize myself for 5 minutes for questions.

Back in 2014, GAO issued a report entitled "The Changing Crude Oil Markets", allowing exports has price and other implications, and the size of the strategic reserve should be re-examined. In the letter that you had sent to us, you indicated that DOE has initiated the process for conducting a comprehensive re-examination of the appropriate size of the SPR in light of current and future market conditions. I was just curious, what is the status of that review, and do you have a timetable of when you all might complete that?

Mr. SMITH. Well, thank you very much, Mr. Chairman, for the question. So indeed, we think it is very important to undertake a comprehensive strategic review, which I believe is the position of the Committee, and we have already started that process. As we know, and as was noted in your statement, there are many factors that have changed since the Strategic Petroleum Reserve was initially created in the '70s. So our comprehensive review is looking at a very wide range of issues. Looking at modernization, looking at distribution capability, looking at issues that are driven by the appropriate size of the reserve.

So we are already started on that process, we are working on that, and we believe that the total review will take several months to complete, towards a year for the culmination of that report.

Mr. WHITFIELD. Are you personally concerned—I talked a little bit about the infrastructure issue, and because of the shale boom, and the capacity limitations that we have, are you concerned at all about the infrastructure aspect of this?

Mr. SMITH. Well, I am, Mr. Chairman. One note, I imagine that our team who is managing this process would bristle at the characterization of the SPR being in a poor state of repair. I think we have got a tremendous team that is doing all the things that they need to do to make sure that the SPR is ready. And, indeed, every time we have had a test sale, or we have had to use the SPR, that team has performed admirably.

That said, it is an aging asset. We have well bores that have been in place for decades. And as you drill into these salt structures, they move over time, and it causes issues. So not only are we concerned about ensuring that we are funding this in a way that allows it to keep up with deferred maintenance, but also many infrastructure issues, such as the direction of the pipelines, the inflow of crude, the types of crude that are coming into the refineries in the Gulf of Mexico has changed, and we think it is important for us to consider all these things. So we think these, you know, we agree with the Committee's conclusion that these are critical things to study and analyze.

Mr. WHITFIELD. I think you had indicated there is something like 691 million barrels of crude oil, in storage.

Mr. SMITH. Right.

Mr. WHITFIELD. Is most of that heavy sour crude, or is there light sweet as well?

Mr. SMITH. So we have got a total of 691 million barrels of crude in storage right now. That is split between sweet and sour, so we have got approximately 260 million barrels of sweet. We have about 430 million barrels of sour, so we have a split between—

Mr. WHITFIELD. Yes.

Mr. SMITH [continuing]. Sweet and sour.

Mr. WHITFIELD. And do you happen to know the number of gallons of crude that are in public storage in our country today?

Mr. SMITH. I don't have that number off the top of my head, Mr. Chairman.

Mr. WHITFIELD. I was told that it was in the neighborhood of 500 million barrels. Does that sound right to you, or have you heard about—

Mr. SMITH. That might be a reasonable number, Mr. Chairman. I don't know what the figure is off the top of my head.

Mr. WHITFIELD. OK. Well, thank you very much. And, Mr. Rush, you are recognized for 5 minutes.

Mr. RUSH. I want to thank you, Mr. Chairman. Secretary Smith, in your testimony you stated that the SPR is a network of 60 operational—at four storage sites in Louisiana and Texas, with a designed capacity of 713.5 million barrels, and 115 operational well bores. I would imagine that these facilities see a lot of wear and tear over the years, and require quite a bit of upkeep and maintenance. What is the state of these facilities, and how are they maintained? Is there a funding stream dedicated to the upkeep and maintenance of these facilities? And what can we, as members of Congress, do to assist you in maintaining these facilities?

Mr. SMITH. Well, thank you very much, Ranking Member Rush, for that question. We request appropriation every year that we use to maintain the SPR, and ensure that the Strategic Petroleum Reserve is ready for a drawdown. In our budget request that the President recently released, we did ask for a total of \$257 million for the Strategic Petroleum Reserve, which was an increase over budget requests in previous years. I guess the marks we are seeing right now would result in a \$45 million decrease in the amount that we requested, which does impact our ability to tackle some of the deferred maintenance that we think is important.

As I briefly noted, some of these well bores are 20, 30 years old. As you are drilling through the cap rock, and into these caverns, you do have movement over time that compromises the well bores. There are lots of above ground issues that you have to deal with to ensure that all of your pumps, your compressors, your valves, corrosion issues are taken care of. So it is our intent to ensure that we are chipping into some of this deferred maintenance backlog, and, indeed, that was reflected in the request that we made in this budget submission and the Congressional justification that we submitted.

So we do have a plan to ensure that we are ready to execute. Historically we have always been able to accomplish the mission,

and I think that is a testament to the folks that we have working down in Louisiana and Texas, on these sites. But there is work that has to be done on an ongoing basis, and we think that funding that at appropriate levels is very important.

Mr. RUSH. What were some of the most important lessons that we learned from the operational test sale, in terms of evaluating the drawdown and sales procedures, as well as analyzing potential commercial infrastructure investments?

Mr. SMITH. So we learned a number of things. First of all, it was a \$5 million test sale. We were successful in getting all five million barrels pushed to market. We did learn some things about some shortcomings. We noticed some issues with the—distribution group—or pipeline system that probably needs to be addressed. We also specifically identified a metering skid at one of the sites that, if—anything sold has to go through a single metering skid, so if you have two opportunities to move crude out of that site, you would have to do it sequentially, one after the other.

That is a significant bottleneck, and something that we could address, and—just by putting in a new metering skid, would be able to significantly increase the capacity of that site. And these were things that we noted in our Congressional justification for the 2016 budget that we recently submitted.

Mr. RUSH. Now, the reduction in the 2016 budget, can you project the ramifications of that? Is that going to significantly affect, or drastically affect, your ability to achieve your mission?

Mr. SMITH. Well, we think that these things are important. One of the reasons why we did the test sale was to identify areas of improvement, bottlenecks, things that we had to do to improve the distribution capabilities of the Strategic Petroleum Reserve. It is a valuable asset, but you do have to maintain it, you do have to manage it, so we think that it is critically important to not only take care of the deferred maintenance that we are concerned about, but also to make specific upgrades, such as the additional metering skid, that would increase our ability to serve more than one offtake at a time. And that would, as a result, increase the Strategic Petroleum Reserve's ability to push crude into the market in the case of an emergency.

Mr. RUSH. Thank you, Mr. Chairman.

Mr. WHITFIELD. Gentleman's time has expired. Mr. Pallone, did you want to make an opening statement?

OPENING STATEMENT OF HON. FRANK PALLONE, JR., A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW JERSEY

Mr. PALLONE. Sure. Sorry that I was late, I was at the other hearing, on 21st century cures. I will try to cut back on it, but I did want to yield a minute to Mr. Welch, so, Mr. Chairman, I just want to say that I think I have made it clear that I am interested in working with you and Chairman Upton on energy legislation, but I am concerned about the format of today's hearing. I can't recall a time when this subcommittee has crammed two completely unrelated topics into one hearing, and I think it does a disservice to members, and to the subject matter, because both of these sub-

jects are important, and really warrant not only separate legislative hearings, but also they should be preceded by more oversight.

With regard to the specific proposals before us, I recognize they do not represent anything more than discussion drafts of potential legislative language that could go into an energy bill. However, as this efficiency title is currently constituted, I would not be in a position to support it, or to recommend that others support it. In particular, I am opposed to language in the discussion draft that repeals Section 433 of the Energy Independence and Security Act signed into law by President George Bush. Section 433 established groundbreaking energy efficiency performance standards for the design of new Federal buildings, and those Federal buildings undergoing major renovation, rightly ensuring that new Federal buildings be designed to result in decreased consumption of fossil fuels. The draft would prohibit from promulgating a final rule updating efficiency standards for gas furnaces until an advisory group completes an analysis and determination.

And I certainly understand that there are concerns out there, but stakeholders have been working toward a resolution mutually agreeable to all parties. Now, however, some stakeholders apparently decided to try to do an end run by proposing this language, halting DOE's efficiency efforts from moving forward, and the draft sets up an opponent dominated advisory panel, and gives more weight to the anti-efficiency factors being examined in the analysis. In my opinion, this greatly sets back any progress made toward good faith efforts to sincerely resolve concerns with the DOE's proposal.

The building code efficiency provisions in the draft is another area of great concern to me. As currently outlined, changes to DOE standards authority in this area would do great harm to what has been a very successful and impactful program. That said, I do want to make clear I do believe there is a sincere effort on both sides to try to find common ground, and I remain optimistic that we can develop a bipartisan energy package. We are early in our process, and there are many ideas from both sides of the aisle that have not yet been considered. In raising these issues up front, I hope that we can have a more concerted bipartisan collaboration moving forward.

Mr. Chairman, last week the Obama Administration released its first installment of the quadrennial energy review. I know it was mentioned at a previous hearing by Mr. Doyle, and this is a great government-wide effort to look at key aspects of the Nation's energy infrastructure that contains many useful insights, including some recommendations that would require legislation. We need to review that report carefully, because I think it provides us with an opportunity for our committee to work closely with the administration to put together meaningful energy legislation that addresses the four areas of your architect of abundance framework, and that the President, I think, ultimately would sign.

So let me thank you again for holding this hearing, for your hard work in bringing these provisions forward, and for your willingness to work with us to make this into a product that we might all be able to support. And I would like to yield the remainder of my time to Mr. Welch.

Mr. WELCH. Thank you very much, Mr. Pallone. Thank you, Mr. Pallone and Mr. Rush, for your leadership on energy efficiency, and I really am grateful to our chairman, Mr. Whitfield, and Chairman Upton, for their focus on this.

Energy efficiency is such an area where we can work together and make real progress. It saves money, creates jobs, it is better for the environment. We have made progress, Mr. McKinley and I, in other sponsored legislation that President Obama is going to sign into law this afternoon, and it is only a beginning.

What we know is that energy efficiency is literally the lowest cost electricity resource for utilities, and from 2008 to 2012 new efficiency improvements from utility programs and appliance standards have avoided the need for more than 275 power plants. So we have got an opportunity to focus on the common ground where, whatever the fuel source, less is more. It can be nuclear, it can be coal, it can be solar, if we find efficiency, we are going to put people to work retrofitting our homes and our commercial buildings. We are going to save on fuel bills, and we are going to do a significant improvement of the economy. So I am grateful to the bipartisan approach we have got, and there is work to be done, and I am glad this committee is going to do it. Thank you, Mr. Pallone, and I yield back.

Mr. WHITFIELD. Gentleman yields back. At this time, recognize the gentleman from Texas, Mr. Barton, for 5 minutes.

Mr. BARTON. Am I asking questions or giving a statement?

Mr. WHITFIELD. Questions.

Mr. BARTON. Questions. OK, I didn't know. I just got here. I have got two hearings going on, and I am still asleep because Mr. Doyle's baseball team is so good that we are getting up now before dark to start practicing to try to be competitive with them.

Mr. DOYLE. Got to get up earlier than that.

Mr. BARTON. Yes. Well, that is probably true. But arrogance sometimes leads to its own downfall, so Honorable Mr. Smith, we are glad to have you here today.

I think you know that I have introduced a bill that would repeal the current ban on crude oil exports. It also has a section that requires the Department of Energy to conduct a study, and to send the results of that study to this Committee, and the Senate Energy Committee, within 120 days about the status of the SPR, what we should do with it. Do you know if the Department of Energy supports that part of the repeal bill?

Mr. SMITH. So, just to understand the question, Congressman, do we support the issues on export, or just support doing the study on the—

Mr. BARTON. The study. The study on the—I can make it a two part question.

Mr. SMITH. OK.

Mr. BARTON. Unless you just want to say yes, yes, which I will yield back to the Chairman.

Mr. SMITH. I want to make sure I understand the question.

Mr. BARTON. Yes. No, I have had some discussions off camera with the Secretary of Energy about repealing the crude oil export ban. My question to you, since this hearing is on energy efficiency, and what to do with the Strategic Petroleum Reserve, is whether

the Department supports that part of the bill repealing the ban on crude oil exports that requires a study of the Strategic Petroleum Reserve, and that that study be reported to the Congress within 120 days?

Mr. SMITH. Yes. Well, thank you for the question, Congressman, and the clarification. So we certainly do support the idea of doing a comprehensive review of the Strategic Petroleum Reserve. In fact, that is a process that we already have underway. We, of course, will comply with the law as written. I would say that a comprehensive study that looks at infrastructure issues, that looks at subsurface issues, that looks at geologic issues, that looks at market issues, all the things that would help us come to some conclusions over the appropriate size and the scope of work that it needs to do to modernize the Strategic Petroleum Reserve. It would be difficult to do that in 120 days. That is—

Mr. BARTON. Do you have a timeframe that you would prefer? We wanted to get it back fairly quickly, but since our bill hasn't had a legislative hearing yet, we are very flexible.

Mr. SMITH. Right.

Mr. BARTON. Would 180 days be better? Would you like a year? What is the magic number?

Mr. SMITH. Well, 180 days would be better than 120 days. I think the estimate that we would make for doing a piece of work of that magnitude was several months, so it would be considerably longer than the current 120 days that you have proposed. But that said, we have got a great team, and we will accomplish what we can in the time that we are given. But in order to address what we think are fundamentally, and comprehensively a different set of conditions than we had when the Strategic Petroleum Reserve was initially put in place, back in the '70s, but that is actually a big piece of work—

Mr. BARTON. Right.

Mr. SMITH [continuing]. And we would like to make sure that we have time to get that right.

Mr. BARTON. When we put the SPR in place, we were importing lots and lots of oil, and oil production in the United States was going down. Today we are increasing our production, oil imports are going down, refined product exports are going up. Current law precludes the President from using the Strategic Petroleum Reserve, except in times of national emergency. He has some discretion in declaring that emergency, and Congress has had issues with past Presidents when they have declared it.

What is your opinion of giving the President, or the Secretary of Energy, the discretion to perhaps actually make—I won't say routine sales of crude oil, but make it easier to sell crude oil in the world market when there is not a national emergency, given the fact our oil production is increasing like it is, and we have the potential—I am not saying we will ever do it, but we have the potential to be totally energy independent, and not import any crude oil at all?

Mr. SMITH. Right. Well, thank you for that question, Congressman. So the authorities to export crude to other countries would fall under the purview of the Department of Commerce, and of the Office of the President, so I don't demur answering on their behalf.

What I can say is that we think it is extremely positive that we are, for the first time in decades, producing more oil domestically than we have to import from other countries. That has been I think a tremendous improvement, in terms of our energy security and economic development.

I would note that we are still importing—

Mr. BARTON. Right.

Mr. SMITH [continuing]. 7.6 million barrels per day, so we still are importing significant quantities of oil here in the present time. But in terms of the authorities to export, I mean, that would be a question for Congress. We follow the statute, in that there are exceptions and waivers that have to be handled by Department of Commerce, and by the Office of the President.

Mr. BARTON. My time has expired, but it is refreshing to know that at least the Department of Energy wants to do what the Congress tells it to do.

Mr. WHITFIELD. Yes, we are excited to hear about that.

Mr. BARTON. I am honored to hear that. With that, I yield back.

Mr. WHITFIELD. Where would Mr. Pallone—Chair at this time, will recognize the gentleman from New York, Mr. Tonko, for 5 minutes.

Mr. TONKO. Thank you, Mr. Chair. Assistant Secretary Smith, in your testimony you indicated that DOE has started a review of the SPR, and you mentioned a few of the issues that DOE will examine, including the size, the composition, and the geographic location of the reserve. It sounds as if the reserve assumes it would largely keep the present overall structure in place, with perhaps some modifications. And maybe that is what we should do, but is the Department also going to re-evaluate whether maintaining a Strategic Petroleum Reserve is the best way to promote energy security?

And might I just say, I don't doubt the need for emergency planning, and specific authorities for action in case of an emergency, given the importance of this resource to our economy, but with the changes in our oil markets, and private investment in infrastructure for oil and gas, and the changes in demand for different refined products, I am wondering whether the SPR, which we conceived in the midst of a very different environment, is still the proper overall structure. So can you address whether or not we are going to re-evaluate, whether we maintain that SPR?

Mr. SMITH. Well, thank you, Congressman, for that question. So, if you look at global oil prices right now, you see markets are currently very well supplied, and—as was noted by Congressman Barton from Texas, we are producing more oil domestically than we have in the past. We are producing more barrels domestically than we import from other countries, so some of those situations have changed.

However, we do believe that the Strategic Petroleum Reserve does still provide a critical element of energy security for our nation. It is the largest energy stockpile in the world. It is, I think, an important tool that we have to handle not only disruption of physical barrels, but also the impacts that price increases might have on the U.S. economy.

So in our study we will look at the size of the SPR. I think that is important to consider, what the appropriate size of the Strategic

Petroleum Reserve would be. And we will look at infrastructure issues, we will look at fundamentally how the Strategic Petroleum Reserve operates. But I would say that it is certainly our conclusion, and my personal conclusion, as the official who oversees the site, that this is an important resource for national security, and we think that its core mission remains vital.

Mr. TONKO. And in terms of its structure, you believe it will best serve us in the event of an emergency?

Mr. SMITH. Well, Congressman, that is something that we will evaluate in the study. I mean, there are structural issues that we can tackle, in terms of what infrastructure needs to be in place. We have made changes, in terms of, for example, setting up the Northeast Gasoline Reserve last year as a response to weaknesses that we saw in the aftermath of Superstorm Sandy in 2012. So there are steps that we are taking to say, well, we understand what the statute says, and we understand the design of the Strategic Petroleum Reserve.

We are making steps as we go forward to ensure that we are using authorities that we have to ensure that the reserve remains relevant, and we will try to think broadly, in terms of doing a strategic review, so that we consider what other changes might be appropriate.

Mr. TONKO. Thank you for that. And you also recommend that Congress update the definition of a severe energy supply interruption, to include criteria focused on disruptions in the global oil market, whether those disruptions result in a problem with U.S. oil imports or not. Would you elaborate on that thinking, please?

Mr. SMITH. Well, it is tied to a—I guess an observation has already been made. The Strategic Petroleum Reserve was created back in the '70s in a very different environment than the environment we have now. We operate under EPCA, and over the years, over the decades since the early '70s, the statute that we have now is a patchwork of changes, and addendums, and amendments that have been put in place over the years. So there are some ambiguities about authorities. There are some issues of regional resources perhaps being deployed in a way that is more appropriate for a national resource.

And so it is our view that, as we look at the language that authorizes us to use the reserve, given that that has been changed piecemeal, bit by bit, over decades, starting from a point which is very structurally different than the global markets right now, we do think it would be judicious and appropriate to take a look at—all of the language that gives authorization, and streamline that, and make it suitable for today's markets.

Mr. TONKO. Thank you very much, and with that, I will yield back, Mr. Chair.

Mr. RUSH. Mr. Chair?

Mr. WHITFIELD. Sorry, Mr. Rush?

Mr. RUSH. Mr. Chairman, I just wanted to—the Committee, and all the—there is a gentleman in the room, on the left side there, white hair, very handsome gentleman, that is former member Dave McCurdy from Oklahoma. He is the president of the American Gas Association, and I just didn't want him to sit in this room without us giving him his due. He was a fine gentleman, and true friend,

and just an outstanding member of Congress. So he is there. The handsome guy with the white hair.

Mr. WHITFIELD. And we know he was an outstanding baseball player as well for the—

Mr. RUSH. I don't know why—is there a provision that he can join your side and be on your team?

Mr. WHITFIELD. Yes, absolutely.

Mr. RUSH. Because you are going to need him. And—

Mr. WHITFIELD. He looks like he is getting younger, to me, every single day. No, we are glad you are here. Thank you so much, and thank you for reminding us of that.

At this time I would like to recognize the gentleman from Texas, Mr. Olson, for 5 minutes.

Mr. OLSON. I thank the Chair. And good morning, and welcome, Mr. Smith. I know you are a fellow Texan, grew up in Fort Worth. You served our country, a West Point graduate, in the Army. Thank you for your service. I promise I won't talk about the state of affairs between your Army and my Navy, and that big football game that happens every year, but I do want to talk about the state of affairs of the SPR.

It is a big part of my home life. The Bryan Mound is about 20 miles down the road from my home, and the Big Hill is about an hour east in Winnie. In your QER, DOE talks about some big changes for the SPR. You want billions of dollars more spending to fix the system. And, as has been mentioned, our world has been turned upside down these past years with this energy production. We have plenty of crude here in parts of the country where we usually have to import or anticipate a shortage. I would like to delve into some of those issues, but I first have a question on the specific type of crude in the SPR.

These days we are barely exporting light crude. Much of the crude we do import—I am sorry, importing light crude. Much of the crude we do import is heavier. It seems that this crude is most at threat of a supply disruption. And with the huge amount of oil we have here at home, are you happy with the current balance of light versus heavier crudes in the SPR, as you mentioned, I think, the balance is between 260 billion barrels of light crude, sweet crude, and then 430 barrels of sour, heavier crude. Are you happy with that balance, and how would you adjust it if you are not happy with it?

Mr. SMITH. Well, thank you for the question, Congressman. So, indeed, our balance between sweet and sour is 260 for sweet barrels, and then 430 for sour. As we go through our process of looking at our long term strategic review, I think that is something that we will be considering, along with infrastructure. There are issues of cavern storage, and how we blend different types of crudes, and what caverns we would place them into. So, as you note, the mix of crude that refiners are using in the Gulf of Mexico has changed over the years.

You know, late '90s, early 2000s, refiners put lots of money into upgrading refineries to run heavier crudes. Now we are seeing that there are more light crudes that are becoming available here as the Bachman in South Texas comes online. These are all things, I think, that we have to consider. I wouldn't categorically state that

right now we think we have the right balance. In fact, the very reason why this Committee is encouraging us to do the study, and—that we have already embarked on that path is that we think that we need to address these issues. We think they are very important.

Mr. OLSON. Thank you. This is not news, but our crude supplies, and even the direction of some pipelines, have changed in recent years. For refined products, we are a major global supplier now, and at the same time some allies remain very reliant on imports. In some scenarios, an SPR release might not be as effective as it was in the past. My question is this, with this new market reality, should we be focused on the SPR here at home, and making sure our allies upgrade their reserves overseas? Allies like South Korea, where you served during the Army. Anything we should do with our allies to make sure they have their own SPRs?

Mr. SMITH. Well, thank you, Mr. Congressman.

Mr. OLSON. I will take the promotion.

Mr. SMITH. OK. Apologies to the Chairman. So I—just 2 weeks ago—so we work very closely with the IEA, the International Energy Agency, that helps us align petroleum reserves throughout the world. I will make a couple of notes on that. Just 2 weeks ago I was in Szechuan Province, Chengdu, China at an IEA event, and then a few days later I was in New Delhi, India at a separate IEA event. We have also spent time in China looking at, you know, creating a stronger communication between ourselves and the officials in China who manage their reserves. So we have a very strong understanding that, you know, we can't do this by ourselves. We wouldn't endeavor to do it by ourselves. I think it is a more powerful tool when we are part of the potential to use the Strategic Petroleum Reserve as part of a collective action.

So indeed we are taking steps along those lines. We think these are important steps to take. And, in fact, we have, just last year, signed a historic agreement with China to create a greater sense of transparency between ourselves and China so that we understand issues there, with regard to their energy stockpile. We think these are important steps, and they are ones that we continue to push on.

Mr. OLSON. Thank you. Out of time.

Mr. WHITFIELD. Chair recognizes at this time, Mr. Doyle of Pennsylvania for 5 minutes.

Mr. DOYLE. Thank you, Mr. Chairman. Mr. Smith, thank you for testifying before our Committee today. We all know how much the landscape has changed since 1975, when we first passed the legislation to create the SPR. And I was glad that you mentioned the recently released QER in your testimony. It suggests that energy security should be more broadly defined than just oil security. What other sources do you think should be included, and how should we protect them?

Mr. SMITH. So, to make sure I understand the question, Congressman, I have spoken to recommendations in the QER that had to deal with the Strategic Petroleum Reserve, and you are thinking how do we think about energy security more broadly?

Mr. DOYLE. Yes. The report suggested that we shouldn't think of it as just oil security, but we should think of it more broadly. So

is it suggesting security measures, or how we view other sources, natural gas, or whatever?

Mr. SMITH. Well, with regard to the petroleum reserve, the scope of the study that we have discussed here would be specific to the petroleum reserve, including crude and refined products. So the scope of that discussion wouldn't change. What I will say is that we do work very closely across offices within Department of Energy. So there are four applied offices within DOE. I run the Office of Fossil Energy, which includes oil, natural gas, clean coal, carbon capture and sequestration, the Strategic Petroleum Reserve. There is a separate office that looks at energy efficiency and renewable energy.

Mr. DOYLE. All right.

Mr. SMITH. A separate office that looks at—Office of Electricity, and a separate office that looks at nuclear energy. So we do work very closely. In fact, one of the things that Secretary Moniz has integrated since he has come to the Department are cross cutting teams to ensure that, in our budgeting process, we are very explicitly creating teams that break down those silos. So when we are thinking about energy security, and we are thinking about job creations, when we are thinking about all the important things about energy reliability, and reducing greenhouse gas emissions, that we are breaking down those silos, and we are thinking across borders. So that is something that is already in place, and we think is being expressed in the way that we are putting together our budgets and executing our programs.

Mr. DOYLE. Thank you. In your testimony you also highlighted the QERs recommendation to consolidate the authority for the Northeast Home Heating Fuel Reserve and the Northeast Gasoline Supply Reserve into a single unified authority. And, additionally, you suggested that these release authorities should be aligned and tailored to the purposes of a product reserve, rather than that of a crude oil reserve. Can you expand upon why you think this consolidation is beneficial, and how the release authority would be different for a product reserve, rather than a crude oil reserve?

Mr. SMITH. Well, thank you, Congressman, for that question. So Part B, Title 1 of EPCA dictates the steps we would have to take in order for the Northeast Gasoline Reserve, which is part of the Strategic Petroleum Reserve. That language is very much geared towards a national shortage, and very much geared towards crude oil. It is not geared towards a regional event, the type of event that we saw in the aftermath of Superstorm Sandy, and it is not geared toward the needs of communities who are suffering shortfalls or shortages in a supply of products. So we think it would be appropriate to amend that so that the triggers for releasing the gasoline reserve would be appropriate for the types of emergencies you might see there, so that, we bought this insurance policy against shortages. We want to make sure that we are able to deploy that insurance policy in ways that are appropriate for the types of emergencies that it is meant to cover.

With the NEHHOR, the Northeast Home Heating Oil Reserve, there are a couple triggers that might trigger these with NEHHOR. One is that a differential in the current price, that it had to exceed a moving average by 60 percent. We think that is a tremendously

difficult bar to make. And, in fact, once you have gotten to that point, you have probably gone beyond the point which the reserve would be useful. There is also language that says a regional supply shortage of significant scope and duration would trigger the ability to use NEHHOR, which we think is probably a bit more appropriate.

But between the NEHHOR, the Northeast Home Heating Oil Reserve, the crude reserve national resource in the Gulf of Mexico, the SPR, and the Northeast Gasoline Reserve, and any, you know, future thing that we might have for products, we do think that we need to go back and, you know, again, as we mentioned, this patchwork of legislation that has been created over the years, we think it would be appropriate to look at all of that, and make sure that it is streamlined for the markets of today, as opposed to the markets of yesterday.

Mr. DOYLE. Great. Thank you very much. I yield back.

Mr. WHITFIELD. At this time the Chair recognizes the gentleman from Ohio, Mr. Latta, for 5 minutes.

Mr. LATTI. Well, I thank the Chairman, and I thank you for having this hearing today, and I appreciate our witness and his testimony this morning. If I could just kind of go back to a question that the Chairman asked initially, and then I think part of the answer was dealing with the infrastructure side. Did I understand you said something about the direction of the pipeline? Did I understand you to say that?

Mr. SMITH. Yes, Congressman. So, as we have created a lot more crude—so we mentioned that we are producing more crude domestically than we import, and that is for the first time in many years. We have a lot more crude that is coming from North Dakota, so it is going from north down south. We have a lot more crude that is being produced in South Texas, out of the Eagle Ford Shale. And so previously you had pipeline networks that—you had the Strategic Petroleum Reserve in the Gulf of Mexico, and you could push oil from the SPR in the Gulf of Mexico up to the rest of the country. Now you are seeing some of those pipelines have reversed because they are bringing crude from new sources of production, in North Dakota and in Texas, and it has come into the Gulf of Mexico.

And so that complicates the original construct of the SPR, which was to have this centrally located large stockpile of hundreds of millions of barrels that you could simply, through pipelines, push out to the rest of the country. Given that some of those pipelines were reversed, it makes us re-think some of those things, and also makes the waterborne transport of crude a lot more important than it probably was back in the '70s.

Mr. LATTI. Now, when you look at your strategic overall plan that you are looking at into the future, is that something that you are really going to emphasize, then, on the direction?

Mr. SMITH. Indeed, Congressman. When we think about what infrastructure you need, what marine transport you need, what pipeline systems you might be employing, what should be the balance of crude, what should be the size of the Strategic Petroleum Reserve, what types of crude the refiners are using, those are all factors that we will be considering when we undergo this comprehen-

sive review. And it will help us crystallize these issues, and make very specific recommendations about investments that we need to make to make sure that we have got the reserve that is suitable for the markets of today, as opposed to the markets of the early '70s.

Mr. LATTI. Thank you, because—and also you had mentioned earlier, in your response, that we have about 7.6 million barrels of oil that we are importing every day today, and also we all know it has been alluded to this morning what has happened with our shale development in this country, and really what we have been able to do in this country to help ourselves. But in light of all that, if something would happen on an—if there would be an international supply disruption at this time, are we prepared to meet that with the current setup of what we are with the SPR?

Mr. SMITH. Well, thanks for the question, Congressman. So, we have noted many of the shortcomings, the market has changed, some of the pipelines go in different directions, but, one thing I can say is that, not only through the test sale, but, through the release that we had for the disruption that came from the unrest in Libya, that the team of professionals we have running the Strategic Petroleum Reserve down in the Gulf of Mexico, and Texas, and Louisiana, have always been successful at pushing oil into markets, and in doing the things that the SPR was meant to do.

Now, that is not to say that, going forward, we don't have some concerns. We do think that there is some modernization that needs to occur. We do have some deferred maintenance that we are concerned about, and we want to make sure that that mission readiness continues. But we are focused on remaining ready. We utilize the resources that we have in our disposal. But going forward, we do have some serious concerns, which is the reason why we have asked for some increase in budgets in this Congressional justification for the 2016 budget, and that the study that we are going to be undertaking will be looking at issues of modernization. We think those are important points.

Mr. LATTI. Thank you. Mr. Chairman, I yield back the balance of my time.

Mr. WHITFIELD. At this time the Chair recognizes the gentleman from California, Mr. McNerney, for 5 minutes.

Mr. MCNERNEY. Thank you, Mr. Chairman, and thank you, Assistant Secretary, for testifying this morning, and for your work in this area, and for all the constant field work that you do. Now, one thing you mentioned in your opening remark was the aging drawdown infrastructure by saying that it needs more maintenance—what specifically would be the best actions to take, how much would they cost, and could that be paid for by drawdown profits?

Mr. SMITH. So I will talk a bit about the first part of the question, which is what we think needs to be done, and then I will try to address the second part of your question. So in terms of deferred maintenance, I think every year we get an appropriate, we take that appropriate, we do what we need to do to in order to remain mission ready. And mission readiness is—this is an energy security asset, and so the team in the Gulf of Mexico is focused on mission readiness.

So what we need to do in the immediate term, for the budget that we are requesting for 2016, there are issues with valves, there are issues with compressors, there are issues with pumps. There are some well bore work-overs that need to be accomplished. We have included funding in our request for the transfer metering skid at Big Hill, which would allow them to push oil in two different directions to two different buyers at the same time, as opposed to the one bottleneck that they have currently, where they can only move oil to one buyer. We think in the immediate term that these are important things to undertake, in terms of ensuring that we are taking care of that deferred maintenance, and that we continue to be ready.

Going forward, we have a modernization effort that is referred to in the Quadrennial Energy Review. That would have to do deal with further surface infrastructure for life extension. So again, this was an asset that was put in place decades ago. If you are going to move decades into the future, there are lots of things you have to do to make sure that equipment that is getting to its sell by date is getting renovated, it is getting fixed, it is getting replaced, in some cases.

So that would be surface infrastructure, everything we need to move oil around the surface, and that is the pumps, and valves, and all that equipment to move oil around. It would include brine disposal caverns, so we use brine to push oil and out of the caverns, and so there would probably be some new brine drive caverns that we would have to work on. And then disposal wells as well. So, brine has to be disposed of when it is utilized, and so those are things that would be included in the life extension.

Beyond that, there are some other issues to deal with, marine capacity, marine distribution. That is also envisioned in the Quadrennial Energy Review, and will be considered in the strategic study that will be undertaken.

Mr. MCNERNEY. OK. Well, last year it said you grossed \$468 million by your test sale. What was the average price per barrel in that sale?

Mr. SMITH. Congressman, I don't know that number off the top of my head. I would be happy to respond for the record. But it was consistent with whatever the market price was at the time. It was higher than it is today.

Mr. MCNERNEY. Higher than today, but is it higher than it was when the oil was purchased and put into the reserve?

Mr. SMITH. Well, the oil is purchased over time, right, so the—

Mr. MCNERNEY. Right.

Mr. SMITH [continuing]. Comparison that I can make is that when we did the test sale we sold 5 million barrels. Receipts from that sale were somewhere in the order of magnitude of \$500 million. We took part of those funds and used them to create the Northeast Gasoline Reserve, which is a million barrels of gasoline that we have in three sites in the northeast. That was the reserve that we created to respond to Superstorm Sandy. We had enough left over after that to replace almost all of the oil that we had sold in the first place.

So we sold at a much higher level than we bought back, which means we sold the oil, and created a new reserve, including all the

storage, and paying for the maintenance and operation on a go forward basis, and still had enough left to buy back all the oil that we sold in the first place. So it was good timing, and good execution on—

Mr. MCNERNEY. OK. Well, that sort of answers the second part of my first question that you didn't answer the first time through. OK. So, with that, I will yield back, Mr. Chairman.

Mr. WHITFIELD. Gentleman yields back. At this time recognize the gentleman from West Virginia, Mr. McKinley, for 5 minutes.

Mr. MCKINLEY. Thank you. Let me get the first question out of the way as quickly—I want to hear from you whether or not you support what Secretary Moniz came and testified to us back in January, I believe it was, that the operation of the Nettle facilities at Morgantown and Pittsburgh will remain as is into the future. In fact, we talked about a 10 year time period. Do you agree with that?

Mr. SMITH. Yes.

Mr. MCKINLEY. OK. So I don't need to go to part two question on that. So the other issue is, building back off the question having to do with the gasoline storage in the northeast, I am just curious about that, because I know the crude can be stored for some period of time, but there is a shelf life for gasoline. Can you share with us a little bit about how often you are turning that over? Because that gasoline can't stay there forever.

Mr. SMITH. Right. Thank you, Congressman, for that question. So we didn't go and construct new tankage. We rented tankage that is in place, and so these are in existing commercial facilities, so part of our maintenance that we are paying for all the time includes ongoing turnover over that product, so—

Mr. MCKINLEY. So it is being refreshed, is what you are saying?

Mr. SMITH. Yes, Congressman.

Mr. MCKINLEY. OK, that is fine, so we don't have that issue. Because I know there are serious problems with gasoline over a period of time if it is not turned over. So let me go to the next question, that has to do with this storage of the crude in the salt mines, primarily down, I guess, in the Gulf region, having faced a lot of the pushback, and understandable, the pushback of the brine discharge from the operation, and the Marcellus and the Utica operation that the environmentalists—and understandably. I would share the concern, what are we doing with this brine reserve that is coming back up again?

So I am curious, since you have produced somewhere in the neighborhood of close to 700 million barrels of brine, what would you do with it?

Mr. SMITH. Thank you for that question. So we have got a very experienced team of environmental professionals that are part of the Strategic Petroleum Reserve that ensure that we are complying with all state, local, and Federal regulations in terms of disposal of brine. We do have brine drive caverns in place that we use to manage the brine. We need the brine to push the oil out of the caverns.

Mr. MCKINLEY. So when it comes back up, you are putting it someplace—mechanically, I want to be able to be clear, not talk in 30,000 feet. When it comes back out, where does it go?

Mr. SMITH. It probably would be good to answer that question for the record, Congressman, because I want to make sure that we get all the details correct. But what I can say is that that is an operation that we have got decades of experience managing, that we are managing consistent with all the state and local regulations.

Mr. MCKINLEY. How do you deal with—apparently there are some issues in the salt mines with structural integrity that is breaking down, in some cases, and obviously, as you know, crude is not typically found in a salt environment, so you are going to have some interaction between the chemical composition of a crude oil and the salt in the walls of the container. How does this work in the breakdown? What are we doing to assure us that we have long term stability in our storage with our reserves?

Mr. SMITH. Well, we do have an extensive testing program that is looking at sampling from a statistical sample of the caverns on an ongoing basis, so we have a very granular and fine understanding of the quality and the state of the crude that we have in all of the caverns. Generally the reason why you store crude in the salt caverns is the salt is not soluble in crude, whereas it is soluble in water, right? So you use the water to actually create the space in the cavern, and then you fill that with crude, so you have got essentially these enormously large pressure vessels that are full of crude, but the salt itself is not soluble in crude, which is what makes it very appropriate for storage.

Mr. MCKINLEY. So you are indicating there is no chemical interaction between the two?

Mr. SMITH. What I am saying is—

Mr. MCKINLEY. Careful with that.

Mr. SMITH. I am saying that salt is generally not soluble in crude, and that we have an extensive testing program so that we have a very fine understanding of the state of the crude, sweet and sour, all the various caverns, 60 caverns throughout four different sites, so that, on an ongoing basis, we always understand exactly what crude we have in the caverns, we know what refineries they are suitable for, and that we are consistent with all the standards for delivering those refineries, both—

Mr. MCKINLEY. OK. In the timeframe that I have left on—is that apparently, as I said earlier, we are finding some developing structural integrity problems—can you give us a sense of how many of those—if we are storing close to 700 million barrels in crude, how much of that is in areas that are questionable?

Mr. SMITH. Well, what I can say is that every cavern that we have crude in right now is certified. It is understood it is safe, all right? We have had to decommission a couple caverns over the last few years. Our biggest challenge is that you are drilling through cap rock into these salt structures, and that over time they do move, so they pinch the well bores, they compress the well bores, they deform the well bores. And so, on an ongoing basis, we have got a program of remediation where we are having to inspect the well bores on an ongoing basis. And part of the funds that we had requested for this budget period, increasing funding from last year to this year, was to ensure that we are able to do the appropriate number of work-overs.

One final thing I will say is that if there is an issue of safety in any cavern, it means we don't operate that cavern. So we don't operate any cavern that is going to create an environmental issue. We don't operate any cavern that is going to be a—create a safety issue. We decommission those caverns if they create a—

Mr. MCKINLEY. OK. If you can get back to me on—I am over on time. If you could get back to me on those two answers that left—one was percent, and the other question.

Mr. SMITH. All right. I would be happy to.

Mr. MCKINLEY. Thank you very much.

Mr. WHITFIELD. At this time the Chair recognizes the gentleman from Vermont, Mr. Welch, for 5 minutes.

Mr. WELCH. Thank you very much, Mr. Chairman. Mr. Smith, thank you. The Strategic Petroleum Reserve has been with us for a while, and can perform a number of very useful functions, including taking some of the pressure off the spike in gas prices when consumers are getting hammered. In fact, we passed a law, that I was one of the co-sponsors of, to suspend shipments, this is back in '08, suspend shipments to the SPR because gas was 3.73 a gallon. And, in fact, the evidence indicated that it was about—adding about a quarter at—of a cost—a quarter a gallon at the price of the pump. Obviously, we are in a different situation now, and as we have re-filled it, we are paying less than we were paying then. What has been the experience of SPR with respect to how it can have an impact on the price that consumers pay at the pump? I know that is not its primary objective, but it is an incidental effect.

Mr. SMITH. Well, thank you, Congressman, for that question. So I guess—two separate issues. So one of the things that the Strategic Petroleum Reserve, just its existence, but also its utilization in a crisis, can do is have an impact not only on ensuring that we have appropriate supply in a disruption, but also on global oil markets. I will note that global oil markets and global crude markets are different. You do have an internationally fungible global crude market, and an internationally fundable global product market. We import and export product. In fact, we are a net exporter of refined products.

So if the question is, when we are filling the caverns, do we have an impact on prices, we just bought five million barrels to replace the barrels from the test sale. We kept an eye on that as we made that announcement, and we didn't see an appreciable impact on prices. We are concerned about impacts on consumers, so that is something that we keep an eye on.

Mr. WELCH. One other question. The quadrennial energy review mentions that Congress should update the SPR release authorities to allow it to be used more effectively to prevent economic harm in emergencies. Do you recommend any specific legislative steps that are needed in order to accomplish that?

Mr. SMITH. Thank you for that question, Congressman. So, indeed, one of the disconnects well, first of all, to reiterate a point that I had an opportunity to make earlier, we operate primarily under EPCA, which is, right now, after decades, is a patchwork of amendments, and addendums, and changes. So we do see a disconnect between the market of today and the market that was perhaps foreseen back in the early '70s. So changes in the legislation

and authorities, that would allow us to be more proactive with the petroleum reserve would be welcome. Changes that would centralize some of the authorities so that, right now we have different authorities for regional product reserves, and the Strategic Petroleum Reserve.

And, importantly, they are in some cases, for example, the Northeast Gasoline Reserve is managed under Title B, Section 1, and that is a national standard, so you have a regional reserve for products that would be released based on a standard that is set for a national reserve that has crude in it. And so we think that addressing all those issues would be positive to make sure that that is its effect.

Mr. WELCH. Well, we would welcome your specific recommendations on how best to do that.

Mr. SMITH. I really look forward to the opportunity to work with the Committee on that.

Mr. WELCH. All right. Thank you. I yield back.

Mr. WHITFIELD. Chair recognizes the gentleman from Ohio, Mr. Johnson, for 5 minutes.

Mr. JOHNSON. Thank you, Mr. Chairman, and Assistant Secretary Smith. Thank you so much for being here with us today. A couple of quick questions on a little bit of a different subject, then I will get back to some questions about the QER. Are you confident that your department is treating applications by Canadian LNG companies consistently with NAFTA obligations?

Mr. SMITH. Thank you very much for that question, Congressman. So we currently have two applicants for—two Canadian applicants before the Department for authorization to export liquefied natural gas. To be clear, what we authorize is—we give the applicant the authorization—or we rule on their application to export the molecule. Other entities look at environmental issues, including the FERC. So we have got two applications that are before us right now. So the commitment that we have made is that we are going to treat applicants in Canada, applicants in Mexico, and applicants in the United States in a way that is open, it is transparent, it is fair, it is consistent.

So under Section 3 of the Natural Gas Act, we are compelled to make a public interest determination for any natural gas that is exported from the United States. It is our reading of that statute that that applies to natural gas that might be exported via Canada, via Mexico, or via the United States. So whether you are a mile north or a mile south of that border, we have to do that public interest determination.

Mr. JOHNSON. I understand that, but it—I guess I am a little confused, because it is my understanding that that is not being applied in the case of Mexico, but it is being applied in Canada. And are you concerned that Canada could, in fact, exercise jurisdiction over the export of LNG derived from Canadian natural gas for U.S. projects, such as Jordan Cove and Oregon LNG? And the reason that I ask this question is because they are experiencing the same slow rolling, slow moving process for liquid natural gas export permits that American companies are.

Mr. SMITH. Right.

Mr. JOHNSON. And it is going to come to a head at some point.

Mr. SMITH. Well, I won't speculate on what the Canadian government is going to do. I think Canadian government is going to do what is appropriate for the citizens of Canada, just as we are doing what is appropriate for the—

Mr. JOHNSON. Yes, but it could have dire implications for here at home, because a lot of the gas that we have here at home, in the Marcellus and other places, are destined to go to places like Canada. And so it does have economic implications here at home.

Mr. SMITH. Well, indeed, Congressman, and as we make these—well, first, I wouldn't concur with the characterization of this process, slow rolling. I mean, we have already—

Mr. JOHNSON. We can debate that, because they have been sitting there for years, and there are 38, only five of them had been addressed. We were assured by Secretary Moniz that these were going to be looked at more quickly, and we are not seeing LNG export permits being granted.

Mr. SMITH. Well, indeed, Congressman, we are. We have authorized 5.7 billion cubic feet of natural gas—

Mr. JOHNSON. How many permits have you authorized?

Mr. SMITH. For four different—

Mr. JOHNSON. Four out of 38. Mr. Smith, in my view, that is slow rolling, when America's economy is dependent upon the jobs, and the energy independence that this brings.

Mr. SMITH. Well, Congressman, right now there are zero applicants sitting in front of us for a decision right now. There is an important process that these companies have to go through that—

Mr. JOHNSON. Well, you know why that is, right? You know why that is? They are not going to put the hundreds of millions of dollars into doing the environmental assessments and the FERC process when they know these permits are going to sit in the Department of Energy for extenuating periods of time. They have got to have some idea that they are going to get a return on their investment. But—

Mr. SMITH. In fact, they are spending millions of dollars to go through those process, because they are going through that FERC process. So we work very closely with FERC. As those applicants have finished that process, then they come to Department of Energy. The last application that we got that came out of FERC, we turned that around in 1 day.

So the companies will make the decision whether to either spend the money on the environmental work or not, and that is up to the companies. The market will decide that. As the companies make those investments, as they get financing, as they sell the gas, they will then come to the Department. Once that work is done, it puts us in a situation where we can make that—

Mr. JOHNSON. My time is expired almost. Point of clarification, then. Are you telling me that the roughly 33 permitting applications that are sitting in the Department of Energy, that none of that has gone through the FERC process, and that none of that is waiting on the Department of Energy for action?

Mr. SMITH. Those applicants that have gone through FERC, that have completed the re-hearing process, have come to us, and we have made decisions on those applicants.

Mr. JOHNSON. So you are saying that none of those other 33 are waiting on the Department of Energy?

Mr. SMITH. The rest of those 33 are doing all the other work that they have to do to complete these decadal multi-billion dollar projects. They are big projects, and they do take some time, but we are moving expeditiously on this. We are getting these applications out as we are ready to make the decisions because they have done the work. They come to us, and we write the orders.

Mr. JOHNSON. Sorry for exceeding my time, Mr. Chairman. I yield back.

Mr. WHITFIELD. At this time the Chair recognizes the gentleman from New York, Mr. Engel, for 5 minutes.

Mr. ENGEL. Thank you very much, Mr. Chairman. Welcome, Mr. Secretary. New York and the northeast region of the U.S. are particularly vulnerable to gasoline disruptions as a result of hurricanes and other natural events, and Hurricane Sandy, or Superstorm Sandy, in 2012 was a good example of that. It caused widespread issues related to the availability of gasoline.

In response, to help build a more secure and resilient energy infrastructure, the Energy Department did establish the first Federal regional refined petroleum product reserve, containing gasoline. The reserve, I am told, currently holds one million barrels of gasoline to help strengthen regional fuel resiliency in the northeast. So let me ask you if you could please talk about efforts related to the setup and operation of the northeast reserve. Did you have to overcome any unforeseen challenges, and are there any issues that have yet to be resolved?

Mr. SMITH. Thank you, Congressman, very much for that question. So, as you pointed out, the establishment of the Northeast Gasoline Reserve was an important step that we took after some of the disruptions that we noted in Superstorm Sandy. So, as a result of that, we created a reserve in the northeast that would have gasoline in place. That includes 700,000 barrels that are stored in the New York Harbor area, and that is in two separate facilities. We have 200,000 barrels that are in a terminal in Massachusetts, and then 100,000 barrels that are stored at terminals south of Portland, Maine.

So those three different geographic locations make up the Northeast Petroleum Reserve. The funding that we used for purchasing the gasoline, we also used to procure storage capacity, and maintenance, and ongoing expenses for the reserve. So that the resources are in place. We have put in place all of the IT, and the procedural systems that we would need to have in place in order to actually move those barrels out into the market in the case of a disruption.

We worked very closely with potential buyers of gasoline out of those reserves to ensure that we are, on an ongoing basis, exercising the capabilities to make sure that not only have we purchased this insurance policy, but we are ready to use it, and to deploy it in case of a future emergency. So that is the steps that we have taken to date.

Mr. ENGEL. It is also my understanding that the DOE operates a network of pipelines as part of the Strategic Petroleum Reserve, including the Northeast Reserve, so I would like to know a bit more

about that. Do you have available information on how many miles of pipelines does DOE operate as part of the SPR?

Mr. SMITH. I don't have that number off the top of my head, Congressman, but I would be happy to take that question for—

Mr. ENGEL. And get back to me? How is that system managed? Can you help me understand a little more about—

Mr. SMITH. All right.

Mr. ENGEL [continuing]. Management of that system?

Mr. SMITH. So the Strategic Petroleum Reserves—our Deputy Assistant Secretary, Mr. Bob Corbin, is based here in Washington, D.C. He works very closely with me. We have the management office down in the Gulf of Mexico that has a center in New Orleans that oversees those operations. And so, between that operational center in New Orleans, and our center here in Washington, D.C., we oversee all the activities of the Strategic Petroleum Reserve, including the Northeast Home Heating Oil Reserve, and the newly created Northeast Gasoline Reserve, is all managed by the SPR.

Mr. ENGEL. Is the safety of the pipeline network subject to oversight by DOT's Office of Pipeline Safety?

Mr. SMITH. So one clarification I will make, because there is not an extensive pipeline network that is actually owned and maintained by the SPR. Again, I will be happy to give some details of that question for the record, to ensure that we are being clear on that. But we certainly are complying with all state and Federal regulations for all assets that we manage.

Mr. ENGEL. But help me to understand who is responsible for regulating those pipes.

Mr. SMITH. So if the strategic petroleum has a release that goes into an existing commercial pipeline network, then that pipeline would be operated and regulated by whatever the appropriate Federal and State statutes oversee that infrastructure. Just like if we put crude into a barge, and we sell it to someone who is going to take that water-borne to another location, then there would be a federal, state, and local regulations for those transportation assets, even if we don't own them.

Mr. ENGEL. OK. Thank you. Thank you, Mr. Chairman.

Mr. WHITFIELD. At this time we will recognize the gentleman from Texas, Mr. Flores, for 5 minutes.

Mr. FLORES. Thank you, Mr. Chairman. Mr. Smith, thank you for your testimony today. Going to the QER for a minute, the QER recommends that Congress authorize an additional \$1 ½ to \$2 billion to increase the incremental distribution capacity of the SPR. That request hasn't appeared in front of Congress. Can you tell me why?

Mr. SMITH. Well, thanks for the question, Congressman. So in our 2016 budget request, you know, we did have some funds for maintenance issues within the Strategic Petroleum Reserve. It did not include these recommendations from the QER. And, indeed, as you note, the QER was just released, right? So, we look forward to working with Congress to refine further details on that, but the QER literally is hot off the presses as of last Tuesday.

Mr. FLORES. OK. Thank you. And the QER also says that the DOE will analyze the need for additional or expanded regional product reserves, in particularly like the one you talked about in the northeast. These will be in the southeast and on the west coast.

Will the DOE formally request funding from Congress in advance in an annual budget submission?

Mr. SMITH. Thank you, Congressman. So we are undergoing these studies now, in real time, so I will demur from making any specific predictions about when we would make a recommendation, or even what the review will state. So the whole purpose of going through this comprehensive review, looking at everything from sub-surface issues, to market issues, to infrastructure, to need for regional reserves will help us flesh out what needs to happen. And, indeed, future efforts certainly would have funds appropriated, and we will be working with Congress, based on the results of the study.

Mr. FLORES. OK. So we can assume that if the DOE study indicates that you should have these regional product reserves, then you will formally ask Congress for the appropriation?

Mr. SMITH. So, Congressman, certainly, if we do determine that there is new work that needs to be done that requires appropriation that would require us to work with Congress, yes.

Mr. FLORES. OK. Good. Will you provide to the Committee for the record the September 2011 DOE study that is entitled "Refined Petroleum Product Reserve, Assessment of Energy Security Needs, Cost and Benefits" that is referenced on Page 2-34 of the QER?

Mr. SMITH. We can provide that.

Mr. FLORES. OK. Thank you. Mr. Chairman, that is all I have. I yield back.

Mr. WHITFIELD. Gentleman yields back. At this time I would recognize the gentleman from Texas, Mr. Green, for 5 minutes.

Mr. GREEN. Thank you, Mr. Chairman, and, again, good to see you again, Assistant Secretary Smith. First of all, I would like to talk to you about LNG permitting exporting, and thank you for coming last Congress to our natural gas caucus to talk with us. Of course, expansion of exporting of natural gas is important to our producers in our area, but also to our friends and allies around the world. But today we are talking about the Strategic Petroleum Reserve, which is also important.

In March 2014 Department of Energy conducted a test sale from the SPR to demonstrate drawdown and distribution capacity. In November the DOE reported that pipeline capacity is limited, and drawdown of significant scope may post a challenge. The same issues were addressed in the quadrennial energy review, and the budget that was submitted was for \$51 million for operations and flexibility, and the QER recommends 1.5 to two billion increase in distribution capacity. Obviously 51 million is relatively low, compared to the 2 billion, and I am going to see how we can get you some of those funds. Does the DOE anticipate using funds from additional test sales to fund requirements laid out in the QER? Do you have that ability?

Mr. SMITH. Yes. Well, thank you for the question, Congressman. First of all, we don't have plans for a future test sale. The last test sale we felt was very important in order to exercise the operational and procedural capabilities of the SPR, and so that is why we undertook that sale. We don't have plans for a future sale.

Mr. GREEN. OK. But does the Department have the ability, if you have a sale, to utilize that funding for your budgetary needs?

Mr. SMITH. There is—

Mr. GREEN. It may not be appropriated by the appropriations.

Mr. SMITH. So under statute we have got a fairly limited number of things that we could use those funds for. We could use them to buy other petroleum products. We could use it for storage or transit of petroleum. But under statute, there are some limits to—

Mr. GREEN. OK.

Mr. SMITH [continuing]. What we could use those funds for. But, again, to reiterate, the test sale was driven by the need to exercise the operational capabilities of the—

Mr. GREEN. Well, and I am glad you do it, because what you found out, that there were some issues that needed to be dealt with. During an emergency, what actions or authorities are available to alleviate those issues you found out?

Mr. SMITH. So some of the issues that we found out were drivers for the 2016 Congressional justification for the budget that the President issued for the 2016 budget, including the additional metering skid at that Big Hill. So in terms of major kind of infrastructure issues, I mean, that was probably one of the main things that we were already kind of moving to address, but, obviously, we need funding to do that.

Mr. GREEN. OK. Does the DOE support additional pipeline construction and tank storage to deal with the constraints that you found?

Mr. SMITH. Congressman, I think that the specific answer to what we would recommend to do next, with regards to infrastructure, will be driven by the strategic review. We do know that, as we noted, we have got aging infrastructure, and so the life extension program that we have thought through would include some surface infrastructure thing, including tankage, including pipelines to move things around the SPR, including pumps and compressors, brine drive caverns, brine disposal wells. So those would all be things that we would have to put in place as part of the life extension.

So we have got a rough outline of what we think that would look like, and you have seen some rough numbers in the QER. I think there was an estimate of between 700 and \$900 million for that piece of work. The details of what that would look like are—that is what we are going to be driving towards in this review that we are undertaking.

Mr. GREEN. OK. I know a significant part of the SPR is actually just east of Houston, between Houston and Beaumont.

Mr. SMITH. Indeed.

Mr. GREEN. Was that where the test was done, or was it other locations that we have the reserve?

Mr. SMITH. The test sale was out of Big Hill, and brine Mound was where the crude came from, for that sale.

Mr. GREEN. OK. Because I always joke that if we have infrastructure problems in Texas with oil and gas, then the rest of the country really must be in bad shape, because we have a lot, and we still need to build more. Mr. Chairman, I am out of time, and I appreciate the time. Thank you.

Mr. WHITFIELD. Thank you. I am sorry to say, Mr. Smith, there are no more questions for you today. But we do appreciate your

being with us, and talking about this important issue. And I just wanted to also bring to your attention that Mr. Rush and I, and Mr. Pallone, and Mr. Upton had sent a letter to Secretary Moniz sometime in March, just asking about four or five questions about the SPR review process that you are undertaking now. And if you see him in the hall, or at the coffee table, would you ask him if he could give us a reply? We would appreciate it.

Mr. SMITH. I will do that, Mr. Chairman.

Mr. WHITFIELD. Thank you very much, and thanks again for being with us. We look forward to working with you on this issue. And at this time I would like to call up the second panel of witnesses. And we will have you all come up, and then what I am going to do is just introduce each one of you before your 5 minute opening statement. So you all just have a seat, and then we will get started.

In the second part of this hearing, we are going to be focused on the energy efficiency aspect, and I want to thank each and every one of you for joining us this morning, and thank you also for your patience. And, as I said, I am going to introduce you individually, and then you will make your opening statement.

So our first witness this morning is Mr. Christopher Peel, who is the corporate Senior Vice President and Chief Operating Officer for Rheem Manufacturing Company, on behalf of the Air-Conditioning, Heating, and Refrigeration Institute. So, Mr. Peel, thank you. You are recognized for 5 minutes. Just be sure to turn your microphone on, and get it up close enough, because somehow it is difficult to hear in this room. So, thank you.

STATEMENTS OF CHRISTOPHER PEEL, CORPORATE SENIOR VICE PRESIDENT AND CHIEF OPERATING OFFICER, RHEEM MANUFACTURING COMPANY (ON BEHALF OF THE AIR-CONDITIONING, HEATING, AND REFRIGERATION INSTITUTE); KATERI CALLAHAN, PRESIDENT, ALLIANCE TO SAVE ENERGY; JOHN W. SOMERHALDER II, CHAIRMAN, PRESIDENT, AND CEO, AGL RESOURCES (ON BEHALF OF THE AMERICAN GAS ASSOCIATION; FRANK THOMPSON, PRESIDENT, SWEET-WATER BUILDERS, INC. (ON BEHALF OF THE NATIONAL ASSOCIATION OF HOME BUILDERS); ELIZABETH NOLL, ENERGY EFFICIENCY ADVOCATE, NATURAL RESOURCES DEFENSE COUNCIL; RONA NEWMARK, VICE PRESIDENT, INTELLIGENT EFFICIENCY STRATEGY, EMC CORP. (ON BEHALF OF THE INFORMATION TECHNOLOGY INDUSTRY COUNCIL); AND MARK WAGNER, VICE PRESIDENT, U.S. GOVERNMENT RELATIONS, JOHNSON CONTROLS, INC. (ON BEHALF OF THE FEDERAL PERFORMANCE CONTRACTING COALITION)

STATEMENT OF CHRISTOPHER PEEL

Mr. PEEL. Thank you, Chairman. Chairman Whitfield, Ranking Member Rush, and members of this subcommittee, I appreciate the opportunity to be here with you to talk about some energy policy issues that are important to manufacturers and our customers. I would like to begin by thanking you for your work on the recent passage of S-535, which included language providing regulatory relief for grid enabled water heaters that are positive for the environ-

ment and our customers in rural America. I would also like to thank you for inviting me to testify this morning.

My name is Chris Peel. I am the Chief Operating Officer for Rheem Manufacturing Company. Rheem was founded in the 1920s, is headquartered in Atlanta, and is a global industry leader, with seven U.S. based factories and distribution centers. Rheem designs and manufactures furnaces, air conditioners, water heaters, and refrigeration equipment. We have a proud history of developing innovative high efficiency products which reduce energy consumption, and help customers save on their utility costs. I am here on behalf of AHRI, a trade association that represents 315 manufacturers of HVAC, refrigeration, and water heating equipment. AHRI's members employ over 100,000 people in the U.S.

I am here today because we care about serving our customers, enhancing safety and reliability, supporting our employees, and improving the environment. With these priorities in mind, I ask the subcommittee to address three issues that are vitally important, transparency in stakeholder engagement in the rulemaking process, the expected impact of the DOE's proposed efficiency standards for residential furnaces, and the value provided by voluntary independent verification programs.

The DOE is planning to issue 23 new regulations affecting our industry between now and 2018. This ambitious schedule has caused a reduction in the constructive interaction between stakeholders and DOE, resulting in oversights involving economic assumptions and technical issues. Rather than working together to achieve what are very common objectives, we find ourselves in a situation where we need to ask for congressional intervention.

In my view, new efficiency standards achieve the greatest public benefit when industry, interested NGOs, and government officials work together to create consensus drive standards. We also believe this is the goal envisioned by DOE's own process rule, which involves early input from stakeholders as a means to achieve successful regulations through the appropriate analysis and utilization of real world inputs. The outcomes will be better balanced, and achieve the intended benefits for the economy and the environment.

A recently proposed residential gas furnace standard is an example of a rule created with insufficient input from industry. DOE is poised to finalize a new energy efficiency standard for residential furnaces that would raise the national minimum efficiency from 80 to 92 percent. To achieve the higher efficiencies of a 92 percent furnace, both the product and the installation become significantly more complex and costly for the consumer.

DOE estimates that replacing an existing 80 percent furnace with a 92 percent furnace will cost the majority of consumers an average of \$660 more. This could rise to \$2,200, depending on the installation. Out of the more than 20 million 80 percent furnaces currently installed, the majority are in the South, where the customer payback will seldom be realized. Therefore, we recommend consideration of legislative efforts that would give time and space to finalize this rule until all stakeholders are able to work together to ensure the proposed regulations will achieve our efficiency objectives without needlessly penalizing families and small businesses.

I also wish to thank Representatives Latta, Cooper, and Blackburn, who have introduced H.R. 1785, the Volunteer Verification Program Act, which will assure consumers that the HVAC and water heating products they installed in their homes truly meet the applicable Federal efficiency levels, while conserving taxpayer resources, and providing certainty for manufacturers. This is the proverbial win-win-win scenario, and I thank you and the staff for including this measure in the draft bill.

Under H.R. 1785, DOE and stakeholders would work collaboratively on negotiated rulemaking to establish criteria under which the Federal Government would certify independent programs and rely on such VIVPs to verify efficiency ratings. DOE would, of course, retain its enforcement authority to periodically inspect and test products to ensure compliance. As DOE budgets and priorities can fluctuate year to year, we believe that industry and our customers are best served by VIVPs. Our industry spends millions of dollars, and thousands of employee hours, every year to certify and verify that our efficiency ratings are accurate. VIVPs, such as AHRI's program, has, for 50 years, successfully held manufacturers accountable to the high standards that our customers deserve and expect.

Finally, Chairman Whitfield, Ranking Member Rush, and members of the Subcommittee, I appreciate the chance to appear this morning, and I look forward to answering any questions you might have, and to working together with you and your staff on these priorities.

[The prepared statement of Mr. Peel follows.]

**Statement of Christopher Peel
Chief Operating Officer
Rheem Manufacturing Company
U.S. House Committee on Energy & Commerce
Subcommittee on Energy & Power
April 30, 2015**

SUMMARY

Heating, cooling and water heating products have been regulated for decades. Manufacturers have learned, adapted and incorporated the regulatory requirements into their business models and look forward to establishing additional mechanisms for negotiated rulemakings, which are more collaborative among stakeholders, to enhance the success of well-intended regulations going forward. The Department of Energy is planning to promulgate 23 new product efficiency standards affecting the industry between 2015 and 2018. This accelerated regulatory schedule, caused by the intersecting priorities of the President's Climate Action Plan and the legally mandated deadlines on issuing new efficiency standards, has caused a significant reduction in the needed constructive interaction between stakeholders and DOE during the rulemaking process. Unfortunately, this lack of true collaboration has resulted in oversights, including errors involving economic assumptions and technical issues. Rather than working collaboratively to achieve common objectives, there arises the need to ask for Congressional intervention, or, in some extreme cases, resort to legal action to ensure that regulations are designed to achieve what is in the best interest of the environment, the economy, and hard-working Americans.

In an effort to create a more open and transparent regulatory process, the rules governing how regulations are crafted need to be updated. The testimony will focus on three main examples:

- Transparency and stakeholder engagement in the promulgation of rules under the Energy Policy and Conservation Act (EPCA)
- The expected impact on both industry and consumers of the U.S. Department of Energy's (DOE) proposed efficiency standards for residential furnaces, and
- Support for the value provided by voluntary independent verification programs (VIVPs), such as AHRI's program

The current proposed standard for residential gas furnaces is an example of a rule that, while seeking to achieve the laudable goal of reducing energy consumption, will unnecessarily burden millions of residents, while unnaturally shifting the current market demand for gas furnaces. The industry is asking for Congressional action in order to bring all stakeholders together to negotiate a sustainable path forward.

Finally, the establishment of voluntary independent verification programs conserves DOE resources, reduces taxpayer costs and provides clarity for manufacturers bringing products to the market. Reliance on a strong and consensus-built verification program alleviates unnecessary regulatory burdens on manufacturers and strengthens market surveillance, assuring consumers of the quality and efficiency of the HVAC and water heating products in their homes and businesses. We thank Representatives Latta, Cooper and Blackburn for their leadership on this issue and applaud the Subcommittee Leadership and staff for including this measure in the draft bill. This supports the environment, taxpayer cost-savings, and jobs. A proverbial win-win-win.

Statement of Christopher Peel
Chief Operating Officer
Rheem Manufacturing Company
U.S. House Committee on Energy & Commerce
Subcommittee on Energy & Power
April 30, 2015

Chairman Whitfield, Ranking Member Rush and Members of this Subcommittee, good morning. I would like to start by taking this opportunity to thank you for your work to address energy policy matters that are important to the US economy, including your recent passage of S.535 which included crucial language providing regulatory relief for grid-enabled water heaters.

I would also like to thank you for inviting me to testify this morning. My name is Chris Peel, and I am the Chief Operating Officer for Rheem Manufacturing Company (Rheem). Rheem was founded in the 1920's and is headquartered in Atlanta, Georgia. Rheem is a global industry leader with seven US-based factories and distribution centers. Rheem designs, develops, and manufactures products that make our lives safer, more comfortable and more productive, including residential and commercial furnaces and air conditioners, water heaters, and indoor air quality accessories. Rheem also has a deep history of developing innovative, high efficiency products and we are proud to have earned numerous industry awards for these technology solutions, which have reduced energy consumption and saved small businesses and consumers thousands of dollars annually on utility costs. We also maintain a significant philanthropic initiative which we call the Heart of Comfort that supports environmental, housing, social assistance, and veterans' programs, among others to ensure we are giving back in the communities where we are fortunate to have a presence.

I am also here representing the Air Conditioning, Heating, and Refrigeration Institute (AHRI), which is a trade association that represents 315 manufacturers of heating, ventilation, air conditioning, refrigeration (HVACR), and water heating equipment. AHRI's member companies employ over 100,000 people in the US and represent more than 90 percent of the HVACR and water heating equipment manufactured and sold in North America. This number increases to over a 1,000,000 employees when including those involved in the manufacturing, distribution, installation and support of HVAC and water heating appliances. AHRI has a 50-year history of promoting environmental stewardship and, during that time, has successfully administered a voluntary independent verification program (VIVP) that ensures its members' products comply with federally-mandated efficiency and performance requirements.

In both my capacity with Rheem and on behalf of AHRI, I am here today because, we care about improving the environment, safety and reliability; the employees in our industry; and the customers we serve. With these priorities in mind, I ask the Subcommittee to help address three issues that are vitally important to the ability of the HVAC and water heating industry to serve the American consumer while we work to compete in the global economy:

1. Transparency and stakeholder engagement in the promulgation of rules under the Energy Policy and Conservation Act (EPCA);
2. The expected impact on both consumers and industry of the U.S. Department of Energy's (DOE) proposed efficiency standards for residential furnaces; and,
3. The value provided by voluntary independent verification programs (VIVPs), such as AHRI's program.

ENERGY POLICY AND CONSERVATION ACT (EPCA) PROCESS REFORMS

As part of the President's Climate Action Plan, DOE is planning to promulgate 23 new product efficiency standards affecting our industry between 2015 and 2018. This accelerated regulatory schedule, caused by the intersecting priorities of the President's Climate Action Plan and the legally mandated deadlines on issuing new efficiency standards, has caused a significant reduction in the needed constructive interaction between stakeholders and DOE during the rulemaking process. Unfortunately, this lack of true collaboration has resulted in oversights, including errors involving economic assumptions and technical issues. Rather than working together to achieve what are very common objectives, we find ourselves in a situation where we need to ask for Congressional intervention, or, in some extreme cases, resort to legal action to ensure that we are doing what is in the best interest of the environment, the economy, and hard working Americans.

In my view, new efficiency standards achieve the greatest public benefit when industry, interested NGOs, and government officials work together to create consensus-driven standards. We believe this is also the goal envisioned by DOE's "Process Rule" which involves early input from stakeholders as a means to achieve regulations in a manner that enhances success through the appropriate analysis and utilization of real-world inputs. Expanding the regulatory tools available to the DOE to include greater use of a negotiated rulemaking process affords all stakeholders the ability to engage in human interaction, as opposed to merely a formalized notice and comment method. Some detractors may claim that negotiating face-to-face in the same room over many months slows the regulatory process, but I would submit that the final results will create consensus-based, intelligent energy policy that will move our economy forward.

To improve this process, I would respectfully ask that this Subcommittee work with stakeholders to codify the rules that govern the DOE rulemaking process. Doing so would ensure all voices are fairly represented when a new standard is under consideration. The resulting policies will be better-balanced and would achieve the intended benefits for the economy and the environment.

DOE RESIDENTIAL FURNACE RULE

Chairman Whitfield and Ranking Member Rush, the recently proposed residential furnace rule is an example of a DOE rule created with insufficient input from manufacturers. DOE is poised to finalize a new energy efficiency standard for residential furnaces that would raise the national annual fuel utilization efficiency (AFUE) from 80% to 92% for natural gas furnaces. Stated justifications for the proposed rule are that it will reduce greenhouse gas emissions from furnaces and lower costs for consumers. These are laudable goals that we share; however, we have significant concerns regarding the true impact and market viability of such a standard.

By way of background, there are two primary residential gas furnace technologies in the market today, commonly referred to as 80%+ (or non-condensing) and 90%+ (or condensing). The US market is roughly evenly split between 80% and 90% furnaces, and it is estimated by the Energy Information Administration that, as of 2009, there were more than 44,000,000¹ central warm air gas furnaces installed in the US. The overwhelming majority of 90% furnaces are installed in the northern US and, due to the significant climate difference, the majority of 80% furnaces are installed in the south.

¹ Residential Energy Consumption Survey (RECS): Space Heating. U.S. Energy Information Administration. <http://www.eia.gov/consumption/residential/data/2009/#undefined>.

To achieve the higher efficiencies of 90% furnaces, additional costs must be added to the product, and more complex and costly installation requirements are necessary. DOE estimates that replacing an existing 80%+ furnace will cost consumers an average of \$660 more and that this cost cannot be economically justified in 60% of the installations². In the Agency's worst case scenario, such as a very old home or a multi-residence dwelling, the cost could be as much as \$2,200 more in order to update the infrastructure.

A more balanced and economically justifiable solution would be to recognize the significant and distinct differences between the two gas furnace market segments and work with all stakeholders to develop a minimum efficiency approach that ensures that both 80% and 90% furnaces are viable options for American consumers, rather than penalizing such a significant share of our nation's families and small businesses by eliminating an entire product category. It is our view that we can achieve credible environmental benefits that can be economically justified with such a solution.

Therefore, we recommend consideration of legislative efforts to swiftly address concerns before this rule should be finalized in its current form. We would also request that the timing to finalize this rule be delayed until all stakeholders are able to work together to ensure that the proposed regulations will achieve our environmental objectives without penalizing families and small businesses.

² Energy Conservation Program for Consumer Products: Energy Conservation Standards for Residential Furnaces;" Notice of proposed rulemaking and announcement of public meeting, 10 CFR Part 430 (12 Mar 2015). Table IV.12—Additional Installation Costs for Non-Weatherized Gas Furnaces in Replacement Applications.

VOLUNTARY INDEPENDENT VERIFICATION PROGRAMS (VIVP)

I also wish to thank Congressman Latta for his tireless efforts on behalf of industry manufacturers and their customers. He and Representatives Jim Cooper and Marsha Blackburn of Tennessee, have introduced H.R. 1785, the Voluntary Verification Program Act, which will assure consumers that the HVAC and water heating products they install in their homes truly meet the applicable federal efficiency levels and do so in a manner that provides clarity on the operational side of our manufacturing-intensive businesses. All of this can be done in a way that also conserves taxpayer resources. This is the proverbial win-win-win scenario.

To ensure compliance with DOE regulations, our industry spends millions of dollars and thousands of employee hours every year working to certify and verify that our efficiency ratings are accurate. Manufacturers' efficiency rating claims are verified through random testing by an independent laboratories and participation in AHRI's stringent verification programs. These programs are open to all manufacturers whether or not they are AHRI members. AHRI-verified products are publicly listed on their website, which is updated daily, and the data is also sent directly to the Department of Energy (DOE) on a daily basis.

Under H.R. 1785, DOE and stakeholders would work collaboratively on a negotiated rulemaking to establish criteria under which the federal government would certify voluntary independent verification programs and rely upon such VIVPs to verify efficiency ratings. It is important to note that for enforcement purposes, DOE would retain its authority to penalize violators and periodically inspect and test products to ensure compliance.

As DOE budgets and priorities can fluctuate year to year, we believe that our industry is best served by VIVPs. Because a level competitive playing field is essential to the long term viability of any industry, VIVPs, such as AHRI's 50-year old program, continue to successfully hold all manufacturers accountable to the high standard that our consumers deserve and expect. I believe this approach conserves DOE resources, reduces taxpayer costs and provides clarity for manufacturers bringing products to market. I would like to thank Representatives Latta, Cooper and Blackburn for their leadership on this issue and applaud this Subcommittee and staff for including this measure in the draft bill. It is our view that The Voluntary Verification Program Act of 2015 will ensure a robust market surveillance program to ensure consumer protection, and we would respectfully request your continued support.

CONCLUSION

Finally, Chairman Whitfield, Ranking Member Rush and Members of the Subcommittee, I appreciate the chance to appear this morning. I look forward to answering any questions you might have and to working together with you, your staff, industry colleagues, efficiency advocates, and DOE leaders to achieve policies that help strengthen American jobs and serve the best interests of our customers -- your constituents -- who have a right to expect environmentally responsible product solutions that truly improve the quality of their lives. We are dedicated to building upon our tradition of working with you on these critically-important objectives and thank you for your service and leadership.

Mr. WHITFIELD. Thank you, Mr. Peel. And our next witness is Ms. Kateri Callahan, who is the President of the Alliance to Save Energy, and you are recognized for 5 minutes.

STATEMENT OF KATERI CALLAHAN

Ms. CALLAHAN. Thank you, Mr. Chairman, and Ranking Member, and members of the subcommittee. I really appreciate the opportunity to testify today. The Alliance to Save Energy is a bipartisan, non-profit coalition of about 140 businesses and organizations that span the entire economy. Our sole mission is to advance energy efficiency, and we do this to drive economic growth, to preserve the environment, and to enhance our national security. We have a proud 38 year history of bipartisan leadership from House and Senate lawmakers who serve as honorary members of our board, and I am delighted that, of the 16 congressional leaders, we have five who are members of this committee, Congressman McKinley, Congressman Welch, Congressman Tonko, Congressman Burgess, and Congressman Kinzinger. These forward-thinking leaders demonstrate clearly that energy efficiency is truly the sweet spot in our our national debate over energy policy.

Since the founding of the alliance, our country has made huge strides in driving energy efficiency into our economy, and a lot of this progress can be traced directly to the work of Congress over the past 4 decades. Since Congress began lawmaking on efficiency, we have actually doubled our country's energy productivity. That means that we are getting twice as much gross domestic product from each unit of energy that we consume, as we did in the 1970s. And this translates into huge savings. ACEEE is announcing today that Americans, just last year, will save \$800 billion on their collective energy bill. The policies now on the books are going to continue to deliver gains. The EEIA estimates and forecasts that our energy productivity will increase 50 percent or more just on a business as usual case. But we believe that we can, and must, do better if we are going to remain globally competitive. And since we still waste about half of the energy that we consume, there is ample room for improvement.

The Alliance has a goal to again double our energy productivity in this nation by 2030, and if we do this, we see that American families could see their utility bills fall by over \$1,000 a year, and we could create 1.3 million new jobs. But we can only deliver these benefits to Americans if Congress provides a policy infrastructure to support aggressive energy efficiency implementation.

We are very encouraged by action in the 114th Congress today. We were thrilled that the first energy bill that went to the President, and will be signed today, is S-535, and we thank the Chairman and the members of the Committee who worked so hard to move this bipartisan bill through the full House. We view S-535 as a strong indicator that the comprehensive energy legislation you are creating will include meaningful efficiency policies. And the draft title already does contain some of these policies, but, like the Ranking Member, we are deeply concerned that some of the provisions will actually impede or roll back progress that we are making.

So first let me run through quickly those provisions that we support. We support all the provisions in Chapter 1 which deal with improving Federal energy efficiency, with the exception of the repeal of the fossil fuel consumption requirements. We could support this repeal if it were coupled with strong efficiency goals, as it is in other legislation pending before the Congress. We also support the provisions in Chapter 2 that safeguard the integrity of the Energy Star program, and require energy guide labels to include information on the smart grid capability of products. We support all the provisions included in Chapter 4, as these enable energy and water efficiency measures in Federal buildings. And finally, we support Chapter 5, which enable schools to make efficiency upgrades.

As much as we support these provisions, we have very, very strong objections to the provisions included in Chapter 3. Building energy codes are a critical policy tool for advancing energy efficiency in the largest consuming sector of our economy, and they have been very effective. As a result of a 38 percent improvement in the codes that we have seen in recent years, we have seen a reduction of \$44 billion annually in the energy bills of American families.

The Department of Energy has played a key and critical role in delivering improvements in the building energy codes, and we believe that it is imperative that the Department continue to engage in every step of the code making process, from development, to adoption, to implementation. The Alliance, therefore, urges the committee to strike the current provisions in Chapter 3 and to replace them with the building energy code provisions that are contained in the newly reintroduced McKinley-Welch Energy Savings and Competitiveness Act. These provisions actually strengthen model building codes to make new homes and commercial buildings more energy efficient, and they also work with the states and the private sector to improve the transparency of the code writing process.

The McKinley-Welch bill was carefully developed to address concerns of both advocates, builders, and code making bodies. In addition, their bill deals with the up-front cost of efficiency by ensuring that the upgrades are valued in the appraisal and the mortgage underwriting process. The provision, known as the Save Act, enjoys the support not only of advocates like me, but also of the National Association of Realtors, the Chamber of Commerce, and many, many others. So as the Committee continues its work, we urge members to review the many bipartisan energy efficiency bills that are emerging, or being reintroduced, and in particular we ask the Committee to consider not just the building energy provisions in the McKinley-Welch bill, but all of the provisions in that bill which have broad-based bipartisan support.

So I commend the Chair and the committee for seeking to include energy efficiency as a pillar of national energy policy, and we are hopeful that, as the committee continues its work, the energy efficiency title will be made much more robust so we can achieve that goal, and we can offer, as the Alliance to Save Energy, our full throated support. Thank you.

[The prepared statement of Ms. Callahan follows:]

**Statement of Kateri Callahan
President
The Alliance to Save Energy**

Before the

Subcommittee on Energy & Power

**Committee on Energy and Commerce
U.S. House of Representatives**

April 30, 2015

Introduction

Good morning, Mr. Chairman and Members of the Subcommittee, my name is Kateri Callahan and I am the President of the Alliance to Save Energy. I thank you for inviting me to testify today regarding the Committee's Discussion Draft on Energy Efficiency and Accountability.

The Alliance is a bipartisan, nonprofit coalition of nearly 140 businesses, organizations and institutions -- spanning every sector of our economy -- that works to advance energy efficiency worldwide. Founded in 1977 by Senators Charles Percy, a Republican from Illinois, and Hubert Humphrey, a Democrat from Minnesota, we are honored to continue a 38-year history of bi-partisan leadership from the House and Senate as Honorary Members of our Board of Directors. We are pleased to recognize the leadership of the following Members of

the Energy and Commerce Committee among the 16 House and Senate leaders who are helping us to advance energy efficiency, to drive energy productivity gains for our economy and to stop energy waste: Michael Burgess (R-TX), Peter Welch (D-VT), David McKinley (R-WV), Paul Tonko (D-NY) and Adam Kinzinger (R-IL).

Energy Efficiency: America's Greatest Energy Resource

Since the founding of the Alliance, our country has made huge strides in driving energy efficiency into our economy through new technologies, private and public investment and, most importantly, through adoption of sound public policies. The United States has doubled its energy productivity -- we now get twice as much gross domestic product (GDP) from each unit of energy consumed than we did in 1970's. And, this translates into huge savings for American consumers and businesses on energy bills. ACEEE has reported that Americans saved \$800 billion on their collective energy bills last year.¹

The EIA is forecasting further gains in energy productivity of 53% between now and 2030 just on a "business-as-usual" case thanks in very large measure to the wide array of impactful energy efficiency policies that Congress already has put

¹ Referenced in the testimony of Steve Nadel, ACEEE, before the Senate Energy and Natural Resources Committee on April 30, 2015.

into place, including appliance and equipment standards, fuel economy standards and building energy codes to name a few of the critical policy areas. But, our country will be poorly served if we do not continue to put in place innovative and cost-effective policies that will increase the pace of energy efficiency adoption across the entire economy.

At the Alliance to Save Energy we believe we can once again double our energy productivity as a nation, this time within only the next 15 years, by the year 2030. An independent, economic analysis of the impact of achieving this goal found that doubling energy productivity would reduce the energy bills of American families by more than \$1,000 per year and create 1.3 million new jobs all while reducing CO2 emissions to 1/3 below the level emitted in 2005. This is a bold and audacious goal, but eminently doable if we enact the right policies.

The Congressional Road Ahead

Fortunately, and likely driven by the past policies that have helped us to cut energy waste out of the economy, we meet at a time when the Members on both sides of the aisle and in both chambers are placing a first priority on energy efficiency as energy legislation is being developed. Importantly, we have just witnessed an important milestone with the House adoption S. 535, the Energy Efficiency Improvement Act, earlier this month.

S. 535 is the first energy bill of the 114th Congress to be sent to the President and I am pleased to report that the President will sign the legislation into law later today. More than two dozen bills relating to efficiency are under consideration in the Senate Energy Committee and with this Committee beginning its work on a comprehensive energy bill that will include an efficiency title, we anticipate a similar number of proposals to emerge in the House.

While we are pleased that the Committee's Discussion Draft contains some provisions that will serve to advance energy efficiency, we are deeply concerned that other of the provisions in the Discussion Draft actually will serve to impede and/or roll back progress we are making to drive greater energy productivity. Without significant changes to the energy efficiency title of the Discussion Draft we will be unable to offer our support. Having said that, the Alliance pledges to work together in a spirit of cooperation toward development of an efficiency title that we can embrace without reservation.

Comments on Title IV – Energy Efficiency and Accountability

Provisions We Support

First, there are many provisions which we support wholeheartedly. These include:

1. All of the provisions in Chapter 1 dealing with improving federal agency energy efficiency, with the exception of Section 4114, the repeal of the fossil

fuel consumption requirements for federal buildings. The Alliance would support this repeal if it were coupled with an extension of the energy efficiency goals for the government that expire at the end of 2015. There is legislation pending in the Senate, S. 869, that includes both the repeal and the energy efficiency provisions. This bill has wide support among industry and advocates alike.

2. Section 4121 and Section 4122 of Chapter 2 which safeguard the integrity of the Energy Star program and require Energy Guide labels to include information on smart grid capability of products.
3. All of the provisions included in Chapter 4, entitled Energy Performance Contracting, which will enable energy and water efficiency measures in federal buildings.
4. Chapter 5, which establishes a clearinghouse to provide information and resources to schools make efficiency upgrades.

The Alliance urges the Committee to move forward with all of these provisions, again with the caveat that the repeal of the fuel use restriction clause needs to be accompanied with provisions strengthening energy efficiency requirements..

Provisions We Oppose

We strongly object to the provisions included in Chapter 3, Building Energy Codes. Building energy codes are an important tool for advancing energy efficiency in the largest consuming sector of our economy. Buildings represent more than 40% of the energy we consume. As a result of a 38% improvement in the codes in recent years, we have seen a reduction of \$44 billion annually in the energy bills of American families. And, there are more savings to be realized. The Department of Energy has played a key and critical role in the development, evaluation, adoption and implementation of building energy codes and it is imperative that this work continue unimpeded.

The Discussion Draft's provisions eviscerate DOE's historic role in three important ways that are detrimental to sound national energy policy.

- First, the provisions weaken the certification process for state code submissions, creating essentially an "automatic" certification by DOE regardless of whether or not efficiency criteria are met;
- Second, DOE is barred from participating in the critical steps of code development, evaluation and adoption and can provide technical assistance to states only on implementation and even that support has limitations; and,

- Third, DOE cannot provide any assistance – technical or financial – if it finds that a proposed code does not meet a simple payback period of ten years or less.

“Simple Payback” is a flawed concept for valuing energy investments that are rolled into a mortgage on a new home or building that likely will last for more than 50 years. Home and commercial building owners who finance their purchase don’t pay the full incremental cost of energy efficiency improvements up front but over the course of the mortgage term. And, importantly, the energy bill savings begin on day one of ownership.

A poll conducted by the National Association of Homebuilders (NAHB) found that 9 out of 10 Americans will pay 2-3% more for homes that contain energy efficiency upgrades.² This provides evidence that homeowners understand the concept that efficiency upgrades are “permanent” and add value to the home. The Alliance and many others, including the some of the nation’s largest home builders are working together in support of enactment of the “SAVE Act” which will ensure that the value of efficiency upgrades is taken into account during both the appraisal and the mortgage underwriting processes.

We urge the Committee to remove Chapter 3 from the Discussion Draft.

² [“What Home Buyers Really Want”](#) Study from NAHB

Other Comments

With respect to other provisions of the Discussion Draft, we have these comments: Section 4124 of the bill is effectively an “old chestnut” wherein the updating by DOE of a longstanding rule has been delayed by litigation and other factors. We recognize and appreciate the concerns that have been raised about the rule relating to its practical impact on customers, especially low income customers. And, as such, we are part of the ongoing negotiating process, and are hopeful that the negotiations will produce a consensus resolution before the rule is scheduled to go into effect in April of 2016.

We understand that the Section 4124 may be amended, and as some of the stakeholders in the negotiating process are opposed to the current version, we would appreciate the opportunity to work with the Committee and other stakeholders to craft language that will can garner consensus support.

Suggested Additions

We commend the Chair and the Committee for working to develop a comprehensive energy bill that seeks to include energy efficiency as a pillar of national energy policy. We are hopeful that as the Committee continues its work, the energy efficiency title can be made much more robust with the addition of innovative and cost-effective provisions that are contained in bills introduced by

Committee members and others in the House on a bi-partisan basis. One such proposals that we believe has merit and deserves consideration for inclusion in the bill include the Energy Savings and Industrial Competitiveness Act was re-introduced by Reps. McKinley and Welch yesterday.

- The bill strengthens model building codes to make new homes and commercial buildings more energy efficient while working with states and the private sector to improve the transparency of the code-writing process;
- The bill promotes the training of the next generation of the clean economy workforce in energy-efficient commercial building design and operation through university-based Training and Research Assessment Centers;
- The bill establishes a “Supply Star” program to help make companies’ supply chains more efficient;
- The manufacturing process will be helped by incentivizing the use of more energy efficient electric motors and transformers; and,
- The bill incorporates the provisions of the SAVE Act, which I referenced earlier, by requiring that all mortgages issued, insured, purchased or securitized by a Federal agency must account for energy efficiency in the mortgage underwriting process.

Conclusion

Past history suggests that the process of crafting a comprehensive energy bill that can garner enough support to be enacted by the Congress can be a challenging and sometimes slow process. And, we note that there are many energy efficiency bills that have broad bi-partisan support and which could begin delivering real benefit in terms of energy and money savings for American homes and businesses.

It is our hope that the Committee will move any such bills that do not find their way into the energy package forward even as work proceeds on the bigger bill. And, should the process of moving a comprehensive bill slow or stall, then we hope that the Committee will consider action on the provisions included in the efficiency title separately. Where there is broad consensus and demonstrated, tangible benefit to the country – as there is with energy efficiency policies – we believe that it is important for Congress to act.

Finally, it is imperative that no provisions, such as those currently included as Chapter 3 of the Draft Discussion that impede or “roll back” effective energy efficiency policies and programs are included in any comprehensive bill reported by the Committee. We need to move forward on energy efficiency not backward. Thank you again for this opportunity to present the views of the Alliance to Save Energy and I look forward to working with the Committee on energy efficiency legislation.

Mr. WHITFIELD. Well, thank you, Ms. Callahan. I was wondering why Congressman McKinley was asking us to pay particular attention to your testimony, but when you refer to him as a forward-thinking leader, I mean, I understand.

Our next witness is Mr. John Somerhalder, who is the Chairman and President and CEO of AGL Resources, and he is testifying on behalf of the American Gas Association. So you are recognized for 5 minutes.

STATEMENT OF JOHN W. SOMERHALDER II

Mr. SOMERHALDER. Thank you. Good morning, Chairman Whitfield, Ranking Member Rush, and members of the committee. Again, I am John Somerhalder, both the past Chairman of AGA, and Chairman, President, and CEO of AGL Resources. I am proud that my company serves many of the states represented on this Committee, including New Jersey, Illinois, Virginia, Texas, Florida, California, and Maryland. We support the Committee's discussion draft because it will remove inappropriate barriers to the use of clean, energy efficient, cost-effective natural gas.

Gas utilities have shared your focus around greater energy efficiency for a long time. Sixty-eight million residential gas consumers today use the same amount of gas that 38 million customers used in 1970. Every year gas utilities spend about \$1.5 billion on energy efficiency, and help customers save 136 trillion BTUs of energy, and reduce about 7.1 million metric tons of carbon dioxide. We are proud of what we do as a company as well. Since 2011, our AGL utilities have invested \$188 million in energy efficiency programs. We have helped 45,000 customers purchase high efficiency furnaces. We have helped save enough energy to—and natural gas to heat 80,000 homes for a year, and we have delivered the highest 1 year energy savings by a gas only utility in the U.S. history just last year.

We support your efforts to find a common sense standard for residential furnaces. Under DOE's own analysis, only a third of homeowners will be better off under its proposed rule, and about a third of low income customers will be worse off. We think DOE's assumptions are also too rosy. They don't fully reflect the cost to consumers. Our data shows that an average customer would be forced to pay an additional \$350 in the unit cost for the furnace, and an additional \$1,500 up to \$2,200 for the installation of that unit. The Gas Technology Institute predicts that the proposed rule would impose an additional \$44.9 million in energy costs, and produce an additional 348,000 tons of CO₂ per year. We cannot support an efficiency standard that imposes higher costs, requires more energy, and provides more emissions.

Section 4124 of the discussion draft would require DOE to stop its rulemaking and start a negotiated rulemaking involving a broader group of stakeholders. As discussed—have discussions between AGA and other stakeholders have shown over the past several months, there are alternatives that would meet our shared goals for energy savings and consumer benefits. The negotiated rulemaking process included in the discussion draft will help us reach that consensus.

As you know, Section 4115 would repeal Section 430 of the Energy Independence and Security Act of 2007, a provision that bans all fossil fuel generated energy use in new and renovated Federal buildings by the year 2030. The fossil fuel ban was passed when the government thought U.S. supplies were dwindling. It had good intentions, but DOE's own analysis shows the cost to taxpayers would jump from \$30 million today to over \$500 million in 2019, and over \$1.1 billion in 2030, almost a 4,000 percent increase from today's cost. It simply is not practical.

We also support a provision sponsored by Representatives Blackburn and Schrader, H.R. 1273. Model building energy codes are developed by private organizations. States and local governments choose to either adopt the new standards, or to maintain their current standards. DOE has too often taken on an inappropriate advocacy role in co-development. The provisions would introduce greater transparency in the Department of Energy's technical support of co-development, specifically prohibiting DOE funding or personnel from involvement in any advocacy related to code adoption.

Finally, Section 4142 clarifies that the term of a utility energy service contract can extend beyond 10 years, but not exceed 25 years, correcting a Department of Defense interpretation. A 10 year term severely limits a utility's ability to help the DOD reach its energy security, energy efficiency, and renewable energy goals. At AGL Resources, we understand the importance of these types of projects. Since 2003 we have worked on 10 projects, totaling roughly \$31 million, in Georgia, Virginia, and Florida to provide these vital energy efficiency programs.

Mr. Chairman, thank you for the opportunity to testify today. I look forward to questions from the Committee.

[The prepared statement of Mr. Somerhalder follows:]

SUMMARY OF TESTIMONY:**John Somerhalder, President and CEO, AGL Resources
Past Chairman, American Gas Association**

AGA and its member companies are strong advocates for energy efficiency in all direct use applications of natural gas. Nationwide, natural gas utilities supported energy efficiency programs with investments nearing \$1.1 billion in 2012, and similar investments in 2013 reached \$1.5 billion. Since 2011, AGL Resources has invested \$188 million in energy efficiency programs, helping our customers save over 58 million therms in just four years.

AGL Resources and the American Gas Association wish to express strong support for:

- Section 4124, which addresses the development of fair, effective, and non-regressive energy efficiency standards for residential natural gas furnaces.
- Section 4115, which will restore the ability of federal installations to benefit from the use of energy efficient, cost-effective, end-use applications of natural gas in the long-term.
- Section 4131, which reaffirms the U.S. Department of Energy's appropriate role as a source of technical expertise in the development of energy efficiency codes and standards for buildings and appliances – and the importance of maintaining a bright line between technical consultations and policy advocacy.
- Section 4142, which would clarify the Federal government's use of utility energy service contracts (UESCs).

AGA is concerned that DOE's current proposal for a new energy efficiency standard for residential natural gas furnaces standard significantly overestimates the associated energy savings and greenhouse gas emission reductions the new standard would achieve, while also unfairly imposing significant economic burdens on many American consumers – especially low-income households. The rule could actually cause some consumers to switch away from natural gas to less efficient forms of heating, with the net effect of causing *increases* in total energy usage, carbon dioxide emissions, and consumer costs.

Implementation of the "Section 433" fossil fuel ban will severely limit – and ultimately prohibit – adoption of highly efficient technologies using natural gas at federal facilities, such as combined heat and power, fuel cells and waste heat recovery systems. The statute also creates a counterproductive bias in federal policy against clean and affordable natural gas. The United States is now the world's leading producer of natural gas. The Federal government should serve as an example to homes and businesses across the country by demonstrating how this abundant, domestic resource can increase energy efficiency, decrease overall emissions, improve our energy security and save money.

**WRITTEN TESTIMONY OF
JOHN SOMERHALDER**

**PRESIDENT AND CEO
AGL RESOURCES**

**PAST CHAIRMAN
AMERICAN GAS ASSOCIATION**

Good morning, Chairman Whitfield, Congressman Rush, and members of the Committee. I am John Somerhalder, President and CEO of AGL Resources, and past Chairman of the American Gas Association. I am pleased to appear before you today.

The American Gas Association, founded in 1918, represents more than 200 local energy companies that deliver clean natural gas throughout the United States. There are more than 72 million residential, commercial and industrial natural gas customers in the U.S., of which 94 percent — over 68 million customers — receive their gas from AGA members. Today, natural gas meets more than one-fourth of the United States' energy needs.

AGA and its member companies are strong advocates for energy efficiency in all direct use applications of natural gas. Nationwide, natural gas utilities supported energy efficiency programs with investments nearing \$1.1 billion in 2012, and similar investments in 2013 reached \$1.5 billion. Through these energy efficiency investments, AGA members helped customers save 136 trillion Btu of energy and offset 7.1 million metric tons of carbon dioxide in 2012.

I am proud to say that my own company, AGL Resources, is a recognized leader in our commitment to energy efficiency. Since 2011, AGL Resources has invested \$188 million in energy efficiency programs, helping our customers save over 58 million therms in just four years. That amount of natural gas saved is enough to heat 80 thousand homes in one year. Also since 2011, our programs have helped nearly 45,000 customers to purchase and install high efficiency furnaces.

AGL Resources and the American Gas Association support the Committee's discussion draft. In particular, we commend the inclusion of elements that will remove barriers to the use of clean,

energy efficient, cost-effective natural gas. I will direct my comments to four specific legislative provisions included in the discussion draft:

- The first of these, section 4124, addresses the development of fair, effective, and non-regressive energy efficiency standards for residential natural gas furnaces.
- The second, section 4115 will restore the ability of federal installations to benefit from the use of energy efficient, cost-effective, end-use applications of natural gas in the long-term.
- The third, section 4131 reaffirms the U.S. Department of Energy's appropriate role as a source of technical expertise in the development of energy efficiency codes and standards for buildings and appliances – and the importance of maintaining a bright line between technical consultations and policy advocacy.
- And finally, section 4141 would clarify the Federal government's use of utility energy service contracts (UESCs).

I will begin by explaining why section 4124 is so critical. First and foremost, AGA is concerned that DOE's current proposal for a new energy efficiency standard for residential natural gas furnaces standard significantly overestimates the associated energy savings and greenhouse gas emission reductions the new standard would achieve, while also unfairly imposing significant economic burdens on many American consumers – especially low-income households.

AGA worked with the American Public Gas Association and the Gas Technology Institute (GTI)¹, to analyze the real-world emissions and energy usage levels that would result if a significant number of consumers respond to the rule by switching away from natural gas furnaces in favor of other less efficient fuels. The analysis incorporates the results of a national survey of builders and contractors that AGA conducted to assess the appliance and fuel choices that would likely occur under a national condensing furnace standard. According to the survey, about 22 percent of homes with existing non-condensing furnaces cannot be easily retrofitted with a condensing furnace, either because of prohibitive expense or due to local building codes that would prevent the new venting systems. The added cost of buying and installing a condensing furnace to replace a non-condensing furnace ranges from \$1850 to \$2550. GTI's impact analysis indicates significant adverse

¹ an independent, not-for-profit technology organization

consequences are likely to accrue under a national condensing rule standard, if the rule is not structured to minimize the likelihood of fuel switching from natural gas to electrical appliances.

The analysis shows that even small degrees of displacement of natural gas appliances would result in outsized adverse effects including greater overall energy usage, higher consumer costs, and increased carbon emissions. In the first year of the program alone, GTI estimates the rule would result in the emission of nearly 350 thousand additional tons of carbon dioxide, an increase of 463 thousand decatherms of energy usage, and added consumer costs nationwide totaling \$45 million. We are deeply concerned that, if not appropriately structured, this rule could prove to be the first energy efficiency standard issued in the history of the Department that has the real-world impact of *increasing* our nation's overall energy consumption and carbon footprint.

If finalized, AGA believes the rule would impose burdensome costs and renovations on many homeowners replacing their natural gas furnaces. According to the Department's own analysis, 66 percent of affected households would see no benefit or bear higher net costs under the proposed rule. Specifically – and again according to DOE's own analysis – 20 percent of households nationwide would see a net life cycle cost increase, and in the South, nearly a third of affected consumers would actually have higher costs under the proposed rule. Low-income consumers would be the hardest hit – 39 percent of low-income consumers in the Southern United States would bear higher costs for home heating as a direct result of the proposed rule.

DOE is required by statute to demonstrate that any new proposed standard is economically justified. It is hard to understand how the Department can continue on its present course that will clearly leave many Americans worse off than they are today.

Section 4124 of the discussion draft would right the course. This provision would require the Department to halt its current rulemaking on residential natural gas furnaces, and to instead initiate a negotiated rulemaking involving a diverse group of stakeholders. For the past several months, AGA has participated in discussions about the furnace rule with a diverse group of environmental and energy efficiency advocates and industry representatives. In these discussions, we are considering alternative pathways for the rule that would meet our shared goals for energy savings and consumer benefits. By establishing a negotiated rulemaking process, this section 4124 would provide an

opportunity for all stakeholders to contribute to a successful rule that benefits all American households.

The next section I will address is the discussion draft's section 4115. This section would repeal section 433 of the Energy Independence and Security Act of 2007, a provision which mandates elimination of all fossil fuel-generated energy use in new and renovated Federal buildings by the year 2030.

The section 433 fossil fuel ban is deeply flawed. Its implementation will severely limit – and ultimately prohibit – adoption of highly efficient technologies using natural gas at federal facilities, such as combined heat and power, fuel cells and waste heat recovery systems. The statute also creates a counterproductive bias in federal policy against clean and affordable natural gas. The United States is now the world's leading producer of natural gas. The Federal government should serve as an example to homes and businesses across the country by demonstrating how this abundant, domestic resource can increase energy efficiency, decrease overall emissions, improve our energy security and save money.

In fact, the Department of Energy's analysis of the fossil fuel ban indicates the provision will impose unacceptably high costs on the Federal government, which will ultimately be borne by tax payers. DOE estimates that Federal construction costs will jump from today's level of **\$30 million** annually to **\$536 million** in 2019, when fossil fuel-generated energy must be reduced by 80 percent. Construction costs for Federal buildings jump again to **\$1.135 billion** annually by 2030, when fossil fuel-generated energy must be eliminated.

This projected surge in federal construction costs amounts to an increase of **3,783 percent**. What the American people will get for this exorbitant expense is a Federal government turning its back on an emerging source of national strength and security: our abundant reserves of natural gas. It is equally vexing that these high costs mean that funds will be diverted from other projects that could meaningfully and cost-effectively increase energy efficiency and reduce greenhouse gas emissions from federal buildings.

Next, I will speak to the importance of the discussion draft's section 4131. This provision was introduced as a stand-alone bill, the Energy Savings and Building Efficiency Act (H.R. 1273). We thank the sponsors of that legislation, Representative Blackburn and Representative Schrader, for their leadership.

Model building energy codes are developed by private organizations like the International Codes Council (ICC) and the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). These codes are updated every three years and then state and local governments choose to either adopt the new standard, or to maintain their current standard. While the federal government does not specifically adopt codes, DOE does play a significant role in their development, and also works with states to facilitate adoption and enforcement.

The Blackburn-Schrader provision addresses concerns expressed by AGA and others that DOE has too often taken on an inappropriate advocacy role in code development. The provision would institute greater transparency in the U.S. Department of Energy's technical support of code development, specifically prohibiting DOE funding or personnel from involvement in any advocacy relating to code adoption.

Finally, section 4141 states that the term of a contract can extend beyond 10 years, but not exceed 25 years, correcting a belief within the U.S. Department of Defense (DOD) that contracts with USECs can only be up to 10 years. The 10-year contract severely limits utilities' ability to help the DOD reach its energy security, energy efficiency and renewable energy goals.

This concludes my testimony, Mr. Chairman. I look forward to questions from the Committee.

Mr. WHITFIELD. Thank you very much. And our next witness is Mr. Frank Thompson, who is President of Sweetwater Builders and he is testifying on behalf of the National Association of Home Builders. And you are recognized for 5 minutes.

STATEMENT OF FRANK THOMPSON

Mr. THOMPSON. Chairman Whitfield, Ranking Member Rush, members of the committee, I am pleased to appear before you today on behalf of the 140,000 members of the National Association of Home Builders, and to testify in support of the Strategic Petroleum Reserve discussion draft, and Title 4 on energy efficiency. My name is Frank Thompson. I am a home builder from Western Pennsylvania.

As a longtime leader in the drive to make new and existing homes more energy efficient, while prioritizing housing affordability, NAHB, is uniquely positioned to analyze the impact of this legislation on home building, remodeling, and rental housing industries. NAHB supports this discussion draft. Of importance to NAHB, this draft includes provisions from H.R. 1273, introduced by Representatives Blackburn and Schrader, that use model building energy codes to encourage meaningful energy savings for residential construction that are achievable and cost-effective.

As a single family home builder in Western Pennsylvania, I deal with energy codes, the baseline energy efficiency requirements for buildings every day, and I understand how different energy efficient features impact the performance of a home. I also participate in the development of these codes because they so intimately affect the way I build. The earlier versions of these codes focused on consumers, helping them reduce their utility bills with affordable improvements to their home. Over the last few years, however, I have seen negative trends.

First, while it does not write or publish the codes, the Department of Energy participates in the development of the codes by providing technical assistance, needed building science research, energy modeling, and analysis that only DOE can provide. But NAHB has concerns that technical assistance has been broadly interpreted to allow representatives from DOE to advocate for or against certain technologies, picking winners and losers, and seeking aggressive and costly requirements.

Another unfortunate trend in energy codes is the failure to consider the true economic costs when seeking further energy reductions. We know how valuable the energy savings are to the consumer, but even with these savings there is a significant upfront investment. The 2012 version of the residential code had such significant cost increases that it would take the average family 13.3 years to recoup those costs through utility savings. Some parts of the country, including the entire State of Kentucky, and parts of Illinois, saw payback periods in excess of 16 or 17 years. Meeting an energy code is a requirement for every single home, including low cost housing—or, excuse me, low income housing. Increasing housing costs for all homebuyers will have the unintended consequence of reducing housing affordability. For every \$1,000 increase in the price of a home, 246,000 households will be priced out of a mortgage.

This proposed legislation will drastically improve the manner by which model building energy codes are developed by establishing guidelines for DOE that increase transparency, and ensure an open and fair process. This legislation will also require any code supported by DOE to be cost effective, allowing homeowners to recoup any investment in 10 years or less. NAHB strongly supports the discussion draft, and urges the Committee to swiftly pass this as legislation.

NAHB would also like to weigh in on Section 4124 of this draft, which addresses a flawed DOE rule on non-weatherized gas furnaces included in any final legislation. This provision would require DOE to convene a representative advisory group of interested stakeholders to help analyze the impacts of the proposed rule, and determine whether it is technically feasible, and economically justified, and if not, participate in a negotiated rulemaking.

I thank you for this opportunity, and welcome your comments.
[The prepared statement of Mr. Thompson follows:]



National Association
of Home Builders

Testimony of Frank Thompson

**On Behalf of the
National Association of Home Builders**

Before the

House Committee on Energy and Commerce

Hearing on

***“Strategic Petroleum Reserve Discussion Draft
and Title IV Energy Efficiency”***

April 30, 2015

SUMMARY OF TESTIMONY

Frank Thompson, National Association of Home Builders

NAHB strongly supports the *Strategic Petroleum Reserve Discussion Draft – Title IV Energy Efficiency*, and appreciates the opportunity to provide testimony in support of Sections 4131 Greater Energy Efficiency in Building Codes and 4124 Residential Non-Weatherized Gas Furnaces and Mobile Home Furnaces.

NAHB represents more than 140,000 members involved in the home building, remodeling, multifamily construction, property management, subcontracting and light commercial construction industries. NAHB's goal has been to ensure that housing is a national priority and that all Americans have access to safe, decent and affordable housing, whether they choose to buy or rent a home.

SEC. 4131. GREATER ENERGY EFFICIENCY IN BUILDING CODES

The Role of DOE in the Development of Model Building Energy Codes

Model building energy codes are used across the country to establish minimum standards for building energy efficiency. The codes are developed by private entities, updated every 3 years, and adopted by state and local governments. Once adopted, the code becomes a baseline requirement for all buildings.

While it does not write or publish the codes, the Department of Energy (DOE) participates in their development by providing technical assistance—needed building science research, energy modeling and analysis that only DOE can provide. But NAHB has concerns that “technical assistance” has been broadly interpreted to allow representatives from DOE to advocate for or against certain technologies, picking winners and losers and seeking aggressive and costly requirements.

By requiring DOE to publish any proposed energy savings targets, code changes calculations, and methodology in the Federal Register, this section will increase transparency and guarantee that the public is heard. It would also prohibit DOE from advocating on behalf of certain products and technologies. This will help ensure a fair process that doesn't advantage some businesses over others.

Cost-Effectiveness

DOE also fails to consider the true economic costs when seeking further energy use reductions. Meeting an energy code is a requirement for every single home, including low-income housing and homes for first-time home buyers. Increasing housing costs for all home buyers will have the unintended consequence of reducing housing affordability.

This section would require any code or proposal supported by the Department of Energy (DOE) to have a simple payback of 10 years or less. This will ensure that we continue to increase the efficiency of homes, but that we do so at a rate that families can afford.

Section 4124 – RESIDENTIAL NON-WEATHERIZED GAS FURNACES AND MOBILE HOME FURNACES

This section which would require DOE to convene an advisory group to further analyze the recently proposed rule on gas furnaces, which eliminates non-condensing gas furnaces from the market. Replacing a non-condensing furnace with a condensing furnace will often require remodeling to re-route the exhaust system and this could potentially cost homeowners hundreds, if not thousands of dollars. This type of retrofit may also be impossible in row homes and multifamily structures. Further, the cost-benefit analysis DOE used to justify the rule was averaged on a nationwide basis and neglects the low energy savings that would be achieved in the south.

Testimony of Frank Thompson
On behalf of the National Association of Home Builders
April 30, 2015
Page 2

Introduction

Chairman Whitfield, Ranking Member Rush and members of the Committee, I am pleased to appear before you today on behalf of the 140,000 members of the National Association of Home Builders (NAHB) and to testify in support of the Strategic Petroleum Reserve Discussion Draft, specifically Title IV Energy Efficiency. My name is Frank Thompson and I am a home builder from Pennsylvania. I am a member of NAHB's Board of Directors and the immediate past Chair of the Construction Codes and Standards Committee.

Thank you for welcoming NAHB to this important policy discussion. As a longtime leader in the drive to make new and existing homes more energy efficient while prioritizing housing affordability, NAHB is uniquely positioned to analyze the impact of the legislation on the home building, remodeling and rental housing industries.

The *Strategic Petroleum Reserve Discussion Draft*, which includes the "Energy Savings and Building Efficiency Act of 2015 (H.R. 1273)," as introduced by Representatives Blackburn and Schrader, encourages meaningful energy savings for residential construction that are achievable and cost-effective. As a single family home builder in western Pennsylvania, I deal with energy codes, the baseline energy efficiency requirements for buildings, every day and I understand how different energy efficient features impact the performance of a home. I also participate in the development of energy codes because they so intimately affect the way I build. The earlier versions of these codes focused on consumers - helping them reduce their utility bills with affordable improvements to their home. Over the last few years, however, I have seen some negative trends. This proposed legislation will improve the manner by which model building energy codes are developed, by establishing guidelines for DOE

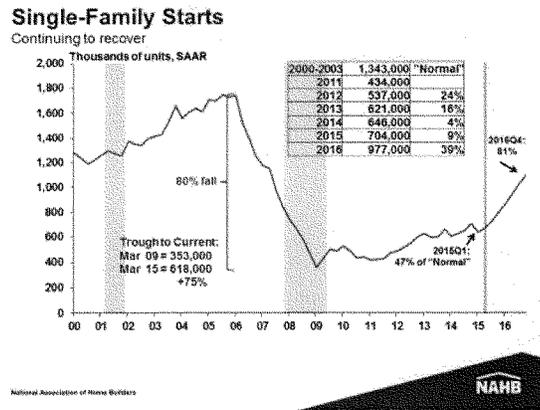
Testimony of Frank Thompson
 On behalf of the National Association of Home Builders
 April 30, 2015
 Page 3

that increase transparency and ensure an open and fair process. This legislation will also require any code supported by DOE to be cost-effective. NAHB strongly supports this discussion draft and urges the Committee to swiftly pass this as legislation.

Housing Industry Background

NAHB's members build approximately 80 percent of all new housing in America each year. Collectively, we employ millions of people and generate 17% of our nation's gross domestic product.

The housing industry is just starting to come out of the worst economic downturn since the Great Depression. In order to meet the housing needs of a growing population and replacement requirements of older housing stock, the industry should be building 1.4 million new single-family homes each year. But in 2014, home builders constructed only 648,000 single family homes. That said, the industry is improving and builder confidence is on the rise.



Testimony of Frank Thompson
On behalf of the National Association of Home Builders
April 30, 2015
Page 4

Energy in the Residential Sector

One of the bright spots in the housing sector is the growing demand for energy-efficient homes. New homes are considerably more efficient than older homes, and consumers want energy-efficient windows, doors and mechanical equipment.

According to the Energy Information Administration, homes built after 1999 consume only 2% more energy on average than homes built prior to 2000, even though these homes are, on average, 30% larger. In fact, heating and cooling no longer account for the majority of energy use in a home.¹

These gains are due to energy efficiency improvements in new construction. Homes built from 2000-2009 account for only 3.2% of the total energy consumption in the country, while older homes account for 19%. Because new homes are already so efficient, any significant reduction in overall energy use can only be achieved by addressing the existing building stock and occupant behavior.

The existing building stock comprises over 95 million rental and owner-occupied homes that were built before 1991, when modern energy codes were first established. And 80% of the buildings that exist today will still be in use in 2050.

But building retrofits can be very expensive. NAHB believes that incentive programs are an important tool to reduce the barriers of high initial costs and encourage more home owners to invest in energy

¹ U.S. Energy Information Administration, Residential Energy Consumption Survey

Testimony of Frank Thompson
On behalf of the National Association of Home Builders
April 30, 2015
Page 5

efficiency. Tax incentives see the fastest results and are the most effective at advancing energy efficiency improvements. Sections 25C for qualified improvements in existing homes (building components), 45L for new homes and 179D for commercial buildings have permeated the market and assisted many families and building owners investing in efficiency. NAHB estimates that for every \$100,000 spent on remodeling, 1.11 full-time equivalent jobs are created. The remodeling activity generated by the 25C tax credit in 2009 was associated with over 278,000 full-time jobs. Unfortunately because these tax incentives keep expiring and being retroactively renewed, the positive impact of these incentives have decreased since 2011.

Occupant behavior is also a growing factor in energy consumption. Electricity use (not including space heating and cooling) accounts for over 70% of energy use, irrespective of when a home was built. The energy-use impact of items purchased by occupants after a home is built can be twice as large as the impact of items typically installed by a builder like windows and insulation. Leaving the television on, doing laundry, running the dishwasher, and even working from home can all drastically increase energy use in a home. Congress should examine education programs and other policies aimed at encouraging consumers to use energy more wisely. One example is the budget-neutral Tenant Star program, which Congress just sent to the President's desk and recognizes tenants who decrease their energy use.

NAHB Green

NAHB is leading the way to improve energy efficiency in the residential sector for new and existing homes. NAHB launched the development of a green building standard for residential buildings now known as the ICC 700 National Green Building Standard (NGBS). The NGBS is an affordable yet rigorous standard that applies to all types of residential buildings, from single-family homes to multifamily

Testimony of Frank Thompson
On behalf of the National Association of Home Builders
April 30, 2015
Page 6

buildings of all sizes, retrofits and land development. It focuses on energy efficiency, water conservation, resource conservation, indoor environmental quality, site design and home owner education and is the basis of a national certification program administered by the Home Innovation Research Labs. This rigorous certification requires buildings to improve in every category to achieve a higher certification level. The NGBS is also the first and only residential green building standard approved by the American National Standards Institute (ANSI), which guarantees that the NGBS was developed using a true consensus process.

NAHB is also working to educate builders on new green design and construction practices through webinars, in-person courses offered during the International Builders' Show and at our state and local home builder associations and two professional designations. Earning the Certified Green Professional (CGP) and the Master Certified Green Professional (Master CGP) credentials requires continuing education green building science and methods and a commitment to incorporate green building principles into homes.

Strategic Petroleum Reserve Discussion Draft and specifically Title IV Energy Efficiency

Chapter 3 - Building Energy Codes

Model building energy codes such as the International Energy Conservation Code (IECC) are used across the country to establish minimum standards for building energy efficiency. The codes are developed by private entities, updated every three years, and are adopted by state and local governments. Once adopted by a state or locality, the code becomes a baseline requirement for all buildings in that jurisdiction.

Testimony of Frank Thompson
On behalf of the National Association of Home Builders
April 30, 2015
Page 7

This discussion draft would reform the development of model building energy codes by improving transparency, setting the guidelines by which DOE operates in this context and ensuring that the code is cost-effective and affordable.

Department of Energy Technical Assistance - Improving Transparency and Ensuring Product-Neutrality

While it does not write or publish the codes, the Department of Energy (DOE) participates in the development of model building energy codes by providing technical assistance—needed building science research, energy modeling and analysis that only DOE can provide. But NAHB has concerns that “technical assistance” has been broadly interpreted to allow representatives from DOE to advocate for or against certain technologies, picking winners and losers and seeking aggressive and costly requirements.

Some businesses have realized that by inserting specific products into the code, they can require the use of their products and increase their sales and profits. Instead of allowing the builder to have flexibility in making decisions in the interest of the buyer, the energy codes dictate specific construction methods and which products to use. In addition, DOE has attempted to hire individuals or a firm to provide advocacy assistance. While this has since halted, it is an example of inappropriate advocacy on the part of DOE.

For example, in the 2012 IECC, DOE proposed to prescriptively require foam sheathing, a specific type of insulation. This proposal eliminated the ability to consider and use more cost-effective construction materials and methods. Conversely, DOE did not support an NAHB proposal that would have increased

Testimony of Frank Thompson
On behalf of the National Association of Home Builders
April 30, 2015
Page 8

flexibility by allowing builders to trade off efficiency measures—wall insulation, for example—provided they install more efficient mechanical equipment to achieve equivalent overall energy efficiency..

This draft would require DOE to publish any proposed energy savings targets or code changes and all calculations and methodology in the Federal Register. This will go a long way towards increasing transparency and ensuring that the public is heard. It would also prohibit DOE from advocating on behalf of certain products and technologies. This will help ensure a fair process that doesn't advantage some businesses over others.

Ensuring Cost-effectiveness

Another unfortunate trend in energy codes is the failure to consider the true economic costs when seeking further energy use reductions. We know how valuable the energy savings are to the consumer, but even with these savings, there is a significant, upfront investment.

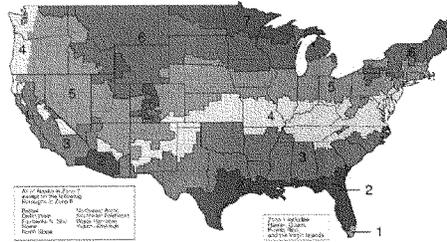
Meeting an energy code is a requirement for every single home, including low-income housing and homes for first-time home buyers. Increasing housing costs for all home buyers will have the unintended consequence of reducing housing affordability. For every \$1,000 increase in the price of a home, 246,000 households will be priced out of mortgage eligibility for a 30-year, fixed-rate mortgage with a 5% interest rate.

According to an NAHB market report, *What Home Buyers Really Want*, buyers are willing to pay for lower utility costs, but need a 14 percent return, which corresponds to a 7-year payback. Budget-conscious first time home buyers require a 5-year payback period (attached). The 2012 version of the

Testimony of Frank Thompson
 On behalf of the National Association of Home Builders
 April 30, 2015
 Page 9

IECC had such significant cost increases that it would take the average family 13.3 years just to break even. Some climate zones saw payback periods in excess of 16 or 17 years (see graphic below). The average home owner does not stay in their home for this long and will never realize a return on their investment. DOE typically analyzes cost-effectiveness over the life of the building, which they define as 30 years. Some energy efficiency advocates argue that the code should reflect a 30-year payback period, but this is simply not realistic.

Climate Zone	Annual Energy Savings	Incremental Construction Cost	Simple Payback (yrs)
1	\$206	\$3,224	15.7
2	\$294	\$3,330	11.3
3	\$470	\$7,203	15.3
4	\$410	\$7,091	17.3
5	\$505	\$4,653	9.2
6	\$397	\$6,399	16.1
7	\$609	\$6,465	10.6
8	\$725	\$6,465	8.9
National Weighted Average	\$427	\$5,668	13.3



2012 IECC Cost Effectiveness Analysis -

<http://www.homeinnovation.com/~media/Files/Reports/Percent%20Energy%20Savings%202012%20IECC%20Cost%20Effectiveness%20Analysis.PDF>

is.PDF

Testimony of Frank Thompson
On behalf of the National Association of Home Builders
April 30, 2015
Page 10

The commercial building sector requires an even shorter return on investment in order to bring the cost in line with commercial leasing structures (10 years or less). Many lenders require strict return on investment analyses. A Turner Construction Report, "2012 Green Building Market Barometer," indicated that 65% of commercial developers expect a payback period of 5 years or less (attached).

A DOE report prepared by the Pacific Northwest National Laboratory, *Assessing U.S. ESCO Industry Performance and Market Trends: Results from the NAESCO Database Project*, found that, in the context of Energy Service Companies (ESCOs), while institutional buildings can withstand a 7-year payback period for energy efficiency improvements, private, commercial buildings can only withstand a 3-year payback (attached). DOE's own report acknowledges that a return on investment is critical for any investments in energy efficiency.

With an aging infrastructure and building stock, more American families are going to be relegated to living and working in less-efficient homes and buildings.² As the housing market recovers, home buyers are facing dramatically different mortgage qualification requirements and financing issues than before the downturn. The reality is that the oldest, least-efficient homes are the most affordable to families with low to moderate incomes. Unfortunately, these families also bear the largest burden in energy costs as a percentage of income.³ Home energy use comprises about 17% of total housing costs, and about 9% of the total income for families that earn less than the national median household income. This draft would require any code, or proposal supported by DOE to have a simple payback period of 10

² The average age of an owner-occupied home in the U.S. is now 35 years and climbing. See the following NAHB analysis for more detail ("An Aging Housing Stock," Eye on Housing blog, <http://eyeonhousing.org/2014/01/20/the-aging-housing-stock/>)

³ CES, 2010

Testimony of Frank Thompson
On behalf of the National Association of Home Builders
April 30, 2015
Page 11

years or less. This will ensure that we continue to make energy efficiency improvements in buildings, but we do so at a rate that the market can bare.

Section 4124 – Residential Non-Weatherized Gas Furnaces and Mobile Home Furnaces

While the primary focus of this testimony is to support the language included on energy codes, NAHB would also like to weigh in on section 4124 of this discussion draft that addresses the recently proposed DOE rule for residential non-weatherized gas furnaces and mobile home furnaces. This legislation would require DOE to convene a representative advisory group of interested stakeholders to help analyze the impacts of the proposed rule and determine whether it is technically feasible and economically justified, and if not, participate in a negotiated rulemaking.

This is needed because the rule, as proposed, is not cost-effective in the southern U.S. Homes in the warmer southern climate use much less heat throughout the year. Unfortunately, DOE used a nationwide cost-benefit analysis to determine whether this rule is economically justified, and this neglects significantly lower energy savings that would be realized in the south.

Additionally, this rule would eliminate the availability of non-condensing furnaces, which can complicate the replacement of these furnaces in existing homes across the country. Replacing a non-condensing furnace with a condensing furnace will often require remodeling to re-route the exhaust system, and this could potentially cost homeowners hundreds, if not thousands, of additional dollars. This type of retrofit may also be impossible or even illegal in some existing town homes and multifamily structures. Replacing a furnace after a break would also take significantly more time and money. For these reasons, NAHB believes that S. 1029 will help DOE better understand market realities and hopefully result in a

Testimony of Frank Thompson
On behalf of the National Association of Home Builders
April 30, 2015
Page 12

more effective and economically justified rule. NAHB urges the committee to consider this legislation and support its inclusion in the final energy package.

Conclusion

NAHB wants to work as a partner with all levels of government to encourage energy efficiency, however, we must also make sure that any mandates are cost-effective and do not jeopardize housing affordability. NAHB looks forward to working with the Committee to improve and ultimately advance this important legislation. Thank you again, for this opportunity.

Mr. WHITFIELD. Thank you, Mr. Thompson. And at this time our next witness is Elizabeth Noll, who is an energy efficiency advocate for the Natural Resources Defense Council, and you are recognized for 5 minutes.

STATEMENT OF ELIZABETH NOLL

Ms. NOLL. Thank you, Mr. Chairman. Mr. Chairman, members of the subcommittee, thank you for the opportunity to participate in today's hearing. My name is Elizabeth Noll. I am an energy efficiency advocate at the Natural Resources Defense Council, here to share our views on national policies and programs that lead to increased investments in energy efficiency.

What would you say if I told you today we can save Americans money, promote job growth, cut pollution, with a solution that is affordable, easy to implement, proven effective, and what your constituents want? That solution is energy efficiency. And states across the country are seeing job growth, broad public support for energy efficiency. Take Illinois, $\frac{2}{3}$ of clean energy jobs—clean energy workers are employed in energy efficiency, and a recent poll showed 70 percent of likely voters strongly support increased energy efficiency to meet the state's energy needs.

In state after state, support for using efficiency to meet future energy needs is the same or higher. Pennsylvania, 97 percent, Virginia, 95 percent, Ohio, 94 percent, and Michigan, 92 percent. Meanwhile, Federal programs, like the Department of Energy's Appliance Efficiency Standards Program, first authorized by Congress in 1987, will save American 1.8 trillion on their utility bills through 2030, and just last year those standards avoided more pollution as comes from nearly 500 million cars.

Let me take a moment now to thank the Committee for their leadership in helping pass the Energy Efficiency Improvement Act of 2015 just last week. It shows once again that efficiency has bipartisan support. And let us not forget that Ronald Reagan signed the first efficiency standard legislation almost 30 years ago. The bill now on the President's desk was a good start, but we must go further. Every American home, building, and appliance that we make more efficient saves money, cuts pollution, and moves our nation closer to a more sustainable and prosperous future.

Some of the provisions before you today will bring energy savings to your constituents, and others will increase the Federal Government's leadership, leading to innovation in the private sector as well. However, I would like to highlight three troubling provisions that we would strongly oppose, which are further detailed in my written testimony.

First, Section 4124 would block the Department of Energy from finalizing a much needed update to the efficiency standards for non-weatherized gas furnaces. If Congress blocks the standard, it will only hurt your constituents, especially moderate and low income families struggling to pay their energy bills. As proposed in March, these standards would save the average consumer \$600 over the life of the furnace. Renters, who are often low income customers, especially benefit from minimum standards. Without an improved standard, property owners are likely to continue to buy cheaper, less efficient models, which means higher bills for those

tenants. Congress needs to strengthen existing programs and policies, not delay or weaken them.

Next, Section 4115 is counterproductive to cutting pollution in Federal buildings. Phasing out fossil fuels has enormous potential to reduce pollution, and that is a place where the Federal Government can show leadership, and leverage the enormous benefit of efficiency to reduce the \$6 billion it spends on its own buildings. And finally, Section 4131 would hamstring the process for adopting model building energy codes that deliver valuable savings for homeowners and renters in your districts, and across the nation. Smart Federal policies are essential to achieving the energy efficiency progress that consumers want, and America needs. And we know manufacturers will continue to innovate and rise to meet these efficiency standards, while delivering the same or better performance and options, as they have done.

In closing, Congress should reject any proposal to delay, weaken, or repeal the clean energy programs that have proven effective, and instead continue passing meaningful energy policies that Americans want. Thank you.

[The prepared statement of Ms. Noll follows:]



Testimony of
Elizabeth Noll
Energy Efficiency Advocate
Natural Resources Defense Council

U.S. House of Representatives
Committee on Energy and Commerce
Subcommittee on Energy and Power Hearing on
"Strategic Petroleum Reserve Discussion Draft and Title IV Energy Efficiency"

April 30, 2015

Mr. Chairman and members of the Subcommittee, thank you for the opportunity to share the views of the Natural Resources Defense Council on national policies and programs that serve to increase investments in energy efficient buildings and technologies as a means to save money, promote job growth and cut carbon pollution. My name is Elizabeth Noll and I am an energy efficiency advocate at NRDC.

IN BRIEF:

NRDC has long advocated for energy efficiency as a critical component in meeting our energy demands and climate goals, now and in the future. Some of these provisions will lead to energy savings for American taxpayers and the federal government's leadership will translate to innovation in the private sector as well. However a number of these provisions will reverse the great progress we've made and harm, including:

- **Section 4124:** Residential non-weatherized gas furnaces and mobile home furnaces which seek to prohibit the Department of Energy from promulgating a final rule amending efficiency standards for non-weatherized gas furnaces and mobile home furnaces.

- **Section 4131:** Greater energy efficiency in building codes which seeks to increase transparency and cost-effectiveness in the development of model energy codes.
- **Section 4115:** Repeal of fossil fuel consumption reduction for federal buildings which would repeal the requirement that all new and modified federal buildings reduce fossil fuel generated energy by 2030.

American innovation is delivering new technology and opportunities to enhance the nation's security and create jobs while reducing pollution. The energy decisions we make today will shape our children and grandchildren's economic and environmental future.

- **We must strengthen the existing programs and policies that are saving consumers trillions of dollars and reducing pollution rather than seek to delay or undermine them.**
- **We must leverage energy efficiency to protect and empower consumers.**
- **We must increase investments in energy efficiency to cut pollution and end needless waste.**

We know efficiency is not fully achieved on its own; we know consumers want and support minimum efficiency standards; and we know manufacturers continue to innovate and rise to meet these standards while delivering the same or better performance and options. Government's role is to continue to set the minimum standards that will save customers trillions of dollars and do so in a manner that allows manufacturers the flexibility to innovate and make better products.

Congress should reject any proposal to delay, weaken, or repeal the clean energy programs that have proven effective and instead continue passing meaningful energy efficiency policies Americans want.

FURTHER DISCUSSION:

NRDC is a national, non-profit environmental organization with more than 1.4 million members and activists. Since 1970, our lawyers, scientists, and other environmental specialist have worked to protect

the world's natural resources, public health, and the environment. NRDC's top institutional priorities include curbing global warming and creating a clean energy future. NRDC has long advocated for energy efficiency as a critical component in meeting our energy demands and climate goals, now and in the future.

What would you say if I told you that here today we have easy to implement tools that are proven to save your constituents money on their energy bills? That is Energy Efficiency.

Forty years of sustained improvements in energy efficiency not just America's single largest energy resource, but a "supply" whose cumulative contribution to meeting growth in the nation's needs for energy services exceeding those of coal, oil, natural gas and nuclear energy combined.

And, federal programs are succeeding—like the Department of Energy's appliance standards program, first authorized by Congress in 1987 and improved through numerous bipartisan bills over the years, will save all Americans including your constituents \$1.8 trillion on their utility bills through 2030 while cutting carbon pollution in 2014—equivalent to the annual emissions from nearly 500 million automobiles.

Energy efficiency programs, including cost-effective programs like home weatherization, helps spur job growth at the same time that it save customers money and reduces pollution.

Take Illinois for example, two-thirds (68,900) of the state's 112,000 clean energy workers are employed in energy efficiency.

Cost effective investments in building efficiency, especially in our heating, ventilation, and air-conditioning systems (HVAC), are key to driving the energy efficiency economy in Illinois. Electrical upgrades to buildings, including lighting, building envelope, and energy efficient appliances and machinery make up nearly 30,000 jobs, and HVAC adds nearly 25,000 jobs to the total.

In 2013, Illinois cracked the American Council for an Energy-Efficient Economy's Top 10 most efficient states rankings for the first time, thanks in large part to the utility efficiency standards that went into effect in 2008.

And the public supports these programs. For example, Illinoisans strongly support increased reliance on energy efficiency to meet the state's future energy needs. According to a poll by the bipartisan team of Fairbank, Maslin, Maullin, Metz & Associates (FM3 - D) and Public Opinion Strategies, 70 percent of likely Illinois voters strongly support increased use of energy efficiency, compared with only 16 and 19 percent of voters who support increased use of nuclear and coal, respectively.

Energy Efficiency Discussion Draft

Let me take a moment to thank the committee for their leadership in helping to pass the Energy Efficiency Improvement Act of 2015 just last week. It reflects the bipartisan nature of energy efficiency policy and paves the way for continued focus and investment in this area. Tremendous energy efficiency opportunities remain untapped and we urge Congress to ensure that we take full advantage of these potential energy efficiency improvements. Every home, building, and appliance we make more efficient cuts customers' energy bills, reduces carbon pollution and moves the nation closer to a more stable and prosperous future.

Some of the provisions under consideration will help lead to energy savings for American taxpayers including those in your districts and the federal government's leadership will translate to innovation in the private sector as well.

American innovation is delivering new technology and opportunities to enhance the nation's security and create jobs while reducing pollution. The energy decisions we make today will shape our children and grandchildren's economic and environmental future.

However a number of these provisions will actually set up obstacles to energy efficiency and harm the constituents in your districts.

Section 4124: This bill would block the Department of Energy from acting to raise the minimum efficiency standards for non-weatherized gas furnaces and mobile home furnaces and which could deliver cumulative savings up to \$19 billion over 30 years beginning in 2021.

In March of 2015, the Department of Energy (DOE) proposed updated standards for home furnaces. The proposed standards would provide tremendous benefits for consumers and the environment. The proposed standards would save consumers more than \$600 on average over the life of their furnace. The proposed rule represents the biggest natural gas saving efficiency standard ever established and would deliver cumulative emissions reductions of 137 million metric tons of carbon dioxide.

Further delay would only serve to harm the people in your districts, the environment and public health.

We are actively working with stakeholders and DOE to ensure the rule maximizes the opportunity for savings to customers and the environment.

Updating the furnace standard is particularly important to low income customers. Cost-effective minimum efficiency standards provide energy savings for all customers. But these savings are even more important to low income customers because heating bills represent such a large portion of those customers' income.

In addition, minimum efficiency standards are especially important for the many low-income households who rent their homes. In almost all cases, renters pay their electricity bills but it is the property owner who chooses the furnace. And the property owner generally choose the least expensive furnace model even that model will result in much higher energy bills over its lifetime. Allowing the Department to do its job and update furnace efficiency standards will make sure that all furnaces meet minimum efficiency levels that will reduce the burden on the many moderate and low-income families who struggle to pay their heating bills. At the same time that we raise minimum furnace standards, we are also working to make new energy efficient furnaces even more accessible to low-income consumers by bolstering state and utility programs that serve low-income populations which provide long-lasting assistance and can reduce the need for bill-payment assistance programs.

Submitted with this testimony is a fact sheet that provides more details on the DOE's proposed revision to the minimum efficiency standard for non-weatherized gas furnaces.

We must strengthen the existing programs and policies that are saving consumers trillions of dollars and reducing pollution rather than seek to delay or undermine them.

Section 4131: Greater energy efficiency in building codes which seeks to increase transparency and cost-effectiveness in the development of model energy codes.

While Section 4131 rightly recognizes the great energy savings potential achievable through building codes, it unfortunately takes more steps backwards than it does forward.

Building codes are the most-effective tool to ensure that efficiency is implemented when it is cheapest and easiest: when a building is first constructed. For instance, it is much cheaper and easier to add insulation before there is drywall up on the walls than it is to cut holes in the wall later.

Recent versions of the national model building codes – IECC and ASHRAE, which are adopted by many states -- have made large improvements in energy efficiency. For example, the 2012 IECC will require new homes to use approximately 30 percent less energy than the 2006 version, saving homeowners an average of \$4700 to \$33,000 in net savings over the life of the home depending on the climate zone.[1]

The Department of Energy played a significant role in advancing efficiency measures during the 2012 IECC development process that led to these large energy savings. Unfortunately, Section 4131 attempts to limit DOE's engagement in future code development cycles by limiting both their own participation and their ability to provide funding to groups that advocate for cost-effective energy efficiency improvements in codes.

^[1] <https://www.energycodes.gov/sites/default/files/documents/NationalResidentialCostEffectiveness.pdf>

The purpose of the building codes program at DOE is to advance energy efficiency in building codes: at the development, state adoption, and implementation stages. Section 4131 would severely limit their ability to achieve these goals by disallowing DOE from “advocating, promoting, or discouraging” specific measures or codes. DOE has an expert voice that is incredibly valuable in the code development and adoption process. DOE has the capability to evaluate energy savings, cost-effectiveness, technical feasibility, and impact on industry in an unbiased way that other stakeholders do not (or do not have the same resources as DOE to do). DOE contributes greatly to both the code development and adoption process by conducting and sharing these types of analyses and should not be hindered from doing so. It is difficult to share this information in a way that does not come across as advocacy, promotion, or discouragement and limiting DOE in this way would be counterproductive to the goal of achieving energy savings through building codes.

Building codes are particularly important because they protect homeowners by lowering the overall cost of home ownership. Unlike upgrades such as granite counter tops, efficiency is hard to see at the time of purchase and so a builder looking to cut costs may skimp on this important measure to reduce their first costs. This is short sighted and ultimately will result in greater cost to the home owner who sees the combined cost of their mortgage and utility bills each month. Skimping on efficiency may lead to a smaller mortgage payment, but a higher utility bill, increasing overall monthly costs and reducing affordability.

Unfortunately Section 4131 takes a short-sighted view of affordability, by requiring DOE to analyze simple payback of measures over three, five and seven year periods and not allowing them to propose any measure that has a longer payback than ten years. Given that a home will be around for many decades, limiting DOE to such short payback periods does not make sense. Furthermore, simple payback

is not the right metric to use as the home owner will be financing most if not all of the additional first cost through a mortgage, which means they will see net savings much more quickly than a simple payback analysis would indicate.

While we appreciate that Section 4131 recognizes the important energy savings achievable through building energy codes, it unfortunately would hinder the advancement of building energy codes more than it would help them.

We must leverage energy efficiency to protect and empower consumers.

Section 4115: Repeal of fossil fuel consumption reduction for federal buildings which would repeal the requirement that all new and modified federal buildings reduce fossil fuel generated energy by 2030.

This bill recognizes the enormous opportunity for the federal government to save money and reduce the environmental impacts associated with energy use in federal facilities. The federal government spends about \$6 billion each year on energy in owned and leased buildings.

Section 4115, in contrast with other provisions related to federal facilities in this bill, appears counterproductive to the mid- and long- term effort to greatly improve energy efficiency and reduce environmental impacts. In particular, it would repeal 42 U.S.C. 6834(a)(3)(D)(i), which establishes a requirement to gradually phase out the use of fossil fuels in federal facilities. The largest contribution to that phase-out would be improvements in energy efficiency, and the federal government would be demonstrating leadership in how rapidly and economically that could be achieved.

We recognize that some stakeholders had previously identified concerns with elements of 42 U.S.C. 6834(a)(3)(D)(i)), particularly as interpreted in a draft rulemaking by the U.S. Department of Energy. However, the U.S. Department of Energy has recently revised the proposed regulations, and the revisions appear to be both workable and a positive step for an economic and sustainable energy future.

We must increase investments in energy efficiency to cut pollution and end needless waste.

In closing, energy efficiency is important. We know efficiency is not achieved on its own; we know consumers want and support minimum efficiency standards; and we know manufacturers continue to innovate and rise to meet these standards while delivering the same or better performance and options.

For example beginning in 1947 electricity use from each refrigerator rose year over year until the first standard was set in the 1978. There was simply no incentive for efficiency as the market encouraged design changes that saved money up front even if they ended up costing customers much more over the life of the product. Since then refrigerator electricity use has fallen precipitously all while providing the same or higher level of comfort and product performance. A new refrigerator meeting the latest standard uses about a quarter of the energy of its 1973 counterpart, offers 20 percent more storage, and costs half as much. This improvement would not have happened had the government not set minimum standards.

Without standards, cost-effective energy efficiency opportunities would be lost, leading to unnecessarily high energy bills, increased energy consumption, and more harmful pollution. Even though any incremental cost of more efficient appliances is paid back and then some through energy bill savings over the life of the product, various barriers often prevent these savings from being achieved. A classic

example is what economists call split incentives. For instance, a landlord buying a furnace might look only at the initial price, rather than the cost over the life of the product, potentially sticking his tenants with higher energy bills. Or a homeowner may not have time to research a new water heater's long-term cost when his old one breaks; instead he may simply choose whichever one is on the repairman's truck. By setting minimum energy-savings levels for these and other products, standards help capture at least minimum cost-effective energy efficiency opportunities that might otherwise be missed.

Government's role is to continue to set the minimum standards that will save customers trillions of dollars and do so in a manner that allows manufacturers the flexibility to innovate and make better products.

Congress should reject any proposal to delay, weaken, or repeal the clean energy programs that have proven effective and instead continue passing meaningful energy efficiency policies Americans want.

Additional Background:

This bill recognizes the enormous opportunity for the federal government to save money and reduce the environmental impacts associated with energy use in federal facilities. The federal government spends about \$6 billion each year on energy in owned and leased buildings. The General Services Administration, the Department of Defense, the Department of Energy and other agencies have been on a steady path of improvement, and conduct an ongoing series of technical and economic analyses, and implementation of measures. These efforts indicate that far more savings are available through cost-effective efficiency technologies, given adequate investment and implementation. This bill also recognizes the important role played by Energy Savings Performance Contracts and utilities in

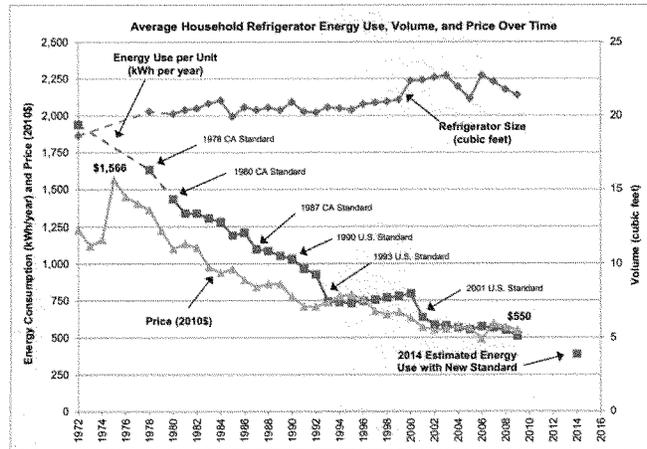
harnessing energy efficiency opportunities, and enhances the ability of federal agencies to tap their financing and implementation capability. We have not had the opportunity to closely study the details of Sections 4111 through 4114, but will do so and provide our views to the Committee.

Section 4115, in contrast with other provisions related to federal facilities in this bill, appears counterproductive to the mid- and long- term effort to greatly improve energy efficiency and reduce environmental impacts. In particular, it would repeal 42 U.S.C. 6834(a)(3)(D)(i), which establishes a requirement to gradually phase out the use of fossil fuels in federal facilities. The largest contribution to that phase-out would be improvements in energy efficiency, and the federal government would be demonstrating leadership in how rapidly and economically that could be achieved. Accordingly, Section 4115 does not belong in an energy efficiency bill. At a minimum, any repeal would need to be balanced with specific and detailed provisions that would reliably deliver the type of energy efficiency savings that are achievable in federal facilities. We recognize that some stakeholders had previously identified concerns with elements of 42 U.S.C. 6834(a)(3)(D)(i), particularly as interpreted in a draft rulemaking by the U.S. Department of Energy. However, the U.S. Department of Energy has recently revised the proposed regulations, and the revisions appear to be both workable and a positive step for an economic and sustainable energy future.

Sec. 4123 of this bill seeks to establish a voluntary verification program for air conditioning, furnace, boiler, heat pump, and water heater products that would be recognized by the Department of Energy. The intent of this bill seems reasonable; however we would have concerns with moving forward with the section as currently drafted. The section does not adequately distinguish between certification, verification and enforcement, the last of which is the authority granted by Congress to the Department

of Energy to enforce the law. This is important to ensure the law is being upheld and we would have concern about any provision that undermines this ability.

Section 4151 of this bill directs the Dept. of Energy to assemble available resources, technical assistance, and support for the purpose of improving energy performance of school buildings, to disseminate the information, and to support projects in schools with partnerships and collaboration. Improving the energy performance of schools must be a high priority because it is an exceptional investment – the up-front cost of projects not only saves localities money through lower utility expenses, many efficiency repairs and improvements can help kids/students by better indoor air quality, fewer very hot and very cold days, and better lighting. This bill does not require additional federal spending on projects in schools – even though that would be a smart investment – but rather it directs DOE to assemble existing assistance and assure it is available to schools. There is good reason to believe there are existing programs that could be helpful to schools considering efficiency projects, such as the USDA loan fund that supports rural electric co-ops funding efficiency projects with “on-bill” financing. And, collaboration with lenders, contractors, manufacturers, and school districts could deliver very real value.



Benefits of Energy Efficiency Standards:

National appliance and equipment efficiency standards are similar to car fuel efficiency standards. They assure a minimum level of energy and water efficiency for households and commercial appliances, creating energy savings for companies and homeowners. Standards provide many benefits for consumers, the national economy, manufacturers and the environments, including:

- Consumers and businesses save money through decreased utility bills;
- Jobs are created when those savings are spent on local goods and services;
- Emissions are cut, improving public health and air quality;
- Manufacturers avoid an expensive state-by-state patchwork of regulations; and
- Innovation results when the manufacturers compete to make products that comply with new standards.

Standards often mean more choices for consumers. For example, because of new lighting standards, manufacturers offered new halogen incandescent bulbs that are 25-30% more efficient than traditional lightbulbs. New, innovative LED products are now gaining market share by leaps and bounds. In other product categories like refrigerators and clothes washers, consumers have more design options and product choices today than ever before.

The federal appliance efficiency program provides certainty and clarity on the standard-setting process and avoids a patchwork of state regulations. This allows manufacturers to implement improvements and innovations at their production facilities in coordination with updated standards well in advance of their effective date. As a result, manufacturers make better products and the energy savings often come at lower cost than estimated. A recent study of nine appliance rulemakings found that while DOE anticipated small increases in the prices of covered products, manufacturer selling prices actually decreased by \$12 on average.¹

Submitted with this testimony is a fact sheet that further explains the decades of benefits from minimum efficiency standards for appliances and equipment.

Energy efficiency is one of the fastest growing sectors of the U.S. economy. Energy efficiency creates jobs that require a broad range of homegrown expertise, including electricians, heating/air conditioning installers, carpenters, construction equipment operators, roofers, insulation workers, industrial truck drivers, construction managers, and building inspectors. Many of these jobs cannot be exported and represent an important and dynamic driver of new economic opportunities.

¹ Steven Nadel and Andrew deLaski, "Appliance Standards: Comparing Predicted and Observed Prices." ACEEE, July 30, 2013. http://www.appliancestandards.org/sites/default/files/Appliance_Standards_Comparing_Predicted_Expected_Prices.pdf.

According to the American Council for an Energy Efficient Economy, federal appliance standards have generated about 340,000 jobs as of 2010.

There are an additional 47,000 smart grid-related jobs that were supported by the American Recovery and Reinvestment Act, according to the U.S. Department of Energy.

Making improvements that increase building efficiency is an even bigger job creator. Between 2009 and 2020, the consulting firm McKinsey found that energy efficiency building retrofits could create between 600,000 and 900,000 American jobs. This job growth would be spurred in two ways – from labor-intensive retrofits in the residential and commercial sectors, and from implementation and enforcement of energy efficiency codes and standards.

Michigan

Michigan has also seen significant job growth in energy efficiency. A study from the Michigan Department of Energy, Labor, and Economic Growth (MCEG) found that over 50,000 Michiganders are employed by renewable or energy efficiency related jobs in Michigan. Studies by the Hill Group, a prominent national consulting firm, found that doubling Michigan's renewable energy output and energy efficiency resources could result in over 200,000 additional job years and over \$28 billion in in-state investment.

Michiganders are enthusiastic about the state increasing its use of energy efficiency and clean energy sources. Over nine in ten (92%) favor increased energy efficiency as a way to meet Michigan's future needs.

Virginia

In a September 2014 survey of small businesses in Virginia by Environmental Entrepreneurs (E2), 65 percent said they think it is important for the state to continue to support energy efficiency programs.

Support among individuals is even higher. Nearly all Virginia voters, 95 percent, according to a poll by the bipartisan team of Fairbank, Maslin, Maullin, Metz & Associates (FM3 - D) and Public Opinion Strategies, favor increased energy efficiency 95 as a way to meet Virginia's future energy needs.

Pennsylvania

More than 57,000 Pennsylvanians work at 4,200 clean energy businesses, according to a November 2014 study commissioned by the nonpartisan business group Environmental Entrepreneurs (E2). About 37,500 people, or 68 percent, work in commercial and residential energy efficiency. While this is an impressive number, the state could almost certainly support significantly more jobs if it undertook policies and programs that improved its energy efficiency rankings. Pennsylvania is ranked only twentieth among the states by ACEEE. No. 1 ranked Massachusetts has more than 65,100 energy efficiency jobs.

Pennsylvanians are more enthusiastic about the state increasing its use of energy efficiency and clean energy sources than they are about coal and nuclear. 97% favor increased energy efficiency as a way to meet Pennsylvania's future needs, according to a poll by the bipartisan team of Fairbank, Maslin, Maullin, Metz & Associates (FM3 - D) and Public Opinion Strategies.

Ohio

More than 56,000 Ohioans, or 63.5% of the total state clean energy workforce, are employed by firms focused on energy efficiency, according to a forthcoming study commissioned by E2. The bulk of these jobs are in residential and commercial efficiency-related activities, “smart grid” work, and energy storage.

92 percent of Ohio voters support expanding utility programs to help consumers improve the energy efficiency of their homes and reduce their electricity bills. 94 percent favor increased energy efficiency as a way to meet Ohio’s future needs, according to a poll by the bipartisan team of Fairbank, Maslin, Maullin, Metz & Associates (FM3 - D) and Public Opinion Strategies.

Missouri

More than 40,000 Missourians work at 4,400 clean energy companies in Missouri, according to an April 2015 E2-commissioned study. The vast majority of these jobs – 83 percent or nearly 32,600 – are in the energy efficiency sector.

Florida

About 100,000 Floridians, or nearly 75% of all residents employed by clean energy businesses, work in energy efficiency, according to an October 2014 E2-commissioned study.

In North Carolina, nearly half of the state’s 23,000 clean energy workers are employed at energy efficiency firms, according to the North Carolina Sustainable Energy Association’s 2014 census of clean energy employment. Clean energy employment increased 15 percent between 2012 and 2014, largely thanks to state policies promoting renewable energy and energy efficiency development.

Mr. WHITFIELD. Thank you. And our next witness is Ms. Rona Newmark, who is Vice President, Intelligent Efficiency Strategy at EMC Corporation, and she is testifying on behalf of the Information Technology Industry Council. And you are recognized for 5 minutes, Ms. Newmark.

STATEMENT OF RONA NEWMARK

Ms. NEWMARK. Chairman Whitfield, Ranking Member Rush, and members of the committee, thank you for inviting the Information Technology Industry Council, also known as ITI, to testify today on the important issue of energy efficiency legislation, and specifically the Energy Efficient Government Technology Act. I am EMC Corporation's Vice President of Intelligent Energy Efficiency Strategy. EMC is a leading IT company providing products and services to enable customers to move to cloud computing, and to gain value through analysis of big data, all within trusted computing environments. The company is headquartered in Massachusetts, and supports a broad range of customers.

At EMC I am charged with reviewing EMC's products and strategies in the areas of energy efficiency and energy efficiency standards. I also help lead efforts within the company, and the industry, to view efficiency at a system level to provide the best net energy savings to accomplish particular results.

As you know, ITI is the global voice of the technology sector. The 60 companies in ITI are leaders and innovators in information and communications technology, including hardware, software, and services. These companies, including my own, are committed to innovation, to developing the energy efficient solutions demanded by our customers, and to helping drive sustainable economic growth, and energy independence across our nation's economy. ITI has had a fruitful history of working with the Committee on energy efficiency and productivity. Enactment of the bipartisan Energy Efficient Government Technology Act, Sections 4111 and 4112 of the discussion draft would be another important milestone in this regard. EGTA is not a regulatory approach. Rather, ITI believes the Federal Government can be a useful partner and leader in leveraging information and communications technology for increased energy efficiency and productivity, giving taxpayers improved ROI.

Data centers and the Internet of things will be essential to future U.S. sustainable growth. We are only beginning to learn what opportunities lie ahead for smarter buildings, smarter manufacturing, and smarter transportation systems, not to mention the smarter fill in the blank we have yet to invent. EGTA recognizes this, and emphasizes the right role for the Federal Government in encouraging further progress and innovation. ITI thanks Representatives Eshoo, Kinzinger, Welch, McKinley, and Tonko for introducing EGTA again this year. We also thank the Committee for EGTA's inclusion within the discussion draft as Sections 4111 and 4112, and we strongly urge EGTA's adoption this year.

Thank you. I look forward to answering your questions.

[The prepared statement of Ms. Newmark follows:]



**Information Technology
Industry Council**

**Written Testimony of
Rona Newmark**

**Vice President, Intelligent Efficiency Strategy
EMC Corporation**

**In behalf of the
Information Technology Industry Council (ITI)**

**Before the
Subcommittee on Energy and Power**

U.S. House Committee on Energy & Commerce

Energy Efficient Government Technology Act

April 30, 2015



Information Technology Industry Council

Written Testimony of:
Rona Newmark
VP, Intelligent Efficiency Strategy
EMC Corporation

In Behalf of the
Information Technology Industry Council (ITI)

Before the:
Subcommittee on Energy and Power
U.S. House Committee on Energy & Commerce

Energy Efficient Government Technology Act

April 30, 2015

Chairman Whitfield, Ranking Member Rush, and Members of the Subcommittee:

Thank you for inviting the Information Technology Industry Council (ITI) to testify here today on the important issue of energy efficiency legislation, and more specifically, concerning our support for the “Energy Efficient Government Technology Act.”

ITI is the global voice of the technology sector. The 60 companies ITI represents are leaders and innovators in the information and communications technology (ICT) sector, including in hardware, software, and services. These companies, including my own, are committed to innovation, to developing the energy-efficient solutions demanded by our customers, and to helping drive sustainable economic growth and energy independence across our nation’s economy. We believe the U.S. government can be a helpful partner in these efforts.

The “Energy Efficient Government Technology Act” (EEGTA) was first introduced back in February 2013, and last year easily passed the House of Representatives as Title III of H.R. 2126, the “Energy Efficiency Improvement Act of 2014.” Last month EEGTA was re-introduced as H.R. 1268 by Representatives Anna Eshoo, Adam Kinzinger, and three other members of this Subcommittee. It has also been incorporated as Sections 4111 and 4112 of the

Committee's Discussion Draft entitled, "Title IV Energy Efficiency and Accountability" (EEGTA also comprises Sections 301 and 303 of S. 720, the "Energy Savings and Industrial Competitiveness Act of 2015"). With support from ITI and seven other prominent organizations, EEGTA builds on a rich, bipartisan energy efficiency tradition between ITI and this Committee.

As a quick recap, this tradition dates back to 2006 with the introduction and enactment of H.R. 5646, a bill requiring the EPA and DOE to analyze and report to Congress on the growth and energy consumption of federal government and private sector data centers. The bill's lead sponsors were Representatives Mike Rogers and Anna Eshoo, and the key supporting organization was ITI.

The report required by that bill was delivered to Congress in August 2007, and was entitled the "Report to Congress on Server and Data Center Efficiency Public Law 109-431." The report provided important information on data center energy usage and practices, as well as useful analysis of both the benefits and obstacles to greater energy efficiency in data centers. To this day, it remains the government study that is consistently referenced globally as concerns data center energy efficiency.

Based on that 2007 report, and with ITI leading in support, Representatives Eshoo and Rogers then offered an amendment (which was accepted by voice vote in the Committee) to the Energy Independence and Security Act (EISA). Enacted in 2007 as Section 453 of PL 110-140, this amendment established a voluntary national information program on data center energy efficiency and innovation, encouraging a strong partnership between the private sector and the federal government.

EEGTA builds on this foundation, supplying a meaningful update and reinvigoration to the requirements of Section 453 of EISA. The bill does not bring a regulatory approach to energy efficiency. Rather, it stresses voluntary partnership between the private sector and the federal

government, and it encourages greater federal government leadership in leveraging information and communications technology (ICT) for energy efficiency and productivity. ITI scores the bill as providing significant savings for the U.S. taxpayer – through reduced federal government energy use and through greater productivity per watt expended.

As regards these potential savings, the American Council for an Energy Efficient Economy (ACEEE) in 2012 released a relevant study, entitled “*A Defining Framework for Intelligent Efficiency*,” that includes the following estimate,

“If homeowners and businesses were to take advantage of currently available information technologies that enable system efficiencies, the United States could reduce its energy use by about 12 – 22% and realize tens or hundreds of billions of dollars in energy savings and productivity gains. In addition, there are technologies that are just beginning to be implemented that promise even greater savings.”

The Center for Climate and Energy Solutions (C2ES) report issued later that same year, “*Leading by Example: Using Information and Communications Technologies to Achieve Federal Sustainability Goals*,” focuses more specifically on the federal government, and estimates that widespread deployment of ICT within the federal government “*could save an estimated \$5 billion in energy costs through 2020.*”

The C2ES Report includes eight case studies of federal agencies: using smarter building systems to save energy; expanding teleconferencing, teleworking and e-training to cut travel and training costs; reducing fleet miles and emissions with smart routing solutions; and shifting technology infrastructure from local server rooms to the cloud. In each case, C2ES found that ICT could produce costs savings, more sustainable practices, and a more productive federal sector.

These eight case studies are representative of the kind of agency initiatives that would be encouraged by Section 2 of EEGTA. This section recognizes that as the nation’s largest

landlord, fleet operator, and purchaser of goods and services, the federal government has both the opportunity and responsibility to lead by example in leveraging ICT in moving the U.S. in a less costly, more sustainable direction. The importance of doing so will increase further as intelligent efficiency and the Internet of Things become more pervasive. In a paper last year, ACEEE spoke of the three drivers of productivity that will be increasingly activated by the combination of intelligent efficiency and the Internet of Things:

- A higher level of system-wide energy savings (as opposed to energy savings from the enhanced efficiency of individual devices) made possible by the array of interconnected equipment, appliances, systems, and infrastructures;
- The set of net positive economic externalities (non-energy benefits) or spillovers that arise from those greater linkages and interactions; and,
- The increased capacity for individuals, systems, and regional economies to learn and act at higher levels of performance as experience and knowledge build up over time.

Enactment of Section 2 of EEGTA would help ensure that the federal government better utilizes these three drivers.

As regards Section 3 of EEGTA, this section focuses on improving the energy efficiency of federal data centers, including measures that will lay the groundwork for further private sector improvements in data center efficiency. It does so by building on work already being performed by the Department of Energy and key stakeholders.

Most prominent of these stakeholders is The Green Grid, a consortium of approximately 200 companies, government agencies, and educational institutions dedicated to advancing resource efficiency in data centers. The Green Grid's metrics, models, and educational resources have provided organizations globally with the ability to measure, manage, and make drastic improvements in the efficiency of their data centers. Indeed, it is estimated that these tools have helped the industry reduce power and cooling energy overhead by 20 percent over the past five years.

Section 3 not only builds on this work, it also captures ITI's vision for the productive future of the partnership between the federal government and our industry. This future should include: an update to the 2007 Report to Congress; further work on specifications, measurements, and benchmarks, and in particular on a new data center utilization metric; use of the Data Center Energy Practitioner Program; and, increased sharing of best practices and open data.

In sum, ITI thanks Representatives Eshoo, Kinzinger, Welch, McKinley, and Tonko for introducing EEGTA again this year, thanks the Committee for its inclusion within the Discussion Draft as Sections 4111 and 4112, and strongly urges EEGTA's adoption this year. EEGTA would serve as a welcome non-regulatory boost to U.S. energy efficiency and to greater return on the U.S. taxpayer's dollar.

Mr. WHITFIELD. Ms. Newmark, thank you. And our next witness is Mr. Mark Wagner, who is Vice President and U.S. Government Relations for Johnson Controls, and he is going to be testifying on behalf of the Federal Performance Contracting Coalition. And you are recognized for 5 minutes.

STATEMENT OF MARK WAGNER

Mr. WAGNER. Thank you, Mr. Chairman, Mr. Rush, and members of the Committee. I am Mark Wagner of Johnson Controls, and representing 10 energy service companies that form the Federal Performance Contracting Coalition. We work to help the Federal Government reduce energy consumption through energy saving performance contracts, or ESPCs. I would like to briefly discuss the benefits of ESPC, and outline our coalition's support for pending legislation that would improve the program.

ESPCs are a tremendous tool for the Federal Government because agencies can get energy efficient equipment, such as new lighting, building controls, HVAC equipment, chillers, boilers, renewable energy assets, at no upfront cost to the government. The energy service companies leverage private sector capital to make the investment. We design and install the equipment, and put in place a plan to measure and verify the savings.

Three important parts of this deal. As you can see from the slide, first the agency gets a facility upgrade, with new building equipment, and they lower their energy consumption. Second, the agency pays off the investment with the savings on its utility bill, but never pays more than it was already paying for its utilities. Thirdly, then it realizes all the savings after the investment is paid off. Most importantly, these savings are guaranteed by the energy service company.

Let me give you an example of an ESPC project that Johnson Controls is doing at Fort Bliss in Texas. We have installed building controls at 120 buildings, put in energy efficient lighting, electric motors, chillers, building insulation, and a 4.7 megawatt photovoltaic array with 5,500 solar panels. It is a \$100 million investment of private sector capital which will save the installation \$150 million. We are also working with the base on technology for a micro-grid to improve energy security in the event of an adverse occurrence on the grid. This is just one example of the many ESPCs that provide multiple benefits to the Federal Government, and to taxpayers. ESPCs are a well-established program. According to the Department of Energy, approximately 600 performance contracts, worth \$5.3 billion of investment, have been awarded to 25 agencies in 49 states, with a net savings of \$3 billion to the Federal Government.

Let me now talk about several legislative provisions designed to improve the ESPC program. We have been very supportive of the energy savings through Public-Private Partnership Act of 2015 that was introduced by Representatives Kinzinger and Welch, thank you very much. This legislation will ensure that the Federal agencies are utilizing, to the fullest extent possible, all cost effective measures for energy conservation measures. It streamlines the ESPC statute, providing consistency and clarification, and it pro-

motes transparency and accountability across the government. This is now Section 4141 of your bill.

Specifically, it would require reporting on the progress of ESPCs. It would encourage agencies to act on their required audits. It would clarify that agencies cannot arbitrarily limit the terms and use of energy related operation and maintenance savings. It would make the definition of Federal buildings consistent with provisions in the law, and it would clarify other important provisions for ESPC, such as the sale, transfer of energy incentives, rebates, or credits, as well as the type of projects for which ESPC can be used. These are all important details to update and clarify the existing statute, which will make ESPCs an even more powerful tool for the Federal Government.

In addition, we support clarifying the use of ESPC for efficiency gains in data centers, which are extremely energy intensive. We are supportive of the repeal of the Federal building fossil fuel reduction, as long as it is packaged together with extended energy efficiency goals for the government, which currently expire at the end of this year. We are supportive of long term utility energy service contracts, as long as they include measurement and verification of energy savings, as well as guarantee or assurance of savings.

Other important provisions that we hope the Committee will consider, in—Section 432, changing may to shall showing—would ensure that the government would act on cost-effective savings, extending energy efficiency goals for the Federal Government, which expire at the end of this year, as I mentioned, ensure that agencies set ESPC goals on an annual basis, and report on their progress, and add alternatively fueled vehicles in their infrastructures measures allowed under ESPCs.

Finally, many of you are aware that the Congressional Budget Office scores any attempt to update the ESPC statute. Members of this—members of the Energy and Commerce Committee have tried to resolve the situation, and we are appreciative of that. The Senate budget contains a fix to the scoring problem for the Senate—in Senate legislation. We encourage the House to continue to pursue annualized scoring for ESPC to fix the CBO scoring problem.

Thank you for your support of ESPC, and the opportunity to testify today.

[The prepared statement of Mr. Wagner follows:]

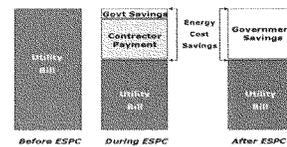
Testimony Summary

Mark Wagner, Johnson Controls, for the Federal Performance Contracting Coalition
 “Strategic Petroleum Reserve Discussion and Title IV Energy Efficiency”
 House Subcommittee on Energy and Power – April 30, 2015

Federal Performance Contracting Coalition (FPCC) represents 10 major Energy Service Companies performing **Energy Savings Performance Contracts (ESPCs)** for the Federal Government. (Ameresco, Constellation Energy, Energy Systems Group, Honeywell, Johnson Controls, Lockheed Martin, Noresco, Schneider Electric, Siemens Government Technologies and Trane/Ingersoll Rand.)

ESPCs are a win-win solution for federal agencies

Energy service companies leverage private sector capital to install new energy efficient equipment at no upfront cost to the government. We measure, verify and **guarantee** the energy savings. The private sector investment is paid off using the utility bill savings. The government lowers its energy use, gets new efficient equipment and never pays more than it would have paid for utilities.



The FPCC supports:

[H.R.1629: The Energy Savings Through Public-Private Partnerships Act of 2015](#) – This legislation will help ensure that federal agencies are utilizing to the fullest extent possible all cost-effective measures for energy conservation. It streamlines the ESPC statute providing consistency and clarification and it promotes transparency and accountability across the government. Last Spring this legislation was approved by the Energy and Commerce Committee.

[H.R. 1268: Energy Efficient Government Technology Act](#) – This legislation will clarify the use of ESPCs for efficiency gains in data centers which are extremely energy intensive.

[H.R. 2351: Repeal Federal Building Fossil Fuel Reductions](#) – We are supportive of this repeal packaged together with extended energy efficiency goals for the government which currently expire at the end of this year.

[H.R. 1630: Utility Energy Service Contract Improvement Act](#) – We support long term Utility Energy Service Contracts that include measurement and verification of energy savings, as well as a guarantee or assurance of savings.

Other Important provisions that should be considered:

- Change “may” to “shall” in EISA 432 to ensure the government acts on cost effective savings
- Extension of energy efficiency goals for the federal government which expire this year
- Ensure that agencies set ESPC goals and annually report on progress
- Add alternatively fueled vehicles and their infrastructure measures allowed under ESPCs

Resolve the scoring problem for ESPCs – CBO scores any attempt to update the ESPC statute. Members of the Committee have tried to resolve the situation. The Senate budget contains a fix to the scoring problem for Senate legislation. We encourage you to continue to pursue annualized scoring for ESPCs.

**Testimony of Mark Wagner,
Vice President, Government Relations, Johnson Controls, Inc.
On behalf of the Federal Performance Contracting Coalition (FPCC)
Before the Subcommittee on Energy and Power
House Energy and Commerce Committee
“Strategic Petroleum Reserve Discussion Draft and Title IV Energy Efficiency”
April 30, 2015**

Chairman Whitfield, Ranking Member Rush and members of the Subcommittee, thank you for inviting me to testify today supporting energy efficiency legislation, specifically H.R.1629, the Energy Savings Through Public-Private Partnerships Act of 2015.

I am Mark Wagner, Vice President, Government Relations of Johnson Controls, Inc., and I am representing the Federal Performance Contracting Coalition (FPCC), which is a national industry coalition comprised of Energy Service Companies advocating for increased Federal use of Energy Savings Performance Contracts (ESPCs). Our coalition focuses exclusively on federal use of ESPCs and has spent time over the last sixteen years removing congressional and administrative barriers to usage, extending necessary authorities, educating about ESPCs and otherwise encouraging their use as a means for saving the government money on both energy and infrastructure. For the last few years we have worked closely with Congressmen Adam Kinzinger and Peter Welch to advance Federal use of ESPCs.

FPCC members have delivered approximately 95 percent of Federal Energy Savings Performance Contracts. This coalition is comprised of companies such as Ameresco, Constellation Energy, Energy Systems Group, Honeywell, Johnson Controls, Lockheed Martin, Noresco, Schneider Electric, Siemens Government Technologies and Trane/Ingersoll Rand.

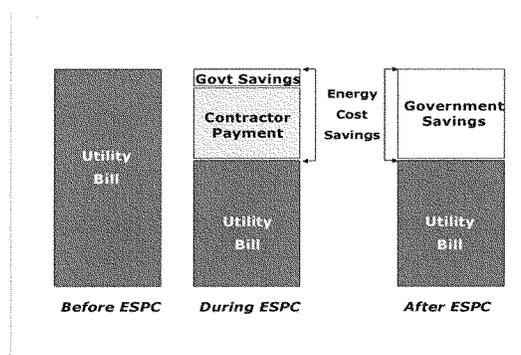
I am here today to discuss the benefits of promoting Energy Savings Performance Contracting (ESPC) in the federal government and the FPCC's support for H.R.1629, the Energy Savings Through Public-Private Partnerships Act of 2015, as well as other provisions in your draft.

Background: Energy Savings Performance Contracting

As the nation's single largest energy consumer, the Federal government spends more than \$7 billion annually on facility energy costs. Energy efficiency improvements can reduce this expenditure and help agencies acquire necessary infrastructure and equipment. In 2007, the Energy Independence and Security Act required federal agencies to perform energy audits of their facilities. With only half of the buildings audited in 2013, approximately \$9 billion worth of energy conservation measures with a ten year payback or less had been identified. There is clearly a vast opportunity for energy efficiency across the Federal government at a time of reduced discretionary funding.

ESPCs and Utility Energy Service Contracts (UESCs) can fill this funding gap. For more than 20 years, performance-based contracts for energy savings have provided critical upgrades to federal buildings, including the House and Senate Office Buildings and the U.S. Capitol.

How do ESPC's work?



Under ESPCs and UESCs, private-sector Energy Service Companies finance and install new energy efficient equipment at no upfront cost to the federal government. Federal agencies repay this investment over time with funds saved on utility costs. The private sector contractors measure, verify and guarantee these energy savings. Private-sector financiers provide the capital, which today is available at historically low interest rates. By law, and on a negotiated basis, the government never pays more than it would have paid for utilities if it had not entered into an ESPC. In fact, a June 2013 Oak Ridge National Laboratory study found that under ESPCs, federal agencies are saving an average of nearly twice the amount of energy as is guaranteed by the contractors. ESPC retrofits also address years of deferred maintenance at federal facilities at no additional cost to taxpayers. For these reasons, ESPCs have proven to be a highly successful tool to implement comprehensive energy efficiency projects.

Using an ESPC or UESC in the Federal government eliminates the need for appropriated dollars for equipment replacement and for operations and maintenance of the energy using equipment. According to the Federal Energy Management Program (FEMP), approximately 600 performance contracts worth \$5.3 billion have been awarded throughout 25 Federal agencies and in 49 states. These projects have resulted in energy savings valued at \$13.1 billion, of which approximately \$10.1 billion went to repay project investments, accruing a net savings of \$3 billion to the federal government.

President Obama announced a Directive ordering federal agencies to enter into \$2 billion worth of performance-based contracting for energy savings over a two year period. After hearing from 179 Members of Congress and Senators, led by the Energy Savings Performance Caucus, he extended that commitment to \$4 billion over five years. The Caucus, chaired by Representatives Kinzinger and Welch has been tireless in supporting Federal ESPCs, by supporting positive administration efforts, legislative barrier removal

and efforts to address differences between the Office of Management and Budget and the Congressional Budget Office in scoring ESPC provisions.

Fort Bliss ESPC Example

Let me take a moment to provide an example of an ESPC and its benefits. Johnson Controls has been helping Fort Bliss, one of the U.S. Department of Defense's largest military installations, become more energy efficient and secure. Through our ESPC work at Fort Bliss in El Paso, Texas, we have invested over \$100 million dollars in private sector capital for energy efficiency improvements to:

- Update utility monitoring and controls systems to manage energy use in 120 buildings;
- Upgrade to energy efficient lighting;
- Replace electric motors;
- Install a new reciprocating chiller and solar thermal water heating technologies;
- Improve building insulation;
- Develop a program to reduce electricity during peak demand periods; and
- Install 4.75 megawatt of photovoltaic arrays consisting of 5,500 solar panels.

These and other initiatives will help the base save \$150 million over 20 years.

We are also working with the installation on technology for a microgrid to maintain critical loads in the event of an adverse occurrence on the grid. All of this is part of the Army's Net Zero energy initiative at Fort Bliss.

B.J. Tomlinson, renewable energy and sustainable engineering program manager at Fort Bliss, sums it up this way: "Improving a building envelope, reducing load and demand footprint, and producing renewable, sustainable energy save money to be sure. But the greener you make your buildings, and the more resilient they become closes the gap between what the grid provides and what you need to operate independently of the grid."

This is just one example of many ESPCs that provide multiple benefits to Federal agencies and taxpayers. Now I would like to address several provisions included in the discussion draft.

Energy Savings Through Public-Private Partnerships Act of 2015 (H.R.1629)

H.R. 1629, introduced by Energy and Commerce members, Representative Adam Kinzinger (R-IL) and Peter Welch (D-VT) will help ensure that federal agencies are utilizing to the fullest extent possible all cost-effective measures for energy conservation. Identical legislation was introduced in the Senate by Senators Cory Gardner (R-CO) Chris Coons (D-DE.) Last spring, the Energy Savings Through Public-Private Partnerships Act of 2014 was approved by the Energy and Commerce Committee.

The legislation promotes transparency and accountability across the federal government, clarifies the ESPC statute, and will further enable federal agencies to maximize their present energy efficiency contracting authorities. The legislation streamlines the ESPC statute providing consistency and clarification within the existing ESPC law to:

- Require a report to Congress on the status of each agency's energy-related performance contracts, the value of these contracts for the previous year, the goal for the coming year, and an explanation by the agency about why goals were or were not met;
- For projects discovered in the energy audits required by section 432 of EISA 2007, agencies must explain why any life cycle cost effective measures were not implemented using U.S. Department of Energy developed guidelines. This will encourage agencies to act on their mandated audits;

- Clarify that agencies cannot arbitrarily limit use of energy-related operations and maintenance savings in an ESPC, a provision that will facilitate use of ESPCs for data center consolidation;
- Make consistent the definition of a federal building within federal energy provisions of law;
- Clarify in federal energy statute that plug loads are allowable energy conservation measures, another provision to clarify use of ESPCs for data centers; and
- Clarify as energy savings the use, sale or transfer of energy incentives, rebates, or credits (including Renewable Energy Credits) from federal, state, local governments or utilities and any revenue generated from a reduction in energy use; more efficient waste recycling; or more energy generated from more efficient equipment.

As mentioned previously, this bill passed the Energy and Commerce Committee last year.

Energy Efficient Government Technology Act (H.R. 1268)

This bill, which encourages the Federal government to harness information technologies and data centers for improved energy performance and efficiency, also passed the Committee last year. Among other things, it clarifies the use of ESPCs for efficiency gains in data centers, which are extremely energy intensive. ESPCs can reduce that energy use by upwards of 75%-- all paid for from energy savings alone.

Repeal Federal Building Fossil Fuel Reductions (H.R.2351)

We are supportive of this repeal, packaged together with extended energy efficiency goals for the government, which currently expire at the end of this year. We would commend to you S. 869, sponsored by Senators Hoeven and Manchin that replaces the fossil fuel reduction mandate (433 of EISA) with several federal energy efficiency provisions that

would further encourage and utilize energy savings performance contracting. The FPCC was involved in negotiating this package. We would hope that the House, as well as the Senate, can support the provisions within it. The extended energy efficiency goals in this bill could be extended beyond the two years provided for in the package.

Utility Energy Service Contract Improvement Act (H.R.1630)

We support long term Utility Energy Service Contracts that include measurement and verification of the energy savings, as well as either a guarantee of savings or assurances thereof. This ensures that the Federal government will achieve intended energy and cost savings.

Other Important Provisions that should be considered

There are some additional pieces of legislation that are being considered by various members of Congress and which we would wholeheartedly support. These include:

- Changing “may” to “shall” in EISA 432, which would ensure that the government act on any cost effective energy efficiency upgrades. The provision in EISA was originally written this way but was changed because of a score from the Congressional Budget Office;
- Long term extension of energy efficiency goals of the federal government, which have been in statute for over a decade and expire at the end of this year. These goals are an important driver of energy efficiency delivered by ESPC and UESC;
- Ensuring that agencies set ESPC specific goals each year and report on their progress; and
- Add alternatively fueled vehicles and their infrastructure to allowable measures under energy savings performance contracting (ESPCs).

Scoring of ESPCs

As many of you are well aware, Energy Savings Performance Contracting has triggered a Congressional Budget Office (CBO) score since 2002 whenever Congress attempts to update the underlying ESPC statutory authority or generally legislate for federal energy efficiency. This scoring situation stalled last year's version of H.R. 1629 and we very much appreciate all the help from members of the Energy and Commerce Committee and from Chairman Upton in particular, to try to address scoring of ESPCs. Most recently, we want to thank the eight members of the full Committee who wrote to budget conferees to request that they retain the Senate provision fixing the ESPC scoring problem. Led by Caucus Chairmen Kinzinger and Welch, these are Chairman Upton and Representatives Shimkus, Castor, McKinley, Yarmuth and Cardenas.

We encourage you to continue to pursue annualized scoring for ESPCs.

In summary, ESPCs and UESCs are private sector financing mechanisms that allow the federal government to increase its energy efficiency, decrease their energy costs without upfront appropriations and address deferred maintenance. Most importantly, the savings are guaranteed by the contractors. These contracts have delivered more than \$7 billion in energy related savings to the Federal government alone and significant additional opportunities abound. Passage of the Energy Savings Through Public-Private Partnerships Act of 2015 is key in supporting the ability of federal agencies to leverage the private sector for energy savings without relying on appropriated funds.

Chairman Whitfield, Ranking Member Rush and members of the Subcommittee, thank you for allowing me the opportunity to testify before you today. I stand ready to answer any questions you might have.

Mr. WHITFIELD. Thank you, Mr. Wagner. Thank all of you for your testimony, we appreciate it very much. And I will recognize myself for 5 minutes of questions.

As you know, we have this draft legislation, and we hear a lot in Congress today around the country about lack of bipartisanship. In this bill, there are 14 titles in the energy title of this bill—or 14 sections, and on 12 of those sections we do have Democratic support. So the three areas that there is not agreement on relates to the furnaces, relates to the fossil fuel, and relates to the building codes. Now, if you have bipartisanship for 12 out of 14 titles, that is pretty good, I would say. So I want to address those three areas that there is some disagreement on, and I want to tell you why we put those in there.

I think Mr. Thompson, Mr. Somerhalder, and Mr. Peel all touched on it, but first we will focus a little bit on Mr. Thompson's remarks. DOE, obviously, has been a leader in recommending and promoting efficiency, and originally they were really good at providing technical assistance. But many people around the country, I don't care where you live, or what part of the country you live in, are saying they were becoming more of an advocate. They are getting closer to dictating and saying what will and will not be done.

And one example of that was the—recently they came out with the standards on the hot water heaters that were being used in demand response programs by rural electric cooperatives around the country. And the cost would double under those standards, so Congress came together and delayed the implementation until some further refinements could take place. That passed the House, passed the Senate, sent to the President. Now we are hearing the same thing about furnaces. And we all know that efficiency—we all know this, that, you can promote good jobs because you promote industries to manufacture new products that are better, you save energy costs, you help improve the environment.

But if you also are significantly increasing the upfront cost, the furnaces—I hear you are talking about \$600, but then installing it is even more. So, we are just trying to buy a little balance here. I don't think DOE, as much as they have expertise, they don't have all of the answers, and so that is why we are having these hearings. And manufacturers—it really creates—and you, Mr. Peel, in your testimony you were asking—you were saying we need congressional intervention here. And I think you specifically talked about 23 new regulations coming by EPA in appliance sector. Would you elaborate on that a little bit, about what it does mean to you and your employees?

Mr. PEEL. Well, first of all, we have had some positive experiences along the way with DOE when we go through a process that involves stakeholder input along the way, and we have got recent examples of that as well. We also appreciate that the DOE is under pretty intense pressure to complete a bunch of regulations in a compressed timeframe. The unfortunate consequence for manufacturers is we have to react to those. One makes the rules, the other has to implement the rules.

So the important thing for us is to be at the table, and make sure that that information, if there are challenges, for example, on gas

furnaces, that those get brought to bear in the discussions, and that we end up with what is the best overall solution—

Mr. WHITFIELD. Right.

Mr. PEEL [continuing]. For the industry, for consumers, and they make sense economically.

Mr. WHITFIELD. And you think that this draft, with the advisory council, basically does provide that additional protection—

Mr. PEEL. I do.

Mr. SMITH [continuing]. And input? Which should benefit everyone in America that certainly has to buy an appliance.

Mr. Thompson, the building codes, would you elaborate just a little bit on why this building code issue is so important?

Mr. THOMPSON. I think there are several important factors, and it starts with creating model building codes that are affordable and adoptable by states. And we are seeing continued growing resistance by states to adopt building codes. If we look at a map, and I think that was included in my written testimony there, we see about $\frac{1}{3}$ of the states that have adopted the 2012 or 2015 IECC, about $\frac{1}{3}$ on 2006 and earlier, or they don't have a state energy code.

Much of the discussion is about the cost increases that come along with adopting those codes, and so we do need to strike a balance that represents the significant impact that these codes have on housing affordability, the 10 year requirement that would be included in the bill, with also the 3, 5, and 7 year analysis would go a long way to providing transparency in the process as to what the real simple payback cost is going to be to people. Get states to have codes presented before them that they can adopt, and then we can also talk about the compliance component, which DOE is in the midst of a pilot program currently that will start to help us better understand just what true rates of compliance we have, and that perhaps there is a significant amount of energy to be saved by increasing those compliance rates, and focus on that.

Mr. WHITFIELD. And you all do support the building code section that is in this draft?

Mr. THOMPSON. Absolutely.

Mr. WHITFIELD. OK. And I know my time is expired, but one other thing I just want to mention. We have many members of Congress that are really focused on energy efficiency. Peter Welch has been one of those. David McKinley has been one of those. And we do want to come up with a good product here, but we want some balance as well.

At this time I recognize the gentleman from Illinois for 5 minutes.

Mr. RUSH. I want to thank you, Mr. Chairman. Mr. Chairman, one of the more contentious issues before us today that has been included in this discussion draft, as you well know, is Section 4124, which would prohibit the Department of Energy from promulgating a final rule amending efficiency standards for non-weatherized gas furnaces and mobile home furnaces. Mr. Chairman, my office has held several meetings with stakeholders on both sides of this issue, and I think it would be most beneficial for members to hear directly from DOE on these issues, and other issues, before we settle on language in any final draft.

Today, however, we have some of the interested stakeholders that have been taking part in discussions with DOE to try and build consensus and come up with language that all sides could agree with, as was done in previous cases, including most recently the water heaters provision that Congress passed just last week with bipartisan support. As I understand it, Mr. Chairman, the language in today's discussion draft has not been agreed to by the very stakeholders, and the conversation is continuing.

My view is that there would be a much better chance of getting bipartisan support for Section 4121 if the interested parties would follow the example set by the Water Heaters Coalition and come up with language that DOE, industry, energy efficiency advocates, and consumer groups could all support.

With that, Mr. Chairman, I have a couple of questions that I want to ask both Mr. Somerhalder and Ms. Noll. To the both of you, we have received conflicting testimony from the two of you regarding the impact that this rule would have on low income consumers. Mr. Somerhalder, can you give us your perspective on this issue, and then I would like to hear from Ms. Noll for your perspective as well.

Mr. SOMERHALDER. Yes. Ranking Member Rush, what we see from our low income customers is the decision to repair, replace their furnaces, when they make those decisions, if they have limitations in their ability to use an 80 percent versus a 92 percent furnace, because of venting requirements, and other requirements that are unique to the higher efficiency furnaces, they have to make a tough decision about what to do. That can be everything from not replace, to use electric resistance heaters, or some other form of heating.

So what we see is that, because of the limitations, there can be a decision to go with a product that is more costly, if they do replace this. I mean, you heard the numbers of \$350 more for the unit itself, up to around \$2,000 to install that won't pay off because of the use of energy, and how quickly that would pay off. And the end result is they either would need to make a decision to replace a unit, and then incur higher costs, or they may make a decision to switch to another form of energy that is less cost effective, and could produce more emissions. So we do see that impacting the low income—

Mr. RUSH. Ms. Noll, would you respond, please?

Ms. NOLL. Yes. Thank you, Mr. Rush. First I would like to begin by saying that all Americans benefit from standards, particularly the low income, who oftentimes are renters, and pay the higher portion of their energy bill, and the property owner is the one that is choosing the furnace, or the water heater, whatever appliance is going into that home.

I would also like to say that this is a proposal right now. It has tremendous benefit in energy savings, in consumer savings, and environmental benefit, and that we recognize a small percentage of installations that would face challenges, and incur a higher cost. But we have also seen that, just in this last year, new technologies and solutions have entered into the market, and helped overcome these challenges. And as we see those increasingly deployed, we

think that that has a great opportunity to help provide solutions to these customers that are going to be facing these challenges.

So we think the Department needs to move forward with their open and transparent process, and get input from stakeholders on this rule, and find ways of making it even better. And I think that, from our perspective, this is not an either/or situation, this is an and/also. We also support the great utility programs, and the state programs, and bolstering those programs to help these vulnerable populations get into the high efficiency furnaces, have improved weatherization that is going to have benefits to them, and improved comfort, and improved indoor air quality.

And we commend the gas utilities, like AGL Resources and others, that serve their customers well through these utility programs. And those are the kind of things that complement the minimum standards, and ensure that all Americans have at least a minimum level of cost-effective efficiency that will serve them, and they can count on. Thank you.

Mr. RUSH. Mr. Chairman, I yield back.

Mr. OLSON. As fate would have it, I have the gavel at the time I am speaking, so I give myself 5 minutes for a couple of questions.

My first one is for you, Mr. Somerholder. One provision of the discussion draft would scrap Section 433 of the Energy Independence and Security Act. It would allow Federal buildings to use fuels like natural gas past 2030, something currently being phased out. In essence, current law bans one of our most efficient and affordable resources of energy right now. Can you talk about some benefits that we would lose if natural gas is phased out from Federal buildings, and do you believe that tackling Section 433 is important?

Mr. SOMERHALDER. We believe the provision to reduce 433 is very important, because natural gas is American, it is affordable, as you pointed out, and it is very efficient. Heating a building, as an example, with a high efficiency furnace, or an 80 percent efficiency furnace, is a very efficient way to heat that building, with very affordable natural gas, American natural gas. So the ability to use natural gas, not limit that option, does provide customer benefit, savings in those buildings, savings for taxpayers. So we very much support a way to continue to use clean American natural gas in Federal buildings.

Mr. OLSON. Thank you. Next question is for you, Mr. Thompson. As you know, the draft bill touches on the issue of DOE's involvement in model building codes. The draft talks about transparency and about public comment. I am interested in your thoughts on how we reach consensus there. What caught my attention, though, was the issue of payback periods and cost effectiveness. Before the private sector even thinks about making an investment, they have to know when, and if, they would get into the black. I have heard some complain that this isn't always true with energy savings. I would like to talk to you about the cost and benefits.

Again, Mr. Thompson, today's draft bill says that when DOE supports a change to the model building code, that change must pay itself back in under 10 years. Do you think that is important, and is that realistic?

Mr. THOMPSON. Thank you for that very thoughtful question. I think it is absolutely important, and if we intend to move families from less energy efficient homes to more energy efficient homes, we need to do it in a way that is affordable to them. And in a number of polls that have been conducted, and one in particular by the National Association of Home Builders, it really tried to identify, by demographic groups, how long they were willing to wait for a payback of that investment. All of them fell short of the 10 year requirement. So it is a bit of a stretch, from a home buyer perspective, to be willing to wait that long to get a simple payback on their investment there.

If we are going to continue to drive people to more energy efficient homes, let us remember we need affordability. And this is in a marketplace that is currently very limited by financial limitations on qualifications to buyers, and limitations on appraisals, and how they recognize the values of energy efficient improvements to that home.

Mr. OLSON. Thank you. Mr. Peel, to follow up on that, do you think the government has done a good job of considering whether energy efficiency standards are cost effective? If not, what can improve that process?

Mr. PEEL. I think the results are mixed. I think we have seen some good analysis, and those have made it through the process through a collaborative effort, and many of them signed into law. We also see, with the furnace rule that is on the table today, some differences in views around what the actual costs would be, and what the payback periods would be. Again, all we are asking for here is a seat at the table so we can openly discuss those issues, make sure everyone is aware, and build the consensus that we think we can get on this.

Mr. OLSON. So the key is a seat at the table, not some law parts of the bill, but just to actually have some voice in this process? That is what you would be happy with?

Mr. PEEL. Yes. Yes, Congressman.

Mr. OLSON. And my final question again is for you, Mr. Somerhalder. There seems to be a great deal of concern about DOE's gas furnace rule. A number of groups say it is too expensive and hard to meet, and this is an issue we touched in today's discussion draft. Are there some ways we can avoid conflicts like this in the future?

Mr. SOMERHALDER. We agree that there are benefits to reach consensus on this, because we all do want higher energy efficiency as we move forward. We need to do that in a way that is not only affordable, but we need to do that in a way certain customers really can't even convert because they don't have access to side walls for the venting requirements. And products are becoming available, but there are still limitations to how those products can be used. So we absolutely need to work together to come to consensus so that all the customers can find a way to continue to lower their costs, and to help improve the environment. So we very much support a consensus process. As Mr. Peel has pointed out, we have had good success with that in the past. There are certain pieces of information that need to be considered now, and we will be able to find a way, we believe, to reach consensus.

Mr. OLSON. Well, thank you. My time has expired. We now recognize Mr. Tonko from New York for 5 minutes.

Mr. TONKO. Thank you, Mr. Chair. I am often stating that energy efficiency should be recognized as our fuel of choice, so I was very pleased when I heard that the Committee would be legislating in this area. But this draft, I have to state, is a real disappointment. There are a few worthy provisions, but there are many others that undermine advances that we should be taking in efficiency.

The provision on DOE's pending gas furnace rule in the discussion draft is of great concern to me. About 40 percent of the energy delivered to the residences is used for space heating, and natural gas and propane furnaces account for nearly 1/2 of that. It may be higher now, since prices may have enticed some to switch heating fuels. Either way, that is a lot of energy, and gas prices may be low now, but experience tells us that is likely to change.

So DOE's new rule on gas furnaces would save consumers a great deal of money on their annual outlays for fuel costs, and the furnaces that deliver these savings are already on the market, and make up a significant part of the current furnace market. The comment period is still open, and this rule appears to be well justified, very well justified. I am not persuaded there is any reason to delay these standards.

So, Mr. Peel, you state that DOE's rule is based on, "errors involving economic assumptions and technical issues". But later in your testimony you cite DOE's analysis in support of your position that this rule should be delayed. Do you have information other than DOE's analysis that supports your position that "the additional cost of installation cannot be economically justified"?

Mr. PEEL. I do have access to information. I don't have it here today. I used DOE's numbers as a conservative estimate. They are consensus numbers from—DOE would agree to those numbers. There are concerns beyond just the payback. The installation complexity is a big issue as well. These are all issues that we would bring to the table in a consensus building session.

So, once again, to reiterate, we are not opposed to energy efficiency increases for weatherized gas furnaces. We want to make sure that the realities of the market are understood when we set these standards. So, for example, most appliances have a range of efficiencies that you can progress through, a continuum. Gas furnaces actually change technology between 80 and 90 percent, and so it is actually a different installation. It is not like installing a more efficient air conditioner, which is very similar to installing a less efficient air conditioner.

So those are the kind of things that we want to be communicating with the DOE and other stakeholders to make sure that it is understood so we can really understand what the payback numbers are. And my feeling is that, with the data we have, with the data DOE has, and other data that we have heard today, somewhere in there lies the answer. And—

Mr. TONKO. OK.

Mr. PEEL [continuing]. Getting together to communicate it is the key.

Mr. TONKO. Well, I would appreciate you sharing any of that information with the committee. These are durable goods. They last a long time, and I think we should implement standards that save energy at this level as early as possible. And given these furnaces, as I stated, are already in the market, there are clearly possible savings there.

To Ms. Noll and Ms. Callahan, there seems to be some disagreement about the provision of this bill on building standards. Again, residences and commercial buildings stand for a long time. Is the provision on building codes consistent with having DOE do all it can to support the adoption of progressive building codes for energy efficiency?

Ms. CALLAHAN. You want me to go first?

Mr. TONKO. Sure—

Ms. CALLAHAN. Thank you—

Mr. TONKO [continuing]. Please.

Ms. CALLAHAN [continuing]. Congressman, I appreciate that question. Let me say, as I said in my testimony, that we believe that the building code provisions that are in the bill currently should be struck. And I have an easy answer for the Ranking Member of where you find bipartisan agreement on building energy codes that will provide more transparency, and will ensure that DOE plays an appropriate, and a strong role in delivering its model energy codes, and that is the bill by Mr. McKinley and Mr. Welch. We have negotiated those provisions over a number of years to address the concerns of the stakeholders, and the concerns of builders, and the concerns of all the folks that are involved in this process. So we think that is where you can get broad bipartisan support.

I want to address a couple of points, I think, where there is perhaps some obfuscation in the testimony that you have heard. Model energy codes are not set by DOE. They are set by independent code making bodies. These are people from all across the United States, city officials, builders like Mr. Thompson, code officials, elected officials. They come together, and they establish the code. Once that code is established, DOE certifies it, if it saves energy, and then the states adopt it, and the localities implement and enforce the codes. So I think that that process, DOE has played an important role, but they cannot control the process. It is handled in other places.

I also want to state that 39 states right now already either the 2009, the 2012, or the 2015 code in place. This is working. And with respect to the the simple payback, I think one thing that is very important to note, NAHB's own surveys show that 9 out of 10 Americans will pay two to three percent more for energy efficient homes. That translates on a \$100,000 home to \$2,000.

Most people mortgage their homes, and so when they add in the efficiency upgrade to that mortgage, it is 30 years to pay it off. And the savings that they get on their energy bill day one, when they move in, are greater than that additional cost. So I think that the codes are there, the codes need to keep going. Thank you.

Mr. WHITFIELD. Gentleman's time has expired.

Mr. TONKO. We wanted to hear from Ms. Noll, though. It was addressed to both.

Mr. WHITFIELD. All right, go ahead.

Mr. TONKO. If we could, please?

Ms. NOLL. I will be very brief. I would just say that we achieve better model codes when the Department of Energy is able to contribute their expertise, and these model codes do increase the efficiency that can save Americans an enormous amount of money in our nation.

Mr. TONKO. I thank you for that, and Mr. Chair, as I yield back, I suggest that we have got a ways to go before we live up to the title of our bill. And with that I yield back.

Mr. WHITFIELD. At this time I recognize the gentleman from Ohio, Mr. Latta, for 5—

Mr. LATTA. Well, thank you very much, Mr. Chairman, and, again, I appreciate the panel for being here today, and I also appreciate the Chairman for including two of my bills in this efficiency discussion draft: the Energy Star Program Integrity Act and the Voluntary Verification Program Act. Both of these pieces of legislation will help manufacturers and consumers, while strengthening the Energy Star program. I would also like to ask the Chairman for unanimous consent to enter into the record two letters in support of the Energy Star Program Integrity Act: one from the U.S. Chamber of Commerce, and the other from the Retail Industry Leaders Association.

Mr. WHITFIELD. Without objection.

[The information appears at the conclusion of the hearing.]

Mr. LATTA. Thank you, Mr. Chairman. I appreciate that.

Mr. Peel, if I could ask, why does the IVP give you more predictability than a DOE run program?

Mr. PEEL. There are really three reasons why the IVP helps us. The first is that the predictability you mentioned is all about consistent funding. We know, as an industry, we are going to fund the program year over year. It is not subject to budget cuts, or other DOE priorities, so we can count on resources being available to test our equipment to make sure that it complies with energy efficiency regulations.

It is also cost effective. There is no taxpayer burden for this, and it has been proven effective. We have been doing it for 50 years, and we get better and better and better at it. It would be very difficult to duplicate. And what makes it work so well is that competition is the driver, is what keeps the integrity of the program. Each manufacturer competes with each other, but it is a common system that allows us to verify that everyone plays on a level playing field, and abides by the rules.

Mr. LATTA. Thank you. And, Ms. Callahan, if I could ask—why do you believe the Energy Start Integrity Act, which the gentleman from Vermont and I introduced, is important?

Ms. CALLAHAN. Well, the Energy Start program itself is very, very important. It has proven very effective in saving consumers money, and in drawing in investment from manufacturers, bringing new technologies forward. We are concerned that if there is a continuation of class action suits that are not necessary, in our opinion, that that will cool the sort of fervor of manufacturers for participating in this very important program. And the savings that have been coming through it since inception in the '90s are very,

very significant, and we have got great consumer products now with the Energy Star label, and we don't want to see that program diminish in any way.

Mr. LATTA. I just want to follow up, I want to make sure I heard that correctly, that without the Energy Start Integrity Act, that—you believe that the manufacturers would stop participating?

Ms. CALLAHAN. I don't know that—whether they would stop or not, but I think certainly it would be an impediment to them to continue because of the extra cost, and the risk involved. So I wouldn't say that it would stop all manufacturers, but I certainly think that it would cool their attraction to the program, and cause some concern.

Mr. LATTA. And let me just follow up briefly, then, also, do you think that the Act would prohibit all lawsuits against non-compliant Energy Star products?

Ms. CALLAHAN. Absolutely not. I mean, it is very narrowly crafted so that if a product has been certified, and then found not to be in compliance, and there are corrective measures put forward by EPA, and those corrective measures are taken, that is where the protection comes. But if somebody is not in compliance, if somebody is not following the EPA guidelines, and refusing to cooperate, and come under the framework of EPA, they could still be sued.

Mr. LATTA. Thank you very much, Mr. Chairman. I will yield back.

Mr. WHITFIELD. Gentleman yields back. The reason we were having a discussion up here, we have a vote on the House floor. It is just one, so we are going to keep this process going, but some people have gone to vote, and they will come back.

At this time I will recognize the gentleman from Pennsylvania, Mr. Doyle, for 5 minutes.

Mr. DOYLE. Thank you, Mr. Chairman, and welcome to all the panelists. I think it is very helpful to hear from a range of industries and stakeholders on these issues. This is a draft document, and I do think we have some work to do on it, but the goal here is to see how we can use technology to save energy, but it has to be affordable too, and I think that is a key ingredient. I want to especially say hello to Frank Thompson, a gentleman that I have known I think my entire 21 years in Congress, and have worked with in the Pittsburgh area for a long time, so, Frank, it is good to see you.

Let me just first ask quickly, Mr. Somerhalder, in your testimony you talked about how Section 433 of the Energy Independence and Security Act of 2007, the fossil fuel ban, is deeply flawed, and this current discussion draft eliminates the ban. But as Mr. Wagner mentioned, Senator Hogan and Manchin have a bill that would repeal this requirement, but also strengthen several existing Federal energy efficiency provisions to ensure large energy savings in the coming years. I am just curious, is the Hogan-Manchin bill something that you could support, or is there a way to make sure we use this as an opportunity to focus on more efficiency?

Mr. SOMERHALDER. Yes. Our major priority is clearly to make natural gas available to these buildings because of the attributes I talked about. But we have been involved in the energy standards, and, in a consensus process, looking at what you talked about,

those standards that could be put in place. So replacing it with a set of standards that we have been involved in, we can support that as a way to move forward, and make sure natural gas is used in those buildings as well.

Mr. DOYLE. Good.

Mr. SOMERHALDER. And that is a good example of where consensus can reach compromise.

Mr. DOYLE. Right. That is great. And that is—

Mr. WHITFIELD. So is he saying that they do support the Senate bill?

Mr. SOMERHALDER. Yes. We have already officially made comments that we can support that, because we were involved in a part of that process, and involved in those standards.

Mr. DOYLE. Good. That is something that is good to know as we work on the discussion.

Frank, let me ask you—you know the district I represent. I don't have a lot of new homes being built. We know the new homes are pretty energy efficient, but a lot of the older homes that are built before the '90s aren't so energy efficient, and the homes in my neck of the woods, in the Mon Valley, and parts of the city of Pittsburgh, were built in the 1920s and 1930s, and I have a lot of row houses in my district. And I have a lot of senior citizens in my district that aren't going to be re-mortgaging their houses, or doing anything like that. When their furnace goes, they have got to pay.

And so we want to have a system—and I just want to express this, I am all for energy efficiency. I have been a big proponent of it my entire time in Congress, but I also worry about a little bit about some of the older residents that I represent in the Allegheny counties that—probably second only to Dade County, Florida in the number of senior citizens that live in these older homes that, if they were told that they had to replace the furnace, and then do some structural changes to these older homes, I just worry what that does to them, cost-wise.

And I just want to know what are, we have had a lot of successes with new housing, and making them more energy efficient. What do you think are some of the major successes that we have in making older homes more efficient, aside from, we have tax credits in the Tenant Star Program, but what other ways do you think we can encourage energy efficiency in these older homes? And maybe you could just speak a little bit to these urban areas like mine, that have houses that are stacked together in rows, and how that works if you have to change venting systems and that?

Mr. THOMPSON. Well, I think there were three questions there, so let me start with the furnace provisions there. And I think some of the flaws in what DOE has presented, and why we need to get this advisory group together, and get the stakeholders at the table, and improve on what they have proposed are the exact circumstances you described there, and the consequences there of trying to bring that new technology, that condensing furnace, into a structure that wasn't built that way. And it could be thousands of dollars that they aren't going to go out and take a mortgage. They are going to have to come out of pocket for it, so we need to find some alternatives that are going to address those situations there.

In terms of how we best address continuing to improve energy efficiency in older homes, I think we need to continue a lot of the programs, the tax incentives, that have been in place. They work. We need to make sure that they are going to continue to be there, because the reality is that the greatest energy users, the gas guzzlers, so to speak, amongst houses are those older homes.

Mr. DOYLE. Right.

Mr. THOMPSON. And it is very costly to come in and retrofit them. So let us keep some programs out there that are going to help temper those costs.

Mr. DOYLE. Great. Thanks, Frank. I see my time is up, Mr. Chairman. Thank you very much.

Mr. THOMPSON. Thank you.

Mr. OLSON. The Chair recognizes Mr. McKinley from West Virginia for 5 minutes.

Mr. MCKINLEY. Thank you, Mr. Chairman, and given the time-frame, I am not going to be able to get to all my questions that I had, but let us just see if we could focus on—when I came to Congress 4 years ago, that was—the thing I left was an engineering practice that dealt deeply into energy efficiency. So we have some working knowledge that we are bringing to the table, and what we have done the first few years was nibble around the edges of energy efficiency as we try to educate the public, and the other members, about what we have to do.

And one of the most important things that I think we are about—Tonko and I are embarking on is now we are going to try to dive deeply into the issue of turbines, and look at that. When we are talking about single turbines at 35 percent, and combined capacities of maybe 60 at best, more likely at 45 or 50 percent. So we are looking at what we can do with that.

We know that this bill that we have, that we are putting forth, is going to provide some form of demonstration project that we can look at the steam injection, raising lit temperatures. We can increase pressure ratios. We know all these things are going to improve so it is probably the most efficient bill that we could pass on efficiency, is looking at how we create electricity.

So is it too early? I am going to ask that to you, Mr. Somerhalder. Coming from the Gas Association, do you think this Congress is ready to take on such a huge subject as to reduce and improve the efficiency of our turbines and our electric generation? Because we know that China and Japan are very actively out there, participating in a robust fashion, and we are going to wind up playing second fiddle.

Mr. SOMERHALDER. Exactly, and, as an association, and as a company—we supply today combined cycle turbines at central stations that have efficiencies of around 60 percent. They have been engineered that well, so we know the industry is capable of finding a way to continue to improve efficiencies. And we have seen the benefit of distributed generation, from micro-turbines, to combined heat and power, to fuel cells. And so we do believe that we need to put in place research and incentives to continue to make progress on that, because those are additional ways to make sure that we are the most efficient and the most cost effective for the consumers in the long run.

So that, in addition to using very efficient furnaces, whether they are 80 percent or 92, for heating, all that together can produce a very good result. So we support additional effort in those areas.

Mr. MCKINLEY. Well, we are going to make an all-out effort to see if we can't get—if nothing else, just to get the dialogue going to educate the American public as well as—what the problems are, because just imagine, what other entity would be acceptable at 60 percent efficiency? If we let the Post Office off at 40 percent of their deliveries weren't appropriate—so, having said that, let me go back to Mr. Thompson on homes.

A component of my practice had been designing and building homes, and I knew that one of the issues we were facing there was indoor air quality. And, again, it is a process of education. I don't think Congress and the American public understand a lot of these issues that we are dealing with on Clean Air Act really have a genesis back in their home. Because we know that we spend 90 percent of our time indoors, and 60 percent of our time in our homes. But yet we are not addressing some of those problems. So I am curious, you, as a home builder, and the Home Builders'—what are you doing, from an association, to address these issues of indoor air quality?

Mr. THOMPSON. As the building codes have continued to tighten up, the air changes per hour in a house, and we saw that in the 2012, and reinforced in the 2015 codes of reducing those air changes per hour. That potential is increased. It has got to be resolved through mechanical ventilation, which is a requirement in the building code, if you are less than five air changes an hour.

Interestingly enough, a number of the states that adopted the 2012 IECC chose to move that number that was in the IECC from three air changes an hour back up to five or over. I believe only one of those states kept it at that because it is a danger level there, and we are getting into a lot of uncharted territory that we need more building science to best understand how we can maintain air quality, minimize mold, and continue—

Mr. MCKINLEY. Right.

Mr. THOMPSON [continuing]. To have energy efficiency.

Mr. MCKINLEY. And in the time I have, my concern is that what we are seeing is SO_x and NO_x gases have been decreasing, and CO₂ emissions have—but yet we are seeing more asthma attacks, and as a result—it is not because of the coal fired power plants. We believe there is science—justify, from the American Lung Association and others, that a lot of this is having to do with our indoor air quality.

Mr. THOMPSON. Yes, sir.

Mr. MCKINLEY. So the asthma increase is not because of coal and gas fired power plants.

Mr. THOMPSON. Yes, sir.

Mr. MCKINLEY. Thank you very much for your time, and I apologize for—

Mr. OLSON. Thank you. And I apologize, the vote has popped up—so we will have a brief recess. Members who come back might have some questions, so please stand by for maybe 5 minutes or so. I apologize so much for this, but we stand in recess.

[Whereupon, at 1:07 p.m., the subcommittee recessed, to reconvene at 1:11 p.m. the same day.]

Mr. OLSON. Order. So please bear with us, patience.

Mr. MCNERNEY. Mr. Olson, I move the bill. There have been a few changes around here.

Mr. OLSON. Well, I was called Chairman the previous panel, so good changes. Don't tell Mr. Rush. And the Chair recognizes the gentleman from Vermont for 5 minutes, Mr. Welch.

Mr. WELCH. Thank you very much. It is really tremendous to be here, and to be with people that a lot of us but me very much have been working with on this question of energy efficiency. It is also very reassuring to me to see how, in my view, Congress has really come a long way. You know, we have been locked down in this important debate about climate change, and tough challenges about our energy policy that have a lot of very valid issues to them, but they shouldn't get in the way of us making process in this space of energy efficiency that is so vital.

Because even if we are going to achieve climate change goals, 40 percent of those, and this was under the Waxman-Markey bill, were going to be achieved through energy efficiency. And that common ground that we have, Mr. Olson, of saving money, I am kind of cheap in Vermont, motivates me, but it also creates jobs. Lot of folks out there doing work to put good people to work building homes, doing retrofits. That all matters. So I am delighted about that.

I am also delighted about all the energy efficiency bills that are going to be part of this, that I and our colleagues have had a part in. Mr. Cartwright, who is not on our committee, but his Streamlining Efficiency for Schools Act has been great. Mr. Kinzinger just came in, and—working with him on energy savings through public/private partnership, and the Utility Energy Service Contract Improvement Act. Mr. Latta, who was speaking a little bit earlier, and I have been working on a number of bills. So there is a lot of momentum.

And I was just talking to one of the people here, who was telling me that he just came from the Senate, and there is a lot of discussion over there. It is hard to believe, but they are actually acknowledging the work that we are doing over here in the House. So they are pretty slow over there, but they are kind of catching up, so we are happy about that. And we have got a lot to do.

And this afternoon, as I mentioned, Mr. McKinley and I, we are going to be at the White House for a bill signing. Now, from my perspective, we probably should do more, but I think we are really making real progress, and it is bipartisan. And, by the way, it feels a lot better to be getting something done instead of just fighting all the time, you know what I mean? OK. So let us keep it up.

But on that topic, there are a couple of issues that are tough. Mr. Whitfield had mentioned this before. You know, there were a number of areas, 12 areas, where there is bipartisan agreement, a few where there aren't. My hope is we can work those out. Building codes is one. You know, building codes, I think, can be very helpful. They have got to be reasonable. So how you address that should be with a focus on what is practical. But I don't think we just say no building codes. I think there have got to be some standards that

make sense, but they have to fit what is realistic in the real world. And that is a judgment call. It is not a right or wrong kind of situation, so let us see that as a tool, but pledge to work in a practical way, dealing with people who are in the field, dealing with some of our regulators who have the interest of energy efficiency.

And also there is a question here about repealing Section 433 of the Energy Independence and Security Act. That was designed to move our government buildings away from fossil fuel usage. It does have some implementation challenges. Let us work to figure out how we can square that circle, not have that be something we just don't resolve, and I think we can do it. But I do have a couple of questions for Mr. Somerhalder, who is out in the field. And I want to know about this rule with the DOE, and I assume you have expressed your concerns to the DOE, and I am wondering what their response has been.

Mr. SOMERHALDER. Yes. We have a part of expressing concerns and comments. To this point, even though we have expressed those concerns, we still need more understanding of some of the data, and some of the technical information, and some of the models that had been used to come up with these cost estimates.

Mr. WELCH. OK. I only have a little more time, so let me just follow up on that. If we pass the time out on the FERS rule, are the gas utilities committed to increasing the efficiency of the units, and will they work quickly to get that rule finalized within a year?

Mr. SOMERHALDER. Yes. We have spent the last several months as well in very detailed discussions on how to do this. The units are very efficient, either the 80 percent or the 92 plus percent. It is really some of the retrofit venting issues that have to be resolved to see where they can cost-effectively be applied. And so—

Mr. WELCH. OK.

Mr. SOMERHALDER [continuing]. A lot of those issues, we are committed to work with DOE and the other stakeholders to reach consensus.

Mr. WELCH. OK. I appreciate that. Thank you very much. I yield back.

Mr. OLSON. Gentleman's time has expired. The Chair recognizes the gentleman from Illinois, Mr. Kinzinger, for 5 minutes.

Mr. KINZINGER. Well, thank you, Mr. Chairman, and, to Congressman Welch, it is great working with you on all this, and you have been a leader not just in this Congress, but Congresses prior, and it is an honor to join you in a lot of this, and so I just want to personally congratulate you on all this hard work, and I want to thank the Chairman for holding the hearing today. I want to thank all of you for being here. I know it is a time commitment, a travel commitment. And, again, as Peter said, this is a real opportunity to show that Washington, D.C. works sometimes. And we get all the news for when we fight, and when we go back and forth, but there are a lot of things where people get to work together.

And this is such an open process, and I want to thank the Chairman for bringing forward the draft. And I understand that some members have taken issue with certain provisions in the draft, but, given the bipartisan nature of the vast majority of the text, it is my hope that we are going to be able to work with each other to

produce a final product that most, if not all, of this committee can support.

I would also like to thank a number of members from across the aisle for working with me on getting some really good efficiency related provisions into this draft. I mentioned Peter Welch. I also want to specifically mention Congresswoman Eshoo's work on the Energy Efficient Government Technology Act to update Federal data center efficiencies, and Congressman McNerney for his help in drafting and introducing the Thermal Insulation Efficiency Improvement Act. I would also like to add quickly that insulation is, in many cases, the unsung hero in improving the energy efficiency of our homes and buildings.

Just a few questions, and then I will yield back my time. Mr. Wagner, you mentioned in your testimony the scoring of ESPCs and UESCs has caused consternation in the industry for quite some time. Lately there has been some work by the House and Senate budget conferees to fix the issues, although we haven't quite made it to that point yet. Given the inclusion of ESPC and UESC language in the discussion draft, would you mind explaining in a little further detail what savings guarantees ESPCs and UESCs offer the Federal Government, and also the potential impact a scoring change will have, saving the Federal Government the badly needed funding?

Mr. WAGNER. Well, thanks for that question, Congressman, and, first of all, let me thank you, and Congressman Welch, for your leadership, particularly on the performance contracting coalition. Your bipartisan leadership is really appreciated.

You know, the scoring problem has really been vexing us for over a decade, and it seems to have only gotten worse. In a nutshell, we basically have the problem where CBO cannot reconcile the savings on the discretionary side of the ledger with the ESPC contract, which is mandatory spending in their mind. They don't give the offset, if you will, for the savings, even though the savings are guaranteed by the contractor. And that has just been problematic under the scoring rules.

So the Senate legislation will fix that, and I know the House has been looking at that, and we appreciate everyone on this Committee who has been diving into try to solve this problem. So what happens is, when you have a number of the provisions that we have in the discussion draft here, they actually hold—CBO will score them, because they assume that ESPC will be used to implement those provisions, and therefore a score. And it is sometimes not just the ESPC legislation per se, it might be other things, like trying to extend a Federal goal for energy reduction overall. So this has really hampered your ability in the past to try to pass legislation in this Committee.

So if we can crack that nut on the scoring problem, and fix it, then you will have a pathway to clearly be able to amend the statute—as I said in my testimony earlier, to update it, to make those clarifications, and maybe even expand the scope of what we can do under ESPC.

Mr. KINZINGER. Yes, hopefully we can get there. And do you believe that the FPC member companies have the ability to meet the

\$4 billion directive issued by the President, and also, on top of that, what else can we be doing to get the Federal Government to be—

Mr. WAGNER. Absolutely we can meet that goal, and even do more, and I think agencies are trying hard to do that, and I know the Administration is committed. And, with your help and leadership, to continue to prod agencies to do that. But I will say that some of these legislative provisions will help because it will unlock some of the things that agencies are trying to do, and clarify some of the things that have been causing them confusion. So that is why the legislation here that you are working on is very important.

Mr. KINZINGER. Ms. Newmark, I am not going to ask you a question because I am running out of time, but I do want to point out that you touch on the use of intelligent efficiency, and I gather you believe that the Federal Government could play a larger role in the use of intelligent efficiency, and more specifically in data centers. I guess maybe in 10 seconds do you want to elaborate on that?

Ms. NEWMARK. Sure. I think the point I was trying to make is that the whole is often greater than the sum of the parts. A one percent, or half a percent improvement in efficiency in every piece of equipment still only gives you a half a percent improvement. If we can look at how those systems work together and get a 10 percent improvement, we all win. And in this case we use less energy, and spend less money.

Mr. KINZINGER. Great. And I wish I could have given you more time, but thank you all for being here, and I will yield back, Mr. Chairman.

Mr. OLSON. Gentleman's time has expired. The Chair recognizes the lady from California, Ms. Eshoo, for 5 minutes.

Ms. ESHOO. Thank you very much, Mr. Chairman. I appreciate the subcommittee holding this important hearing, and I want to thank you, and Mr. Whitfield, and the minority for extending the legislative courtesy to me to come here and join you today, since I am not a member of the subcommittee, but a member of the full committee. So thank you to all the witnesses. We always depend on really highly informed witnesses to enhance our work, so I appreciate the inclusion of my bill, the Energy Efficient Government Technology Act, in the discussion draft of the subcommittee. I appreciate it very much. I have been at this for a while, as some of you know.

Sections 4111 and 4112 of the discussion draft are nearly identical to the provisions of the legislation that I just mentioned, and it is wonderful to introduce—and he is leaving, Mr. Kinzinger. Maybe he can hear me. Introduced with him, and I am grateful to him for his leadership, and there are three other members of this subcommittee that are also co-sponsors of the legislation. It is really a non-controversial bill. I know everyone would like to say that about their legislation, but I think the test was on the floor in the last Congress, when 375 members in the House of Representatives voted for the legislation last year, so I think the proof is in the pudding.

I think it is important to appreciate, as Ms. Newmark just said so succinctly, some of the facts that surround this issue. Today the world generates more data in 12 hours than was generated in all of human history prior to 2003. That is really something to digest,

isn't it? And we should all have enormous pride in that, because we really are the mothers and fathers of the generation of that data, in terms of the technology. And, of course, I always have to brag and crow about my Silicon Valley congressional district. So these billions of gigabits of data have to be stored and processed at data centers, which are really the backbone of the 21st century economy, and they can, and should be, highly efficient.

The Federal Government is our nation's largest land owner, employer, and energy user, and the Federal Government, I think, should lead by example by improving energy efficiency of its IT infrastructure and data centers, and we have them across the entire enterprise. We have lots of it. We have lots of it. So the legislation would require the agencies to develop plans to implement best practices, purchase more energy efficient information and communications technologies, and submit to periodic evaluation, which I think is really important—we don't always do that in the government—of their data centers for energy efficiency. So Congress can track, and the American people can track the progress that we are making.

And the bill also requires the agencies to formulate specific performance goals, which I think is really important as well, and a means to calculate the overall cost savings from the improvements. So I think that if we get this in place, we have the opportunity, by reducing the government's data center energy bill anywhere from 20 to 40 percent. I really don't know who could ever be against this, honestly. It is like walking past a \$1,000 bill on the sidewalk and not picking it up. So I think that—and it has been estimated that we could save \$5 billion, that is with a B, in energy costs through 2020, which is not too far away from us right now.

So I appreciate the support that has all of the support, not only groups and organizations, advocates, industry groups, the American Council for an Energy Efficient Economy, the Alliance to Save Energy, the Information Technology Industry Council, people that I work with all the time, U.S. Green Building Council, which is really very important as well, all of them, as well as the sponsors. And I think that we have a real opportunity to do something that I think everyone across our country would say, you know what, Congress, bravo. It makes sense, and it is going to save taxpayer money, and, for a change, the Federal Government, as an entity, will be instructive to the rest of the country, and—because we adopted a very smart policy. So I thank all of you.

Ms. Newark, thank you for what you said in your written testimony, and—pointing out that we began this effort in 2006, but sometimes the gestation period is longer. So I am willing to wait for that. I thank all of you. And, again, Mr. Chairman, thank you for your legislative courtesy, I appreciate it very much, and kudos to Mr. Kinzinger. I will make sure I find him on the floor and thank him. And Mr. Whitfield, thank you, my friend. I appreciate it. I yield back.

Mr. OLSON [presiding]. Thank you. No more speakers—I ask unanimous consent that the following statements and letters be submitted for the record: number one, American Public Gas Association letter; number two, the Business Council for Sustainable Energy letter; number three, Geothermal Exchange Organization

letter; number four, Consumer Federation of America, and the National Consumer Law Center; number five, NiSource; number six, ASHRAE; number seven, Alliance to Save Energy, and American Council for an Energy Efficient Economy; number eight, U.S. Chamber of Commerce; number nine, Leading Builders of America; number 10, Retail Industry Leaders Association; number 11, Alliance for Individual Efficiencies; number 12, a Center for Progress report entitled, "Buildings of Tomorrow are Here Today"; and finally, number 13, a letter from nearly 500 architectural firms in support of Section 433. I would like to put that in the record without objection. Without objection, so ordered.

[The information appears at the conclusion of the hearing.]

Mr. OLSON. And thank you so much to all the witnesses. On behalf of Chairman Whitfield, who is from Kentucky, watch the Kentucky Derby this weekend, the biggest event there in Kentucky, and without objection, we are adjourned.

[Whereupon, at 1:29 p.m., the subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

PREPARED STATEMENT OF HON. FRED UPTON

We have made significant progress in recent weeks as our bipartisan energy bill is beginning to take shape, and today we address two key components—updating the Strategic Petroleum Reserve (SPR) and improving the federal government's energy efficiency initiatives.

It has been a full 40 years since the SPR was created in the aftermath of the Arab Oil Embargo as an emergency stockpile of oil. Fortunately, we never had the occasion to use the nearly 700 million barrel reserve except for relatively small withdrawals. Nonetheless, it continues to serve a useful role just in case we ever do have a major disruption in oil supplies.

The Department of Energy's Quadrennial Energy Review has highlighted the fact that the SPR is showing its age. In fact, DOE and others are concerned that it is currently in no shape to respond to an emergency and that many upgrades are needed. We agree, and need to consider how to modernize the SPR.

But before we draw conclusions about what to do, our draft bill requires DOE to build on the work in the Quadrennial Energy Review and conduct a long-range strategic review of the SPR and recommend a plan of action.

On energy efficiency, we believe the federal government should first take all sensible steps to minimize its own energy use. Energy Savings Performance Contracts are one vehicle that allows the private sector to apply its energy efficiency expertise to federal facilities at no cost to the taxpayer. Provisions in the draft bill facilitate wider use of Energy Savings Performance Contracts throughout the federal government. There are other steps the federal government can take to reduce energy use, and the draft bill contains measures directed toward that end.

The bill also has provisions dealing with energy efficiency in appliances and buildings, including improved information for consumers about energy use and more rigorous analysis of efficiency standards.

Though we may not agree on all the provisions discussed today, this hearing continues a very useful discussion that I hope will lead to bipartisan energy legislation.

**Testimony of the American Public Gas Association before the
Energy and Power Subcommittee of the House Energy and
Commerce Committee Hearing, “Strategic Petroleum Reserve
Discussion Draft and Title IV Energy Efficiency”**

A Consumer Perspective

On behalf of the American Public Gas Association (APGA), thank you for the opportunity to submit testimony on “Strategic Petroleum Reserve Discussion Draft and Title IV Energy Efficiency.”

APGA is the national association for publicly owned natural gas distribution systems. There are approximately 1,000 public gas systems in 37 states and over 720 of these systems are APGA members. Publicly owned gas systems are not-for-profit, retail distribution entities owned by, and accountable to, the citizens they serve. They include municipal gas distribution systems, public utility districts, county districts, and other public agencies that own and operate natural gas distribution facilities in their communities. Public gas systems’ primary focus is on providing safe, reliable, and affordable service to their customers. The long-term affordability of natural gas has been a focus of APGA and its members.

APGA has the privilege of representing the views of American natural gas consumers. We represent the homeowners and small businesses that rely on affordable natural gas to heat their homes, cook their meals, power their restaurants, operate small manufacturing entities, and service businesses.

Our written testimony will focus on three provisions included in the discussion draft;

- Section 4115, Repeal of Fossil Fuel Consumption Percentage Reduction Requirements for Federal Buildings
- Section 4124, Residential Non-Weatherized Gas Furnaces and Mobile Home Furnaces
- Section 4131, Greater Energy Efficiency in Building Codes

Section 4115, Repeal of Fossil Fuel Consumption Percentage Reduction Requirements for Federal Buildings

Section 433 of the Energy Independence and Security Act of 2007 (EISA 2007) mandates elimination of all fossil fuel-generated energy use in federal buildings by the year 2030. The mandate covers new buildings and major renovations of at least \$2,500,000 (in 2007 dollars). This provision limits and ultimately eliminates the role of natural gas in federal facilities. Section 433 creates a bias in federal policy at odds with the important role that domestically abundant, clean and affordable natural gas can serve in meeting the energy needs of not only federal buildings, but the country as a whole.

The mandate seeks to reduce fossil fuel use by 65% by 2020 with total elimination by 2030.

DOE's own estimates project Federal construction costs will jump from today's level of \$30 million annually to over \$1.1 billion annually by 2030 as a direct result of this provision.

The mandate prohibits both the ultra-efficient direct use of natural gas in federal buildings and the use of gas-fired generation, which is the generation of choice today by most public utilities in the nation to minimize the effects of greenhouse gasses.

Federal agencies are already required to increase energy efficiency and attain sustainability by the Energy Policy Act of 2005, the Energy Independence and Security Act of 2007, and Executive Order 13514. Section 433 would restrict the adoption of high-efficiency technologies to meet these statutory mandates – technologies such as combined heat and power (CHP), which is often fueled with natural gas.

By restoring the ability of federal installations to utilize natural gas, federal energy managers will be able to use energy efficient, cost-effective end-use applications of natural gas in the long-term. The benefits will save money as well as provide measurable environmental benefits.

Section 4124, Residential Non-Weatherized Gas Furnaces and Mobile Home Furnaces

By way of background, the DOE proposed a direct final rule (DFR) in 2011 that, among other things, increased the federal minimum efficiency for natural gas furnaces from 78% nationwide to 80% annual fuel utilization efficiency (AFUE) in twenty southern United States and to 90% AFUE in thirty northern states. The end result of the proposed rule would have amounted to a

ban on negative pressure vented furnace systems (non-condensing furnaces) in northern states. For residential consumers in northern states, it would have eliminated the low cost option for heating homes and would have caused fuel switching, especially among lower income homeowners, away from efficient natural gas furnaces to much less efficient electric heating options due to the first costs associated with the 90% furnace mandated by DOE.

While APGA and its members are strong supporters of energy efficiency, we were concerned that this rule would ultimately undermine efficiency goals while significantly increasing consumer costs. The direct final rule would have deterred consumers from purchasing natural gas furnaces given that the furnaces that would meet these new efficiency standards are condensing furnaces which require additional venting. APGA believed that the additional venting costs that consumers would have faced as a result of this rule would deter consumers from purchasing replacement natural gas furnaces and result in fuel switching to less efficient electric heaters/furnaces in the retrofit market as the front cost to install condensing furnaces will be much higher.

The DFR process is intended to be an expedited rulemaking process for noncontroversial issues. If DOE received any adverse comments, it was supposed to withdraw the DFR and proceed with notice-and-comment rulemaking. Despite receiving comments opposing the DFR 90% standard from over 30 stakeholder groups, including APGA, DOE ruled that it did not receive adverse comments warranting withdrawal of the DFR. The furnace rule was supposed to take effect in May 2013.

In December, 2011 APGA filed a petition for review of this rule in the U.S. Court of Appeals for the D.C. Circuit. APGA was asked to engage in a mediation process with DOE and the Department of Justice, which was representing DOE, to avoid going to court. The mediation resulted in a joint settlement, approved by the U.S. Court of Appeals on April 24, 2014, that resulted in the DFR being vacated. As part of the settlement motion, DOE agreed to undertake a new rulemaking proceeding within one year to consider the appropriate standards.

Unfortunately, DOE's new proposed standard issued in March adds insult to injury. It is now proposing a 92% AFUE nationwide, which will require all homes, nationwide, to utilize the higher cost condensing furnace. The high initial costs associated with the purchase and installation (including in many homes challenging and costly venting issues) will force many residential customers—particularly those in warmer climates—to forego the use of natural gas fired furnaces and instead install less expensive and less efficient home heating alternatives. By DOE's own numbers, which are, we believe, very much understated, over 20% of the homes nationwide will experience a net cost (versus a net saving) by being required to install 92% AFUE furnaces, which percentage skyrockets to 31% in the South on average and to 39% for low-income households in the South. It was, of course, to prevent such lopsided adverse regional results that Congress, at the request of the efficiency groups, among others, amended the Energy Policy and Conservation Act in 2011 to authorize DOE to set regional efficiency standards – an option that DOE has ignored in the pending NOPR despite the demonstrably adverse impacts in the South.

The language in Section 4124 of the discussion draft would allow the stakeholders to engage in meaningful conversations to develop a proposal that will continue us to promote energy efficiency while not adversely impacting homeowners. This provision would require the Department to halt its current rulemaking on residential natural gas furnaces, and to instead initiate a negotiated rulemaking involving a diverse group of stakeholders. By establishing a negotiated rulemaking process, this section 4124 would provide all of the stakeholders time to develop a successful a successful approach that benefits all American households.

APGA is a longstanding supporter of energy efficiency and will continue to be. In fact, the direct use of natural gas is 92% efficient on a source-to-site basis. Unfortunately, DOE's proposed furnace rule would push many consumers to purchase less efficient heating alternatives.

Section 4131, Greater Energy Efficiency in Building Codes

Model building energy codes are developed by private organizations (e.g. the International Codes Council (ICC) and the American Society of Heating, Refrigerating and Air-Conditioning Engineers), updated every three years and then adopted by state and local governments. DOE plays a significant role in their development, and also works with states to encourage adoption and enforcement.

DOE's role in code development has expanded, moving beyond the original authorization of a "technical advisor" to pushing energy goals, and at times advocating for certain products or technologies. DOE has used federal funding to "incentivize" states to adopt the latest codes. These then become mandates in the states.

Earlier versions of the energy codes were far more cost-effective and consumers saw a big "bang for their buck." But now, the codes include very costly requirements that do not have the same return on investment. An average home built to the 2012 energy code, compared to the 2009 energy code, would add thousands of dollars in construction costs, and it would take up to 17.3 years to recoup the additional cost assuming the technology does not need to be replaced.

The Blackburn-Schrader provision reaffirms the DOE's appropriate role as a source of technical expertise in the development of energy efficiency codes and standards for buildings and appliances – and the importance of maintaining a bright line between technical consultations and policy advocacy.

Conclusion

APGA appreciates the opportunity to testify before the House Energy and Commerce Committee's Energy and Power Subcommittee regarding these critical natural gas and public interest issues. We stand ready to work with the Committee on these and all other natural gas issues.

Business Council for Sustainable Energy
Testimony Submitted to the House Energy and Commerce Committee
Subcommittee on Energy and Power
Hearing on Strategic Petroleum Reserve Discussion Draft and Title IV Energy Efficiency
April 30, 2015

The Business Council for Sustainable Energy respectfully submits the following testimony on Title IV of the committee's energy legislation discussion draft regarding energy efficiency that was released earlier this week. The Council appreciates and welcomes the committee's consideration of policy measures to improve and enhance energy efficiency and looks forward to more closely reviewing the discussion draft and providing more detailed input on its provisions.

The Council is a broad-based industry trade group representing companies and associations in the energy efficiency, natural gas and renewable energy industries. Its membership includes independent electric power producers, investor-owned utilities, public power, commercial end-users, equipment manufacturers, project developers as well as service providers for energy and environmental markets. Since 1992, the Council has been a leading industry voice advocating for policies at the state, national and international levels that increase the use of commercially-available clean energy technologies, products and services.

The Council would like to share some of the findings from the 2015 edition of the *Sustainable Energy in America Factbook*.¹ The *Factbook* was researched and produced by Bloomberg New Energy Finance and commissioned by the Business Council for Sustainable Energy. It is a quantitative and objective report, intended to be a resource for policymakers with up to date, accurate market information. Its goal is to offer important benchmarks on the contributions that sustainable energy technologies are making in the United States energy system today. It also provides information on finance and investment trends in clean energy resources.

Sustainable Energy in America Factbook Findings

The *Sustainable Energy in America Factbook* points to the dramatic changes underway in the United States energy sector over the past several years. Traditional energy sources are declining, while natural gas, renewable energy, and energy efficiency are playing a larger role.

These changes are increasing the diversity of the country's energy mix, improving our energy security, cutting energy waste, increasing our energy productivity and reducing air pollution and greenhouse gas emissions.

Behind this change are a portfolio of new energy innovations, technologies, and applications. These include: newly applied techniques for extracting natural gas from shale rock formations; lower-cost and higher-efficiency photovoltaic panels for converting sunlight to electrons; highly efficient, natural gas end-use applications; natural gas vehicles and battery and fuel cell electric vehicles; and 'smart meters' that allow consumers to monitor, modulate, and cut electricity consumption, among others.

The *Factbook* looks at a broad spectrum of sustainable energy technologies and provides data on a wide range of clean energy industries including natural gas, renewable energy sources (including solar, wind, hydropower, geothermal, biomass, biogas and waste to energy – but excluding liquid biofuels), stationary fuel cells and other distributed technologies, as well as energy efficiency.

The *Factbook* shows that United States economy is becoming more energy productive and less energy intensive. By one measure—United States gross domestic product (GDP) per unit of energy consumed—productivity has increased by 54%

¹ 2015 edition of the *Sustainable Energy in America 2013 Factbook*, February 2015, <http://www.bcse.org/sustainableenergyfactbook>

since 1990. Between 2007 and 2014, total energy use fell 2.4%, while GDP grew 8%. This was driven largely by advances in energy efficiency in the transportation, power generation and buildings sectors.

BETWEEN 2007 AND 2014:

- Total energy use fell 2.4%, while GDP grew 8%.
- Energy productivity of the U.S. economy has increased 11%, and 1.4% from 2013 to 2014.
- Annualized electricity demand growth has been zero.

ENERGY EFFICIENCY TRENDS

- Energy efficiency investment in the U.S. totaled close to 14 billion in 2013, based on spending by utilities and through energy savings performance contracts
- In 2014, buildings in 10 states adopted more-stringent residential and commercial building codes
- In 2014, 8% of U.S. generating capacity comes from combined heat and power (CHP) plants (83 GW).
- Commercial and industrial sector appetite for CHP remained the same, approximately 700 MW per year since 2009.
- Smart meters have been deployed to 39% of electricity customers .
- Investments into transmission and distribution infrastructure totaled a record-high \$37.7 billion in 2013 (by investor-owned utilities and standalone transmission companies)
- Demand response accounts for 34 GW of capacity across the U.S..
- The Pacific and New England regions made the greatest strides in energy efficiency. The southeast and southwest regions, meanwhile, have the greatest opportunities to increase efficiency.
- As a trend across the U.S., commercial buildings have showed the greatest progress on energy efficiency over the last several years.
- Uptake of key energy efficiency policies is slowing. States' adoption of decoupling legislation and energy efficiency resource standards (EERS) has been mostly flat since 2010 (with some exceptions), and some states have even begun to retreat from these policies.
- Tightening fuel economy standards are pushing carmakers to release more efficient vehicles; these standards will demand a doubling in fuel economy by 2025.
- Gasoline consumption is down by 8.6% since 2005, largely due to increasing vehicle efficiency prompted by federal policy, increasing consumer preference for less thirsty vehicles on the road, declining miles per vehicle), and increased biofuels blending.
- Sales of battery and plug-in hybrid electric vehicles increased 25% (through 2014 Q3), comprising just less than 1% of market share for new vehicle sales.
- The commercial and industrial sector is demonstrating a continued appetite for CHP (about 700 megawatts (MW) per year since 2009) as well as interest in microgrids.

While energy demand has fallen more steeply than it has in at least 50 years, the use of natural gas and renewable energy has increased. Natural gas provided the United States with 28% of its total energy supply in 2014, and renewable energy is supplying 9.7% of U.S. energy. Natural gas-fired power plants provided 27% of U.S. electricity in 2014, up from just 22% in 2007. Renewable energy generation has meanwhile grown from 8.3% to 12.9% between 2007 and 2014.

Regional Energy Efficiency Comparisons

The regions seeing the greatest measurable strides in energy efficiency are New England and the Pacific states; and the buildings seeing the most energy efficiency efforts are commercial structures. In contrast, the regions that offer the greatest untapped opportunities are the Southeast and Southwest of the country, and the building types that present new opportunities include small office buildings, warehouses, and storage facilities. This comparison of leaders and laggards is based on metrics presented in the *Factbook*, such as: state-wide utility efficiency savings as a percentage of

retail sales, state-by-state scorecards for energy efficiency policies, Energy Star-certified floor space for different types of buildings, and investment flows by type of framework. Energy efficiency investment in the U.S. through formal frameworks (mostly, investments by utilities and investments under energy savings performance contracts) totaled an estimated \$14bn in 2013. Advances in technology and policies to increase the efficiency of appliances and buildings have played a role in reducing emissions and increasing the economy's energy productivity. On the policy front, for example, through 2014, 6.0bn square feet of commercial floor space (around 7% of total US commercial sector floor space) was covered under energy efficiency benchmarking or disclosure policies.

Energy Efficiency Policy Measures Provide Exceptional Value for American Consumers

Policy measures have helped further the cause of energy efficiency. The Department of Energy's efficiency programs have resulted in exceptional value for American consumers and businesses, yielding benefits far beyond their nominal outlays. These programs have retrofitted over 450,000 homes in 43 states, dramatically improved the efficiency of household appliances such as refrigerators and clothes washers, and improved the quality of commercial and residential buildings across the country.²

On February 7, 2013, the Commission on National Energy Efficiency Policy, convened by the Alliance to Save Energy released its Energy 2030 vision. The Commission's report includes a goal of doubling energy productivity in the United States by 2030 and a set of recommendations to achieve this goal, which includes continued support of energy productivity RD&D. Achieving the goal could save \$327 billion annually and add 1.3 million jobs.³

The Commission noted that private R&D budgets are limited in many energy efficiency sectors. Market barriers also prevent adoption and commercialization of new innovations. Thus government support both for R&D and for a wide range of deployment programs has been critical to advances in energy productivity. Looking forward, the Commission recommends increased federal investment in basic and applied research, development, demonstration, deployment, and technical assistance at DOE, the Environmental Protection Agency, and other federal agencies. The federal government should also encourage private R&D through other policy approaches such as public-private consortia, the R&D tax credit, and supporting challenges or contests.

Building envelope assemblies including, insulating materials and air-sealing system technologies are essential to improving building efficiency. To enable mass market adoption, these next-generation technologies must maintain or improve building enclosure durability, including moisture, fire, indoor air quality, acoustic and structural performance requirements. In the case of retrofitting existing buildings, the installation must be fast and easy so that there is minimal impact on building occupants. BCSE believes DOE should focus additional efforts to accelerate, and improve, building energy performance.

Information and Communications Technology Infrastructure Enhances Energy Efficiency

In an increasingly complex energy system, Information and Communications Technology (ICT) can be used to improve the reliability, resiliency and efficiency of the grid's transmission, storage and distribution infrastructure, and to help reduce pollutant emissions through better real time monitoring and control of grid systems. Further ICT applications to enhance end-use energy efficiency and facilitate demand response strengthen grid efficiency and reliability by reducing peak load stresses and line losses and by allowing better grid management in case of generation outages or transmission anomalies.

In the past, transmission, storage and delivery in the energy grid historically was a relatively straightforward, linear system of generation to transmission to distribution. Dispatching was generally local and based on marginal cost

² Alliance to Save Energy at <http://www.ase.org/advocacy/immediate-action-needed-defend-federal-energy-efficiency-programs>

³ Energy2030: Doubling U.S. Energy Productivity by 2030, <http://ase.org/programs/ee-commission>

considerations. Margins of safety were large because of limited real-time information and limited options for replacement of power generation sources in an emergency.

Today's grid must adapt to emerging challenges and opportunities – fluctuating energy prices, an increasingly transactive role for customers, integration of distributed energy resources, the need for improved resilience, and the need to reduce greenhouse gas emissions. In order to meet these challenges, a vastly increased role for ICT is essential. Without continually enhanced ICT in the TS&D infrastructure, the grid cannot achieve these 21st century goals. ICT will allow real-time monitoring of actual conditions throughout the system, and provide the ability to control TS&D system functions so as to maximize efficiencies and ensure reliability with less additional costly excess capacity.

Studies have shown grid-related investment in ICT provides enormous benefits for energy efficiency, economic growth and maximum use of non-polluting energy sources.

Energy Efficient Lighting Saves Taxpayers and Consumers Money

Light emitting diode – or LED – bulbs use 75 percent less energy than the old incandescent light bulbs and last up to 25 years. Using LED bulbs on streets and highways, and in our homes, can save taxpayers and consumers a significant amount of money.

For example, LED bulbs, can cut a city's outdoor lighting bill by half or more. Given that most municipalities are strapped for funds, shifting to energy-saving LED light bulbs helps local governments cut operating expenses.

DOE has led the effort in the transformation to more efficient lighting through demonstration projects to validate the effectiveness of outdoor LED lights and to develop procurement guidelines for interested communities and businesses. LED lights are directional light sources so well-designed fixtures can point the light exactly where the light is needed, while also preventing light from going where it's not wanted, such as in the sky or a neighboring property.

Today, less than 5 percent of outdoor lighting fixtures use LEDs bulbs so the savings potential is significant. DOE has estimated that a total shift to LED outdoor lights would save more than \$6 billion and prevent 40 million metric tons of carbon dioxide emissions per year. The upfront cost for LED bulbs is quickly paid back and represents a great investment toward lower bills and reduced air pollution for years to come.⁴

The Role of Federal Facilities and Energy Saving Performance Contracts

As the nation's single largest energy consumer, the Federal government spends more than \$7 billion annually on facility energy costs. Energy efficiency improvements can reduce this expenditure as well as help agencies acquire necessary infrastructure and equipment. In 2007, the Energy Independence and Security Act required federal agencies to perform energy audits of their facilities. With only half of the buildings audited in 2013, approximately \$9 billion worth of energy conservation measures with a ten year payback or less had been identified. There is clearly a vast opportunity for energy efficiency across the Federal government at a time of reduced discretionary funding.

ESPCs and Utility Energy Service Contracts (UESCs) can fill this funding gap. For over 20 years, performance-based contracts for energy savings have provided critical upgrades to federal buildings, including the House and Senate Office Buildings and the U.S. Capitol. Under ESPCs and UESCs, private-sector Energy Service Companies finance and install new energy efficient equipment at no upfront cost to the federal government. Federal agencies repay this investment over time with funds saved on utility costs.

⁴ <http://energy.gov/eere/ssl/led-lighting-facts>

In May 2014 President Obama issued a memorandum extending a target that had been set at the end of 2011 (\$2bn worth of contracts entered in the period 2012-13; target was extended to \$4bn over the period 2012-16).

The discussion draft incorporates language from H.R. 1629, introduced by Energy and Commerce members, Representative Adam Kinzinger (R-IL) and Peter Welch (D-VT) which would help ensure that federal agencies are utilizing to the fullest extent possible all cost-effective measures for energy conservation. Identical legislation was introduced in the Senate by Senators Cory Gardner (R-CO) Chris Coons (D-DE.) Last spring, the Energy Savings through Public-Private Partnerships Act of 2014 was approved by the Energy and Commerce Committee. BCSE encourages Congress to enact these provisions in the 114th Congress.

These provisions of the discussion draft would promote transparency and accountability across the federal government, clarify the ESPC statute, and would further enable federal agencies to maximize their present energy efficiency contracting authorities. The provisions would streamline the ESPC statute providing consistency and clarification within the existing ESPC law to:

- Require a report to Congress on the status of each agencies' energy-related performance contracts, the value of these contracts for the previous year, the goal for the coming year, and an explanation by agency about why goals were or were not met.
- For projects discovered in the energy audits required by section 432 of EISA 2007, agencies must explain why any life cycle cost effective measures were not implemented using DOE developed guidelines. This will encourage agencies to act on their mandated audits.
- Clarify that agencies cannot arbitrarily limit use of energy-related operations and maintenance savings in an ESPC, a provision that will facilitate use of ESPCs for data center consolidation.
- Make consistent the definition of a federal building within federal energy provisions of law
- Clarify in federal energy statute that plug loads are allowable energy conservation measures, another provision to clarify use of ESPCs for data centers
- Clarify as energy savings the use, sale or transfer of energy incentives, rebates, or credits (including Renewable Energy Credits) from federal, state, local governments or utilities and any revenue generated from a reduction in energy use; more efficient waste recycling; or more energy generated from more efficient equipment.

Conclusion

The *Sustainable Energy in America Factbook* shows the dramatic changes underway in the United States energy sector. The Council appreciates and welcomes congressional consideration of policy measures to improve and enhance energy efficiency and looks forward to commenting further on the discussion draft. For further information, please contact Ruth McCormick, Director, Federal and State Affairs, at [REDACTED] or visit the Council's website at www.bcse.org.



Geothermal Exchange Organization

312 South 4th Street • Springfield, IL 62701

Douglas A. Dougherty • President and Chief Executive Officer

April 28, 2015

Honorable Rep. Ed Whitfield
Chairman, House Subcommittee
on Energy and Power
U.S. House of Representatives
2184 Rayburn HOB
Washington, DC 20515

Honorable Rep. Bobby Rush
Ranking Member, House Subcommittee
on Energy and Power
U.S. House of Representatives
2188 Rayburn HOB
Washington, DC 20515

Dear Representatives Whitfield and Rush:

The Geothermal Exchange Organization (GEO), the trade association for the U.S. Geothermal Heat Pump Industry, would like to thank you for the inclusion of Section 4114 in your draft energy efficiency legislation released Tuesday, April 27, 2015.

Even though geothermal heat pumps have been deemed by the U.S. Environmental Protection Agency as the most efficient heating and cooling technology available, the technology was unfortunately left out of the definition of clean and renewable energy options to meet federal purchase requirements under Sec. 203 of the Energy Policy Act of 2005.

Your proposed legislation corrects that oversight by ensuring that thermal energy and geothermal heat pumps are finally included in the definition of renewable energy for federal energy purchase requirements. GEO is encouraged by this action, and urges the Subcommittee to adopt the Whitfield Rush language on thermal and geothermal within the broad package of energy efficiency measures that you are now considering.

A legislated definition of clean energy that includes the thermal energy of geothermal heat pumps will add a viable option for federal agencies seeking clean energy, cost savings and pollution abatement, and set an example for the States for their facilities.

GEO welcomes any requests you may have for clarification and information needed during your deliberations. We thank you again for this opportunity to express our appreciation for your inclusion of geothermal heat pumps in Section 4114.

Respectfully,


Douglas A. Dougherty
President and CEO
GEO – The Geothermal Exchange Organization

cc: Members, House Subcommittee on Energy and Power

Phone (217) 414-0341

Email Doug@geoexchange.org

Website www.geoexchange.org



Consumer Federation of America

April 29, 2015

The Honorable Ed Whitfield
Chairman
House Energy & Commerce Subcommittee
on Energy and Power
U.S. House of Representatives
Washington, DC

The Honorable Bobby Rush
Ranking Member
House Energy & Commerce Subcommittee
on Energy And Power
U.S. House of Representatives
Washington, DC

Re: Section 4124 of Title IV—Energy Efficiency and Accountability, Subtitle A—
Energy Efficiency in the 4/28/15 House Discussion Draft relating to Energy Efficiency
Standards for Furnaces

Dear Chairman Whitfield and Ranking Member Rush:

The Consumer Federation of America (CFA) and the National Consumer Law Center (NCLC) (on behalf of our low-income clients) are writing in opposition to Section 4124 of Title IV—Energy Efficiency and Accountability, Subtitle A—Energy Efficiency in the House discussion draft (4/28/15.) This section would, in essence, prohibit the Department of Energy (DOE) from issuing much needed and long overdue improvements in efficiency standards for gas furnaces. Consumers continue to be harmed through energy bills that are higher than they should be because industry has been operating under a minimum standard that essentially was set over 25 years ago. Further delays to improving furnace efficiency standards will extend the economic harm to consumers.

The Department of Energy has demonstrated that there are substantial gains to be made in furnace efficiency that will save consumers money. The current process of setting the standards is unfolding at DOE to determine exactly where the standards should be set, and we believe strongly that the DOE process should be allowed to move forward and that Congressional action is completely unnecessary.

CFA and NCLC have long been advocates of furnace efficiency standards because they benefit consumers, particularly low income consumers. We advocated for stronger furnace efficiency standards, on a regional basis, in both the 2007 and 2011 DOE rulemakings.

It is hard to fathom that today's furnace standards essentially date back 28 years to 1987. Nominal improvement was made in the standards adopted by DOE in 2007. In fact, these standards which will take effect this year are virtually obsolete as nearly all furnaces on the market today already

meet the 2007 standard level. Further delays will sacrifice consumer savings and result in increased energy waste.

We continue to remain supportive of cost-effective efficiency standards for gas furnaces for several reasons. Many homeowners lack the time or information needed to choose to upgrade to a more efficient furnace, especially if they are doing an emergency replacement. Many others are renters - often disproportionately low-income consumers – who do not get to choose the furnace installed in their home, but do get stuck with needlessly high bills. National standards are a proven approach for spreading the benefits of energy-savings technologies.

While we would like to see some improvements to the proposed rule to make it more cost-effective for more consumers, we urge innovative approaches, NOT an end to the rulemaking process. For example, a small portion of consumers may face unusually high installation costs when replacing an 80% AFUE furnace with a condensing product. Efficiency and consumer advocates are working with industry stakeholders to explore approaches that would allow some non-condensing furnaces to be sold in special circumstances. Such an approach would result in a new standard that would benefit millions of households and provide an attractive option for the small number of households with particularly difficult installation problems

Lastly, we know from retrospective studies that DOE has overestimated the impact of efficiency standards on product prices. If installed prices for high-efficiency furnaces end up lower than DOE projections, the net savings for consumers will be higher. In addition, innovative venting technologies which are bringing down the cost of venting condensing furnaces, will add to consumer savings.

In closing, we ask that you allow the DOE process to proceed alongside the collaborative approaches which are taking place among industry and consumer and efficiency advocates. We believe this approach will yield the best results for consumers, including those with the most at stake – low-income consumers.

Thank you for your consideration of our views.



Charles Harak
Senior Attorney for Energy Issues
National Consumer Law Center
On behalf of its low income clients



Mark Cooper
Director of Research
Consumer Federation of America

NiSource Inc. Statement for the Record

Senate Energy and Natural Resources Committee Hearing on Energy Efficiency Legislation

In support of S. 1029, a bill to prohibit DOE from prescribing a final rule amending the efficiency standards for residential non-weatherized gas furnaces or mobile home furnaces until an analysis has been completed

April 30, 2015

Issue Summary:

The US Department of Energy is currently proposing a new rule that would eliminate all residential non-condensing furnaces from the market by requiring manufacturers to produce only 92 percent (AFUE) or higher efficiency condensing furnaces. The goal of the rulemaking, according to the DOE, is to increase energy efficiency and lower emissions.

NiSource Position:

- The higher cost of the furnaces will impact all consumers, who now won't have a choice.
 - On average, condensing furnaces cost about \$350 more than non-condensing furnaces, along with an additional \$1,500 and \$2,200 in installation costs.
 - DOE states that under its proposed rule, customers could bear between \$6 and \$12 billion in new costs associated with higher efficiency furnaces.
- Costs significantly increase for those living in homes that were not designed with condensing furnaces in mind and would require significant remodeling – for example older homes and multi-family homes with a central flue. This fact was confirmed through conversations with many of NiSource's trade partners who install these furnaces on a daily basis.
- According to the Department of Housing and Urban Development American Housing Survey, 41 percent of owner-occupied homes were built prior 1969, and the median age of an owner-occupied home is 35 years old (2011 data) – the oldest homes are located in the Northeast.
 - SOURCE: <http://eyeonhousing.org/2014/02/the-age-of-the-housing-stock-by-state/>
 - NOTE: Data available by service territory if helpful
- And, 60 percent of households live in multi-unit structures according to the National Multifamily Housing Council (2014 data).
 - SOURCE: <http://www.nmhc.org/Content.aspx?id=4708%20>
- About 9 million low-income *homeowners* use a natural gas furnace. When it is necessary to replace existing heating equipment, these consumers would be faced with higher upfront costs imposed

under DOE's rule. Because these low-income households have fewer resources to pay for the installation of a higher-efficiency gas furnace, they are more likely to switch to less-expensive electric equipment that costs more to operate. This, in turn, means low-income households are *more* likely than other homes to see higher utility bills under DOE's rule.

- NiSource believes that the financial burden to comply with the rule could cause some homeowners, particularly those on fixed incomes – like seniors – and those near or below the poverty level to make unsafe choices to keep themselves and their families warm.
 - Unsafe choices could include the use of supplemental heating sources not designed for inside the home, including kerosene heaters, an open oven, gas space heaters or modifying or incorrectly installing a furnace.
 - According to the U.S. Fire Administration, supplemental room heaters accounted for over 45,000 fires in 2012 – leading to 195 deaths and 775 injuries nationwide.
 - These unsafe decisions could significantly increase carbon monoxide in the home.
 - According to the Centers for Disease Control, each year, more than 400 Americans die, more than 4,000 are hospitalized and more than 20,000 visit the emergency room from unintentional carbon monoxide poisoning not linked to fires.
- NiSource believes that the modest energy efficiency gains projected do not outweigh the potential significant costs that some residential customers would endure to ensure compliance with the rule – these costs could reach into the thousands of dollars.
- In addition, our utility-sponsored energy efficiency programs are already making progress in reducing energy use and lowering bills for customers:

Company	Customers in State	Customers Served with EE	MCF Saved	\$ Saved
Columbia Gas of Kentucky	~500,000	1,754	10,050	\$65,000
Columbia Gas of Maryland	~33,000	11	276	\$93
Columbia Gas of Massachusetts	~300,000	16,854	491,358	\$3,404,000
Columbia Gas of Ohio	~1,400,000	471,648	616,629	\$3,513,000
Columbia Gas of Pennsylvania	~400,000	944	18,974	\$84,000
Columbia Gas of	~250,000	7,608	42,174	\$298,000

Virginia				
NIPSCO Gas	~800,000	N/A	293,614	\$2,137,000
Total Gas			1,473,075	\$9,501,093
NIPSCO Electric	~500,000		55,016 MWh	\$6,651,434
Total EE Savings	~4,000,000			\$16,153,000

Our Request

NiSource supports S. 1029. The rule should be rewritten with the help of industry and consumer advocates to ensure that the standard does not place an economic burden on our most vulnerable populations and safeguards against our customers using unsafe methods to heat their homes.



Shaping Tomorrow's
Built Environment Today

Submitted Testimony of

Thomas H. Phoenix, P.E., FASHRAE

Society President of ASHRAE

To the

U.S. House

Committee on Energy and Commerce, Subcommittee on Energy and Power

April 30, 2015

Hearing on Strategic Petroleum Reserve Discussion Draft and Title IV Energy
Efficiency

Chairman Whitfield, Ranking Member Rush, and members of the Subcommittee, thank you for the opportunity to submit testimony for what will be one of the most important hearings on energy legislation in recent memory.

My name is Tom Phoenix, and this year I am President of ASHRAE. Founded in 1894, ASHRAE is a global organization of over 53,000 members. The Society and its members focus on building systems, energy efficiency, indoor air quality and sustainability within the industry. Through research, standards writing, publishing and continuing education, ASHRAE shapes tomorrow's built environment today¹.

ASHRAE's Mission is to advance the arts and science of heating, ventilating, air conditioning and refrigerating to serve humanity and promote a sustainable world. In pursuit of this, ASHRAE has been engaged with many of the issues that are the focus of this hearing. While the Society is supportive of many of the ideas contained in Title IV of Chairman Upton's Discussion Draft, we also have some concerns and suggestions for improvement. Our thoughts on these matters are presented below, and we welcome continued dialogue on these matters, as we seek to build consensus on the best ways to solve our evolving energy, water, and indoor air quality challenges.

Support for Building Energy Codes

Many bills in Congress touch on building energy codes in one form or another, and it is easy to understand why. The nation's model residential and commercial building energy codes are developed by the International Code Council (ICC) and ASHRAE². These codes have the potential for substantial energy, economic, and environmental benefits. For instance, a study by the Pacific Northwest National Laboratory (PNNL) of the U.S. Department of Energy's (DOE) Building Energy Codes Program (BECP) found the cumulative greenhouse gas emissions reductions from the Programs' activities have been significant, totaling nearly 3.9 billion metric tons, or approximately three-fourths of all energy-related emissions in the U.S. in 2012³. The study also concluded that since the Program's inception 20 years ago,

"cumulative FFC [full-fuel-cycle] energy savings from 1992 – 2012 are estimated to be approximately 4.2 quads and cost savings to consumers have been more than \$44 billion. These savings have resulted primarily from the Program's activities which upgrade the model energy codes, accelerate their adoption by states and localities, and improve code compliance"⁴.

While these figures are impressive, realizing the full extent of these benefits requires the many disparate elements of the building industry to work together in harmony to facilitate the development, adoption, and compliance with the building energy codes. Certain elements of the Discussion Draft would bolster these efforts and facilitate greater understanding. For instance, ASHRAE supports the

¹ For additional information on ASHRAE, please visit www.ashrae.org.

² For additional information on the development of Standard 90.1, see the portion of this document entitled "Appendix: An In-depth Look at ASHRAE Standard 90.1".

³ Pacific Northwest National Laboratory. 2014. "Building Energy Codes Program: National Benefits Assessment, 1992-2040". Richland, Washington: Pacific Northwest National Laboratory.

http://www.energycodes.gov/sites/default/files/documents/BenefitsReport_Final_March20142.pdf

⁴ Ibid.

Government Accountability Office study on the energy and cost savings impacts of updating the model building energy codes that would be required under Chapter 3 – Building Energy Codes of the Discussion Draft.

There are several provisions in the Discussion Draft that ASHRAE is strongly opposed to. Drawn primarily from the Energy Savings and Building Efficiency Act of 2015 (H.R.1273, and commonly known as Blackburn-Schrader), ASHRAE is strongly opposed to any efforts to limit, in any way, DOE's participation in the development, adoption, and compliance of building energy codes. The provisions in the Discussion Draft that would limit the type of technical assistance DOE is allowed to provide to the model code development bodies, states, Indian tribes, and local governments threaten to reduce understanding of the potential full impacts of the consensus-based model building energy codes. More information is needed, not less. Similarly, ASHRAE believes that efforts to improve code compliance should be increased.

Elevating state building energy code compliance is an area likely rich with potential. While data on code compliance rates is often limited or incomplete, a comprehensive study⁵ conducted by the Institute for Market Transformation found that compliance rates of many states is between 25 and 80%, with some as low as 3%. Among the report's most interesting findings is that increasing compliance rates have significant returns on investment, with every \$1 used to improve compliance yielding \$6 in energy savings.

The provisions in the Discussion Draft would help increase state and local building energy code compliance through required certifications, training for state and local building code officials, and annual reporting requirements.

ASHRAE also supports the provisions of the Discussion Draft that would require DOE to provide assistance, as requested, in developing definitions of energy use intensity (EUI).

ASHRAE firmly believes that you can't manage what you don't measure. Because common, widely accepted and validated definitions and metrics of building EUI do not currently exist, building owners, operators, and policymakers can't effectively communicate goals, evaluate potential investments, and measure success since they effectively are not speaking the same language. The Discussion Draft helps solve this problem.

Stretch Codes and Standards

ASHRAE strongly supports the provisions of the Discussion Draft that would require DOE to provide technical and financial support for the development of stretch codes and advanced standards for commercial and residential buildings. ASHRAE is active in this area, and is currently making it easier for the building industry and policymakers to implement and adopt green building codes and voluntary

⁵ Stellberg, S. 2013. *Assessment of Energy Efficiency Achievable from Improved Compliance with U.S. Building Energy Codes: 2013 – 2030*. Washington, D.C.: Institute for Market Transformation.
http://www.imt.org/uploads/resources/files/IMT_Report_Code_Compliance_Savings_Potential_FINAL_2013-5-2.pdf

building rating programs by creating a first-of-its-kind comprehensive framework involving ANSI/ASHRAE/USGBC/IES 189.1 Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings, the International Green Construction Code, and the Leadership in Energy & Environmental Design (LEED) program.

ASHRAE has also joined with ICC and the National Association of Home Builders to develop the 2015 edition of ICC 700 National Green Building Standard (NGBS). NGBS is an ANSI-approved standard, meaning that it adheres to rigorous consensus process requirements. NGBS addresses several green practices, including:

- Lot design, preparation and development
- Resource, energy, and water efficiency
- Indoor environmental quality
- Operation, maintenance, and building owner education

There are four achievable levels to NGBS: Bronze, Silver, Gold, and Emerald. Additional information on the NGBS can be found at www.homeinnovation.com/green.

Net Zero Energy Buildings

In a related area, **ASHRAE supports the provisions of the Discussion Draft related to net zero energy buildings.** As articulated in ASHRAE's *Vision 2020* report⁶, we support a goal for the building community to produce market-viable net zero energy buildings by 2030. The Discussion Draft can help the community come closer to reaching this goal through the bill's requirement for DOE to conduct a study on the feasibility, economics, and impacts of code improvements that would require that buildings be designed, sited, and constructed in a manner that enables buildings to become zero-net-energy after initial construction as advances are achieved in energy efficiency technologies.

Workforce Training and Certification

ASHRAE believes the Discussion Draft can be improved by incorporating the elements of Subtitle B – Worker Training and Capacity Building of S.720. The full benefits of energy efficiency cannot be realized if those that work in the building industry do not possess the skills research and experience have proven are needed. The proposed building training and assessment centers will help close this gap, however more needs to be done. **ASHRAE recommends expanding upon Subtitle B of S.720 to include a stronger emphasis on certification programs that benchmark with the ANSI/ISO accreditation standards for personnel certification programs for building professionals in energy efficiency legislation. This will help ensure quality in workforce training and certification.**

⁶ ASHRAE. *Vision 2020: Providing Tools by 2020 that Enable the Building Community to Produce Market-Viable NZEBs by 2030*. January 2008.
http://www.ashrae.org/File%20Library/docLib/Public/20080226_ashraevision2020.pdf

Research has shown that building professionals who participate in training and obtain certifications yield buildings that are designed and perform at higher levels. Certification programs also provide significant benefits to building owners, including⁷:

- Increased confidence in critical job knowledge, skills and abilities
- Compliance with applicable local, state and federal requirements
- Confidence in corporate commitment to the professional development of its employees and to providing the best possible resources for projects
- Disciplinary process to follow in case of complaints

ASHRAE is active in meeting the needs of the building industry for a highly-educated workforce, and has developed and maintains six professional certifications in the following areas⁸:

- Building Energy Assessment
- Building Energy Modeling
- Commissioning Process Management
- Healthcare Facility Design
- High-Performance Building Design
- Operations and Performance Management

Currently, ASHRAE has certified more than 2,000 professionals who have demonstrated their knowledge and expertise in the heating, ventilating, air conditioning and refrigeration industry. These certifications are recognized by the federal government and several states and cities who use ASHRAE Certifications for energy audits, energy modeling, commissioning, and other services. These states and cities include⁹:

- | | |
|---------------|-----------------------|
| • California | • Boston, MA |
| • Connecticut | • Chicago, IL |
| • Florida | • Fort Collins, CO |
| • Maryland | • Los Angeles County |
| • Michigan | • Lowell, MA |
| • New York | • Miami/South Florida |
| • Texas | • New York City |
| • Virginia | • Sacramento, CA |
| • Austin, TX | • San Francisco, CA |

⁷ ASHRAE. "The Value of Certification". <https://www.ashrae.org/education--certification/certification/value-of-certification>

⁸ Additional information on ASHRAE's professional certifications can be found at <https://www.ashrae.org/education--certification/certification>

⁹ Additional information on government recognition of ASHRAE's certifications is available at <https://www.ashrae.org/education--certification/certification/government-recognition>

School Buildings

ASHRAE supports Chapter 5 – School Buildings of the Discussion Draft. This legislation would help meet the widespread need throughout the nation for extensive repair of school buildings that affects some 14 million students¹⁰. Many of these repairs involve the heating, ventilating, and air conditioning systems – the same systems responsible for both large amounts of energy consumption and the maintenance of healthy and comfortable indoor environments. By upgrading these systems, energy efficiency is increased, learning environments are improved, and scarce funds are conserved.

ASHRAE believes Chapter 5 can be improved by including language that more explicitly links energy efficiency with indoor air/environmental quality (IEQ), such as that contained in S.523.

Energy Efficiency and Indoor Environmental Quality

Research has confirmed that poor indoor air/environmental quality (IEQ) can result in serious health consequences, such as heart disease and lung cancer. As noted in the section above, the systems responsible for good or poor IEQ are the same systems that consume large amounts of energy in buildings. **In recognition of this link, ASHRAE opposes any efforts to increase energy efficiency at the expense of IEQ, and instead encourages Congress to support legislation that takes a more comprehensive approach to improving building performance.**

Data Center Energy Efficiency

Among the hottest trending topics in the building community is how to improve data center energy efficiency. ASHRAE is currently focused on this subject, and supports the provisions of the Discussion Draft concerning federal data center energy efficiency. **We believe this section can be improved by adding specific provisions that would promote the future use of consensus-based standards on data center energy efficiency. ASHRAE is currently working with public and private stakeholders to develop Standard 90.4 Energy Standard for Data Centers and Telecommunications Buildings; adding a provision on standards for energy efficient data centers would assist federal agencies who voluntarily choose to use Standard 90.4, or other standards when they become available.**

Valuing Energy Efficiency in Mortgage Underwriting

Residential energy efficiency improvements have long-term benefits, but the initial upfront costs can be a deterrent to homeowners. At the same time, average yearly energy costs for homeowners can exceed the amount paid in real estate taxes or homeowners insurance, yet monthly energy bills are often ignored when determining a homeowner's ability to afford monthly mortgage payments.

This situation can be changed by including energy efficiency improvements in mortgage underwriting. Doing so will provide a more complete picture of the full costs of homeownership, while clarifying the value of investing in energy efficiency.

¹⁰ U.S. General Accounting Office. "Condition of America's Schools". February 1995. <http://www.gao.gov/products/HEHS-95-61>.

ASHRAE strongly supports adding a section to the Discussion Draft that would allow federal mortgage loan agencies to include energy cost-savings when determining a borrower's ability to afford monthly mortgage payments. ASHRAE supports the sections from S.720 on this issue.

Next Steps for Energy Efficiency Legislation That Helps Solve Pressing Challenges

As the Sub- and full Committees moves forward in their consideration of energy efficiency legislation, allow me to offer ASHRAE up as a resource. Throughout its 121 year history, ASHRAE and its members have answered the call to develop solutions for the world's energy and indoor air quality problems. In-so-doing, we have amassed deep and broad technical expertise in the built environment. ASHRAE has been involved with the development and promotion of many of the issues being discussed by the Subcommittee today, and I encourage the Subcommittee to continue seeking our input as the Discussion Draft moves forward, with the goal of enacting historic legislation that truly helps meet the pressing energy and environmental needs of our day.

Sincerely,

A solid black rectangular box redacting the signature of Thomas H. Phoenix.

Thomas H. Phoenix
ASHRAE Society President

Appendix: An In-depth Look at ASHRAE Standard 90.1

ANSI/ASHRAE/IES 90.1 Energy Standard for Buildings Except Low-Rise Residential Buildings has been the basis for federal, state, and local commercial building energy codes since the 1970s, and is required in numerous laws and Executive Orders, including the Energy Independence and Security Act, Energy Conservation and Production Act, Energy Policy Act of 2005, National Technology Transfer and Advancement Act of 1995, and OMB Circular A-119.

Standard 90.1 is an American National Standards Institute (ANSI) approved standard, which means that its development adheres to rigorous principles of consensus, openness, balance, transparency, and due process. In fact, ASHRAE is one of the very few ANSI Audited Designators which means we have established and maintain a consistent record of successful voluntary standards development.

The Standard is developed by a committee made up of technical experts representing diverse aspects of the building community, including product manufacturers, energy efficiency advocates, academics, government, building owners, utilities, and consulting (or design) engineers and architects. After the committee reaches consensus on a draft of the standard it is open for a period of public comment. There are no restrictions on who may offer comments, and no one commenter is given greater standing than another. Once comments are received, the committee must attempt to resolve all comments before presenting the standard to the ASHRAE Board of Directors for publication. Both within the ASHRAE and ANSI structures there are opportunities for appeal for anyone who feels that their comments regarding the standard are not adequately addressed.

During the development of the Standard, the 90.1 committee evaluates the cost-effectiveness of individual addenda, as applicable, using a type of life-cycle cost (LCC) analysis called the Scalar Ratio Method. This method is based on ASTM Standard E917—Standard Practice for Measuring Life-Cycle Costs of Buildings and Building Systems. The Scalar Ratio Method simplifies the LCC model in ASTM Standard E917 into a single variable called the Scalar Ratio, which is simply a ratio of economic present worth factors. The Ratio is mathematically equivalent to a LCC analysis using the following parameters:

Parameter	Rate (percent)
Economic Life	Up to 40 years
Loan Interest Rate	6.25%
Heating Fuel Escalation Rate	3.76%
Cooling Fuel Escalation Rate	3.76%
Federal Tax Rate	34%
State Tax Rate	6.5%
Nominal Discount Rate	7%
Real Discount Rate	6.05%

For additional, in-depth information on Standard 90.1, please visit <http://sspc901.ashraepecs.org/>.



April 27, 2015

The Honorable Robert Latta
2448 Rayburn House Office Building
U.S. House of Representative
Washington, DC 20515

The Honorable Peter Welch
2303 Rayburn House Office Building
U.S. House of Representative
Washington, DC 20515

Dear Representative Latta and Representative Welch:

The Alliance to Save Energy and the American Council for an Energy Efficient Economy write to express our support for H.R. 504, the ENERGY STAR Program Integrity Act of 2014.

Since its inception in 1992, the ENERGY STAR program has helped American consumers and businesses invest in energy efficiency and drastically cut energy costs. The program has also helped manufacturers push the research envelope, leading to job creation and the development of transformative technologies. However, despite the decades of proven success, due to a gap in federal law, the manufacturers that voluntarily choose to participate in this program have become targets for unnecessary and costly class action litigation, potentially deterring them from continuing to participate in this important program. H.R. 504 will address that gap in the law.

For an appliance to qualify as an "ENERGY STAR" product it must meet-strict guidelines set by the Environmental Protection Agency (EPA), and it must be tested and approved by EPA-recognized laboratories and certification bodies. Even after the products have been approved, the EPA and the Department of Energy (DOE) oversee off-the-shelf testing to ensure these products continue to perform according to ENERGY STAR standards. Occasionally, products are found to be out of compliance and are disqualified. Once a product is disqualified, its manufacturer must initiate detailed product control measures and, if deemed appropriate by the EPA, provide financial reimbursement to consumers. To ensure transparency for the consumer, the EPA also maintains an up-to-date list of products that have been disqualified publically available on its website.

However, despite these effective enforcement procedures, the law currently allows suits to be brought against manufacturers, regardless of whether the EPA has determined that consumers have been harmed and in addition to any remediation measures, including consumer compensation, already ordered. If continued unchecked, these litigation costs could deter appliance manufacturers from participating in ENERGY STAR, harming American consumers in the process.

The bipartisan Latta-Welch legislation would remove this threat of "double jeopardy" and promote the continued, voluntary participation by manufacturers in the ENERGY STAR program.

At a critical time in our economic recovery, manufacturers need sensible policies that incentivize research and development in energy efficiency technologies that save consumers money and create jobs. Thank you for your efforts to protect the important ENERGY STAR program by introducing H.R. 504.

Kind regards,

The Alliance to Save Energy

The American Council for an Energy Efficient Economy

cc: Members of the Energy and Commerce Committee

164

CHAMBER OF COMMERCE
OF THE
UNITED STATES OF AMERICA

R. BRUCE JOSTEN
EXECUTIVE VICE PRESIDENT
GOVERNMENT AFFAIRS

1615 H STREET, N.W.
WASHINGTON, D.C. 20062-2000
202/463-5310

April 28, 2015

The Honorable Bob Latta
U.S. House of Representatives
Washington, DC 20515

The Honorable Peter Welch
U.S. House of Representatives
Washington, DC 20515

Dear Representatives Latta and Welch:

The U.S. Chamber of Commerce, the world's largest business federation representing the interests of more than three million businesses of all sizes, sectors, and regions, as well as state and local chambers and industry associations, and dedicated to promoting, protecting, and defending America's free enterprise system, commends you on the introduction of H.R. 504, the "Energy Star Program Integrity Act." This bipartisan legislation would promote the continued success of the ENERGY STAR program, a voluntary program that has promoted energy efficiency, job growth, and economic expansion.

H.R. 504 addresses a simple but important issue regarding the ENERGY STAR program and would amend the Energy Policy and Conservation Act to prohibit private litigation against manufacturers should a product fall out of compliance with the program. The U.S. Environmental Protection Agency's enforcement mechanisms of public delisting and subsequent work with manufacturers to regain qualification have proven to be effective. Private litigation based on the ENERGY STAR listing would have a strongly chilling effect on manufacturer participation in the voluntary program.

The Chamber thanks you for introducing the Energy Star Program Integrity Act and looks forward to working with you on this important piece of legislation.

Sincerely,



R. Bruce Josten

cc: Members of the House Committee on Energy and Commerce



1455 Pennsylvania Ave NW, Suite 400 • Washington, DC 20004
(202) 621-1815 • www.leadingbuildersofamerica.org

April 30, 2015

**STATEMENT OF KENNETH GEAR, CEO
LEADING BUILDERS OF AMERICA
BEFORE
THE HOUSE OF REPRESENTATIVES
ENERGY AND COMMERCE COMMITTEE
SUB-COMMITTEE ON ENERGY AND POWER**

**"ENERGY EFFICIENCY LEGISLATION AND THE SAVE ACT"
April 30, 2015**

Thank you for the opportunity to express the views of Leading Builders of America (LBA) regarding energy efficiency and the Sensible Accounting to Value Energy ("SAVE Act").

LBA commends Chairman Whitfield and Ranking Member Rush for exploring ways to improve energy efficiency in this country and removing barriers to achieving further improvements in energy efficient building. LBA member companies are convinced that the SAVE Act is the most impactful efficiency provision under consideration by Congress. It will remove barriers to building more efficient homes and bring new and innovative products to market all while saving homeowners money on their utility bills.

Leading Builders of America is a trade association representing 21 of the largest homebuilders in the nation. In 2013, our members built more than 132,000 homes in thirty-four states accounting for nearly one-third of the new homes sold in the U.S.

LBA member companies are building green homes every day throughout the country and are active participants in voluntary energy efficiency programs like Energy Star, Builders Challenge, Environments for Living and other green building programs and are committed to building an energy-efficient future. Our members are on the front lines of this effort and recognize the important role that housing can play in reducing energy consumption in the United States. However, there are barriers to building the highly efficient homes that homebuyers want and deserve.

A. SAVE ACT IS CRITICAL (§433 of S.720).

A prospective homebuyer considering an energy efficient home should be in a win-win situation. An energy efficient home is good for the environment, cheaper to own, and more comfortable to live in. However, while today's homebuyer values the energy efficient features available in new homes, the mortgage underwriting and appraisal process administered by the federal government does not allow homeowners to properly value or finance those features. LBA believes that providing tools to help homebuyers finance energy efficiency features, and ensuring that those features are properly valued in appraisals, must be at the heart of any legislation aimed at reducing energy consumption in homes. The good news is that these improvements can be made quickly and without a taxpayer subsidy or hidden tax on consumers. The only action required is to update existing mortgage underwriting rules. See, The SAVE Act (§433 of S.720).

Enacting the SAVE Act will:

- 1) Increase the energy efficiency of new and retrofit homes
- 2) Significantly reduce homeowners' monthly utility bills
- 3) Spark innovation and job creation by US manufacturers of energy efficient products
- 4) Increase the accuracy and transparency of mortgage underwriting
- 5) Create a voluntary program without a new government bureaucracy
- 6) Boost the homebuilding and manufacturing industries

1. **Market Based Energy Efficiency:** Currently over 90% of the mortgages originated in the U.S. are through Federal Government entities such as FHA, VA, Fannie Mae and Freddie Mac. Their underwriting standards and processes have not kept pace with significant shifts in consumer costs and building technology. The private sector is delivering more energy efficient homes and cost effective technology, but changes to federal mortgage processes are needed to make it more widely available to working and middle income Americans. The SAVE Act will provide the policy guidance needed to overcome bureaucratic inertia.

2. **Consumer Benefits:** The SAVE Act will save money for borrowers by creating a more transparent and predictable mortgage market, with lower default rates, which means lower costs for everyone. Just as importantly, buyers are incentivized to purchase energy efficient homes because the savings are recognized in their borrowing ability, even as they reduce their monthly energy bills.

3. **Promotes Manufacturing:** Most products that go into new homes are made right here in the US, but product manufacturers who are continually developing new technologies, are finding that builders cannot use these new products because the incremental cost in most cases cannot be financed as part of a buyer's mortgage. Passing the SAVE Act will unlock manufacturing demand for these innovative new products and significantly reduce homeowner's utility bills. A classic win-win.

4. **Transparency:** The SAVE Act increases transparency and accuracy in residential mortgage underwriting. By recognizing energy costs, which are generally more than taxes or insurance, the risk in a mortgage loan will be clearer and the risk of default, therefore, is reduced.

5. **Voluntary:** The SAVE Act will reduce energy consumption with market mechanisms, not more government regulation or ill-conceived subsidies. By recognizing the reality – and the benefits – of lower energy costs, buyers have an incentive to buy, and builders have an incentive to build, energy efficient homes. Over one-quarter of US energy consumption is generated at the household level and the savings will be significant. This can be accomplished with no government subsidies, no new bureaucracies and no hidden taxes on consumers. The program can operate within existing government programs without any significant administrative costs.

6. **Boosts our Economy:** The SAVE Act will boost jobs and the economy. As any American motorist can attest, lower energy costs translate into more disposable income to spend or invest. That helps everyone. At the same time, the residential housing and manufacturing industries, major job providers, will get a shot in the arm with more credit-worthy buyers participating in a rapidly growing segment of the market.

B. Energy Star Program - HR 504

The LBA also supports passage of The Energy Star Program Integrity Act (HR 504 and Section 4121 of the Discussion Draft). LBA member companies are innovators in energy efficient residential construction and have been active participants in the federal government's ENERGY STAR program. The LBA supports legislation like *The Energy Star Program Integrity Act* that stimulate economic growth, spur innovation, protect the environment, and promote energy efficiency. ENERGY STAR is a popular federal program that encourages companies in a wide variety of industries to voluntarily invest in the development of energy efficient technology, reducing energy consumption and growing the economy. Wide

participation in the program, however, could be threatened by a recent trend of lawsuits against ENERGY STAR Partners after a product is disqualified.

Reduced participation in the ENERGY STAR program would be a step backward for the promotion of energy efficient technologies. The *Energy Star Program Integrity Act* would maintain the administrative and enforcement roles of the Department of Energy and Environmental Protection Agency, deter unnecessary lawsuits, and ensure continued participation in the ENERGY STAR program from producers and consumers alike.

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April 28, 2015

The Honorable Bob Latta (OH-05)
U.S. House of Representatives
2448 Rayburn House Office Building
Washington, D.C. 20515

The Honorable Peter Welch (VT-AL)
U.S. House of Representatives
2303 Rayburn House Office Building
Washington, D.C. 20515

Dear Representatives Latta and Welch:

On behalf of the Retail Industry Leaders Association (RILA), I write in support of the Energy Star Program Integrity Act (H.R. 504). RILA is the trade association of the world's largest, most innovative and recognizable retail companies and brands. Our membership includes more than 200 retailers, product manufacturers, and service suppliers, which together account for more than \$1.5 trillion in annual sales, millions of American jobs and more than 100,000 stores, manufacturing facilities and distribution centers domestically and abroad.

For more than 20 years, ENERGY STAR has been a highly successful voluntary program designed to promote the development of energy efficient products. The ENERGY STAR program is popular with retailers and our customers who are interested in accessing a wide variety of affordable and efficient appliances and electronics. As a voluntary program, ENERGY STAR promotes economic growth and energy security while helping reduce pollution.

H.R. 504 addresses a gap in the law that enables follow-on private lawsuits against retailers and manufacturers in the event that a product is disqualified from the program. These lawsuits are a costly and unnecessary addition to the Environmental Protection Agency's (EPA) existing ENERGY STAR enforcement apparatus, and threaten to undermine the ENERGY STAR program by making voluntary participation by manufacturers, retailers, and consumers too expensive. H.R. 504 protects consumers, codifies the existing EPA enforcement process, and promotes continued broad participation in the ENERGY STAR program.

H.R. 504 ensures that retailers and our customers can continue to enjoy a variety of energy efficient products. Without this bill, reduced participation in the ENERGY STAR program would mean fewer energy efficient product offerings from manufacturers, and may make the remaining ENERGY STAR products more expensive. Consumers also benefit from the ongoing energy savings and environmental protection that comes with a robust ENERGY STAR program. While reduced rates of participation in the ENERGY STAR program would slow the rate of innovation, high rates of participation in the ENERGY STAR program give the federal government increased flexibility to raise ENERGY STAR standards even further, encouraging manufacturers to voluntarily invest in energy efficient technologies.

Again, thank you for your leadership on this matter.

Sincerely,



Jennifer M. Safavian
Executive Vice President, Government Affairs

The Energy Star Program Integrity Act (HR 504/ S 1038)

Rep. Bob Latta -- Sen. James Risch -- Rep. Peter Welch

Prevent Consumer Harm and Strengthen the ENERGY STAR Program

Supported by: American Council for an Energy Efficiency Economy; Association of Home Appliance Manufacturers; Alliance to Save Energy; Air-Conditioning, Heating and Refrigeration Institute; National Electrical Manufacturers Association, U.S. Chamber of Commerce, National Association of Manufacturers.

Continued Success

The ENERGY STAR program has proven to be a successful tool in advancing the development and use of energy-efficient products to reduce energy consumption and related greenhouse gas emissions. The program has also promoted economic expansion and job growth for participating manufacturers across the nation.

Strengthening A Proven Process

For a product to earn the ENERGY STAR logo, it must be third-party certified that it meets energy saving guidelines. Manufacturers who choose to participate in this voluntary program make the investments needed to increase the energy efficiency of their products. To ensure these products maintain the required levels of efficiency, the Department of Energy (DOE) and other approved parties perform "off-the-shelf" testing on a certain percentage of ENERGY STAR products. In the event a tested product fails to meet the standard, that product is "disqualified" and can no longer be marketed as ENERGY STAR compliant. EPA posts a list of disqualified products on the ENERGY STAR website. In connection with a product's disqualification, the manufacturer and the Environmental Protection Agency (EPA) work to resolve the cause for disqualification. Within this process, EPA determines whether any consumers have been harmed and whether compensation is warranted.

Despite the continued success and increased oversight of the ENERGY STAR program, a recent threat has emerged that could ultimately undermine the future of the program. A gap in federal law allows private litigation, in addition to and on top of the EPA-administered enforcement mechanism, against a manufacturer when a product falls out of compliance with the program. These lawsuits and the cost and reputational burdens they impose could undermine the ENERGY STAR program and force manufacturers to reassess their participation in this voluntary energy-saving program.

The *ENERGY STAR Program Integrity Act* codifies the existing EPA oversight process, cements important consumer protections, and helps deter costly and unnecessary class action lawsuits.

Center for American Progress



The Buildings of Tomorrow Are Here Today

By Greg Dotson and Erin Aue | April 30, 2015

Commercial and residential buildings in the United States account for 39 percent of the nation's carbon pollution through the consumption of fossil-fuel-generated electricity, natural gas, home heating oil, and propane.¹ Therefore, to achieve deep carbon-pollution reductions, the nation's buildings must become cleaner and more efficient. Fortunately, the technology exists today to eliminate the use of these fossil fuels in U.S. homes and workplaces. By adopting high energy efficiency and onsite renewable energy generation, buildings across the United States are demonstrating that fossil-fuel-generated electricity is no longer a necessity for every building. These buildings—called net-zero energy buildings—can be found in residential neighborhoods, among downtown office buildings, at commercial shopping centers, and in academic institutions.

The federal government is poised to implement net-zero building practices in its new buildings around the country. To make this a reality, the U.S. Department of Energy, or DOE, must now finalize a rule that explains the requirements to federal agencies.

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The need for the DOE to act

The federal government has a history of driving energy-efficiency improvements in the United States. In 2007, Congress passed, and President George W. Bush signed, the Energy Independence and Security Act of 2007, or EISA—a law designed to lead by example in the transition to less-polluting buildings. Specifically, Congress put the federal government on track to progressively reduce the fossil-fuel-generated electricity consumption of federal buildings with plans for new buildings to have net-zero energy usage in 2030.²

Section 433 of the EISA amended the Energy Conservation and Production Act of 1976 and required the DOE “to establish revised performance standards for the construction of new Federal buildings” and major renovations of federal buildings.³ In doing so, the federal government “expected to change the way federal structures are built by forcing the U.S. government to shift from using coal, oil and natural gas in its

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1 Center for American Progress | The Buildings of Tomorrow Are Here Today

buildings to using renewable energy.⁴ The federal government is the largest consumer of energy in the United States, with 350,000 buildings and 600,000 road vehicles in the federal fleet.⁵ In fiscal year 2007, federal buildings accounted for 36 percent of the U.S. government's energy use.⁶

The crux of Section 433 is setting specific targets for reducing fossil-fuel-generated electricity consumption in increments, starting with a 55 percent reduction in 2010 and an eventual 100 percent reduction by 2030.⁷ Thus, by 2030 and thereafter, all newly constructed and majorly renovated federal buildings would not be consuming fossil-fuel-generated electricity. Instead, these buildings would be powered by nonpolluting energy sources and would incorporate advanced energy-efficiency technologies to reduce overall energy consumption.

However, implementation of this legislation has lagged. Although Congress required the DOE to issue a rule in 2008 explaining to federal agencies how to carry out this visionary law, the DOE has yet to finalize a rule. It finally issued a draft rule in 2010. In response, many groups and agencies came forward with concerns about the feasibility of the proposed rule. These included uncertainty about the designation of "major renovation," as the definition varied between agencies, and the ability to use renewable energy certificates rather than directly sourced renewable energy to meet the required fossil-fuel reductions.⁸

In 2011, with the rule stalled by these concerns, Congress began to re-examine the federal government's ability to work toward net-zero buildings. Members from both sides of the aisle spoke out in favor of amending Section 433, arguing that the DOE's targets were "unworkable."⁹ In May 2013, Sens. John Hoeven (R-ND) and Joe Manchin (D-WV) offered an amendment to pending legislation in the Senate to repeal Section 433 and replace it with less-stringent reduction targets.¹⁰ Among those who supported the amendment's new efficiency standards, many claimed that net-zero technology was economically infeasible. Some advocates of energy efficiency tacitly supported the approach, seeing it as a feasible path toward greater near-term efficiency improvements—even if it came at the expense of greater efficiency and reduced fossil-fuel dependence in the long term.¹¹

In October 2014, however, the DOE released a supplemental proposed rule that addresses concerns from the 2010 proposal and sets a clearer path toward achieving net-zero federal buildings. It clarifies to which types of buildings and renovations the reduction targets apply, as well as what specific measures can be used to achieve net-zero energy by 2030. It provides that federal buildings in different climates are not held to a reduction based on the national average consumption; rather, new federal buildings and renovations must reduce consumption compared with the average of those in the same climate region.¹² It also proposes special accommodations for efficient combined heat and power systems that rely on natural gas.¹³

With these proposed changes, the DOE has demonstrated that it has heard the concerns about the 2010 proposed rule and is committed to addressing them. The revised rule indicates that federal agencies will lead the charge on transitioning electricity consumption from fossil fuels to renewable energy. Through it, the DOE is sending a signal to agencies and innovators that the demand for energy efficiency and renewable technologies will continue to rise. President Barack Obama further emphasized this by issuing an executive order in March 2015 that directs federal agencies to reduce greenhouse gas emissions by 40 percent compared with 2008 levels over the next decade.¹⁴ While this is a different directive—the executive order focuses on emissions, while the proposed rule is concerned with fossil-fuel-generated energy consumption—both measures signal that the federal government is becoming a more invested client in low-carbon buildings. This is a growth opportunity for businesses to continue to innovate and develop the best methods for efficiency and renewable power generation.

Having proposed changes that resolve the concerns that have been expressed about Section 433, the DOE should now take swift action to finalize the rulemaking to ensure that the federal government leads by example as it works toward net-zero buildings.

Net-zero buildings have taken off

From homes and businesses to schools and offices throughout the United States, net-zero buildings have proliferated and have even become more cost effective. Examples of their success and neighborhood appeal can be found across the country. Local businesses, homeowners, and governments are choosing net-zero buildings as a smart way to save money in the long run.

Locally, schools and business are taking action. For example, Richlandsville Elementary School in Bowling Green, Kentucky, was built in 2010, becoming the first net-zero school in the country. The efficiency measures are on display throughout the school and serve as a teaching tool for students to learn about energy use and savings.¹⁵ Similarly, Oberlin College in Ohio built the Adam Joseph Lewis Center for Environmental Studies to be 63 percent more efficient than a comparably sized building by relying on the sun for lighting, passive heating, and power generation.¹⁶ The building is equipped with real-time energy- and water-use monitoring on its dedicated website so that students can monitor its efficiency.¹⁷ After a deadly tornado devastated Greensburg, Kansas, in 2007, the county school district opted to unify all of its schools into a new, single net-zero building.¹⁸

Setting an example for businesses, Walgreens opened the first net-zero energy retail space in the United States in Evanston, Illinois, in November 2013. The pharmacy and store meet all of their energy demands through onsite power generation from 850 rooftop solar panels and two wind turbines.¹⁹

Residential net-zero energy projects are also beginning to proliferate. For instance, Premier Gardens in Sacramento, California, is a “Zero Energy” subdivision comprised of 95 single-family homes that utilize high-efficiency and renewable energy technology.²⁰ Kaupuni Village is a net-zero energy affordable housing community in Hawaii made up of 19 single-family homes and a community center.²¹ In Portland, Oregon, an infill project of townhomes has recently been constructed to net-zero energy specifications.²² Additionally, hundreds of homes have been constructed that approach net-zero energy performance, such as the 306-home Scripps Highlands subdivision²³ in San Diego, California, and the 144-home Carsten Crossings development²⁴ in Rocklin, California.

This success among individual net-zero buildings has spurred their expansion to entire towns and other large outfits to achieve larger-scale net-zero status. Arvada, Colorado, will soon be the site of the largest net-zero energy neighborhood in North America.²⁵ Its 308 homes will be extremely energy efficient—using 80 percent less energy than the average equivalent home. Additionally, longer-lasting energy-efficient materials with lifespans of 20 years to 50 years will allow these net-zero homes to yield the benefits of energy efficiency for longer than ever. Due to the cost-saving and pollution-mitigating benefits of net-zero buildings, several states are working to encourage more widespread adoption. Colorado’s Energy Saving Mortgage Program reduces mortgages by \$8,000 for new and renovated homes that are classified as net zero.²⁶ In California, Gov. Jerry Brown (D) has released goals to increase new and renovated state buildings’ efficiency. He signed an executive order requiring that these buildings be net zero by 2025.²⁷ The California Energy Commission is working to update the California Building Energy Efficiency Standards to ensure that all newly constructed homes in the state are net zero by 2020 and that all new nonresidential buildings are net zero by 2030.²⁸

Additionally, net-zero homes are within the price range of most potential homeowners. In Seattle, homeowners were able to build a new, net-zero home for \$125 per square foot—about \$75 less per square foot than the average new home in Seattle.²⁹

How the federal government can lead by example

The federal government can continue this trend of net-zero building and lead by example locally, nationally, and globally. In 2010, the DOE itself built the largest net-zero building in the United States—the National Renewable Energy Laboratory, or NREL, Research Support Facility in Golden, Colorado. This advanced building has achieved impressive energy efficiency, consuming 70 percent less energy than the average Denver office.³⁰ This low energy consumption is achieved through efficient lighting and heating and cooling technology and is offset onsite by the facility’s solar arrays. In addition to being net zero, the Research Support Facility is also platinum Leadership in Energy and Environmental Design, or LEED, certified, the highest level of LEED certification. NREL undertook the project mostly to demonstrate the feasibility of net-zero buildings with today’s readily available technologies, even on such a large scale.

The U.S. Army has also paid attention to the financial and security benefits of high-efficiency buildings and is working toward developing net-zero installations and facilities to reduce costs and increase energy security. In 2013, the Army released a summary report of its nine net-zero pilot programs to identify best practices. By its estimates, by renovating these nine sites to attain net-zero energy, the energy savings would be equivalent to "approximately 8% of the Army's current total installation energy use with renewable energy."³¹

Federal activities are yielding results. Between FY 2007 and FY 2013, the U.S. government reduced the annual energy use of its buildings by 7 percent.³²

Other countries have realized the environmental and economic benefits of energy efficiency. The European Union implemented requirements in 2010 for all new public buildings to be "nearly zero-energy buildings," by December 31, 2018.³³ This qualitative standard aims to achieve very high energy-efficiency levels, supplemented by onsite renewable energy production, for all new buildings in the European Union by the end of 2020.³⁴ These goals will increase EU energy security and reduce energy costs for the governments that operate these buildings.³⁵

Conclusion

Net-zero energy buildings are technically and financially viable today and are delivering benefits to their owners and users. Throughout the United States, private citizens and businesses are already demonstrating this by building and retrofitting spaces of the future that are highly efficient and renewable energy powered. Although the federal government is already equipped to continue its progress toward net-zero buildings, it is time now to finalize its commitment to ensure that its buildings are also part of this future. The DOE should finalize its rule in order to provide certainty and clarity and to allow federal agencies to plan how they will achieve greater reductions in their fossil-fuel-generated energy consumption. Furthermore, the rule will provide savings to both the federal government and to the American people while ensuring that the United States continues to reduce its carbon footprint.

Greg Dotson is the Vice President for Energy Policy at the Center for American Progress. Erin Auel is a Special Assistant for the Energy Policy team at the Center. The authors thank Ben Bovarnick, a Research Assistant at the Center, for his contributions to this issue brief.

Endnotes

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April 29, 2015

The Honorable Lisa Murkowski
Chairman
Energy and Natural Resources Committee
709 Hart Senate Office Building
Washington, DC 20510

The Honorable Maria Cantwell
Ranking Member
Energy and Natural Resources Committee
511 Hart Senate Office Building
Washington, D.C. 20510

Dear Chairman Murkowski and Ranking Member Cantwell:

As leading designers and supporters of energy efficient buildings across America and the world, we urge you to oppose the repeal of Section 433 of the Energy Independence and Security Act of 2007 contained in the Portman-Shaheen energy efficiency legislation.

Section 433 is a cornerstone of the federal government's sustainability strategy. It requires new and majorly renovated federal buildings to hit fossil fuel reduction targets until zero consumption in 2030. If a building cannot hit these targets, then an agency can request a waiver of these targets.

Although some have claimed that Section 433's energy consumption requirements are unrealistic, the facts tell a different story. Today, design and construction companies across the country are designing buildings that meet, and in some cases exceed, the current targets. In fact, Section 433 goals have enabled design firms to develop new design strategies that are now being used to help private-sector building owners reduce their energy loads.

Recognizing that these goals, while achievable, are complex, a diverse group of stakeholders have worked closely with the U.S. Department of Energy (DOE) to ensure the development of workable regulations to implement Section 433. We were pleased to see that DOE upheld its commitment to completing this rule when it released a supplemental rule in late 2014 that addressed each of the stakeholders' concerns, while inviting additional comments.

Section 433 has helped the government reduce the energy consumption of federal facilities across the country. This is a win not only for the environment, but for taxpayers as well, as federal agencies see their energy costs go down. At a time when we are looking to reduce government spending and promote clean energy, it makes no sense to retreat on policies that are achieving positive results. Therefore, we urge you to oppose the repeal of Section 433.

Sincerely,

[au]workshop
A. James Laspesa AIA
Accord Architects and Engineers
ACE Design Group, LLC
Adrian Smith

ags-ARCHITECTS
Alicia Ravetto Architect
Alliance
Anderson Hallas Architects, PC
Anis Building Enclosure Consulting

Antinozzi Associates
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 APArchitects, LLC
 ARCHforensic
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 Joel Smith, AIA Architect
 Architects Design Group
 Architects Hawaii
 Architects McDonald, Soutar & Paz
 Architectural Alliance, Inc.
 Architecture 2030
 Architecture Plus
 ArchWorks, Inc.
 Arianna Braun Architects PLLC
 Arimse Architects, LLC
 Artech
 ARTifice, LLC
 Ashley McGraw Architects, DPC
 Atelier Ten
 Ayers Saint Gross Architects + Planners
 Azizi Architects, Inc.
 Baer Architecture NM
 BAR Architects
 Barnard & King Architects
 Bartlett Architects, AIA
 Bartlett, Amoroso & Recce - Architects,
 P.C.
 baselab.
 Bay Design Associates Architects
 Becker Morgan Group, Inc.
 Berggren Architects
 Bergmeyer Associates Inc.
 Bernheim+Dean Inc.
 BKSK Architects
 BONE Structure
 Booth Hansen
 Boulder Associates
 BQE Software, Inc
 Bruner/Cott & Associates Inc.
 Build Efficiently, LLC
 Built Environment Engineers
 BuroHappold Engineering
 BWS Architects
 C&H Architects
 CannonDesign
 Carl Kaiserman, AIA
 CDM Smith
 Celeste Allen Novak Architect PLLC
 CHA
 Chamblee +Associates, LLC
 Chapman Harvey
 Chenault & Associates
 Chris Ferger Architects, LLC
 clark huesemann
 Closed Loop Advisors
 CMA Architects & Engineers LLP
 Cohen Freedman Encinosa & Assoc.
 Architects P.A.
 Colley Architects, PC
 Communitas Architects, Inc.
 Connolly & Hickey Historical Architects
 COOKFOX Architects
 COOPER CARRY
 COULSON
 cox graae + spack architects
 Cox Group Architects LLC
 Cozzarelli Cirminiello Architects
 Creative West Architects
 Croxton Collaborative Architects
 Crozier Architecture, LLC
 CSArch
 CTA Architects PC
 CUBE design + research
 Cuninghame Group Architecture
 CVA
 CWA Architecture
 C-Wise Design and Consulting

Cynergy AEC
 Danciar Architecture
 Darlene S. Riemer, Architect, P.C.
 Dattner Architects
 Dave Henry Architecture P.C.
 Dave Robinson Architects
 David B. Albright, AIA, Architect
 David Miertschin
 David Sisson Architecture PC
 David Tanza Architect
 Davis Partnership Architects
 dennis em bopp - architect, pllc
 Dennis McNeal Architect, LLC
 Design Methods Inc
 Design Team, LLC
 Design-1-West
 Dewberry
 DiMella Shaffer Associates, Inc.
 DLR Group
 DMKING Consulting LLC
 DNM Architect
 Dolle Architects
 Doris Nathan Architect
 DPA INC
 Dwight Gregory and Associates
 DWL Architects & Planners, Inc. of NM
 Eckenhoff Saunders Architects
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 Edward Dugger + Associates, PA
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 Elise Fett and Associates
 Elizabeth Eason Architecture LLC
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 emcee design
 Encompass Architects, P.C.
 Endelman & Associates PLLC
 Ennead Architects
 EnvironMental Design
 Environmental Systems Planning and
 Design Consultants
 Environmental Works
 Eskew+Dumez+Ripple
 Evenson Architecture
 EwingCole
 Ferguson Glasgow Schuster Soto, Inc.
 FGM Architects, Inc
 Floyd W. McCollum, Jr., AIA
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 Frederick + Frederick Architects
 Frost Architecture
 FXFWLE
 Garapolo & Associates
 Gary Gladwish Architecture
 Gary Rentsch Architects
 Gast Architects
 GBMA Architecture LLC
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 GGLO
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 Greenstone Architecture, PLLC
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 Grimm + Parker Architects
 Group 1.6 LLC
 GSLA
 Gwynne Pugh Urban Studio
 Habitech Planning and Design
 Habza Architecture PC
 Hafer Associates
 Haizlip Studio
 Half Associates
 Hardlines Design Company
 Harley Ellis Devereaux
 Harmony Architecture
 Harris Welker Architects

Hart STUDIO LLC
 Heckman & Associates, P.A.
 Heights Venture Architects, LLP
 Heiple +Wiedower Architects PLLC
 Helix Architecture + Design
 Hellmuth + Bicknese Architects
 Hennebery Eddy Architects
 HERA, Inc.
 High Plains Architects, P.C.
 HIRSCH GROUP ARCHITECTS
 HKS, Inc.
 HMC Architects
 HMFH Architects, Inc.
 HOK
 Hood Miller Associates
 Howorth & Associates Architects
 Hromadka Associates
 Hubbell & Hubbell
 IBI Group Architects
 In Balance Green Consulting
 Independent
 INSITE strategy + architecture
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 Jason K Demarest, Architecture
 JCS Architects
 Jennifer Birks Architecture
 JGA Architects, PC
 JKA Consulting
 John B. Collins Architect, LLC
 John Kalmon Architect LLC
 John S. Reynolds FAIA
 Jones Design Studio
 Jones Studio, Inc.
 Joseph A. Krawiec, AIA, LLC
 JVArchitecture
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 KAL Architects, Inc.
 Kalin Associates
 Kaplan Architects
 Karl Hokanson Architect
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 Kendall/Heaton Associates, Inc.
 Kenney Architects, P.C.
 Kevin Jensen, Architect
 Kipnis Architecture + Planning
 Kirksey
 Kiss + Cathcart, Architects
 Kittner & Pate Design Associates
 KlingStubbins Inc (a Jacobs Co.)
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 Kubat Consulting LLC
 Kurzman Architecture, LLC
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 Landmark Architects
 Landon Bone Baker Architects
 Larson and Darby Group
 Lavallee Brensinger Architects
 Lehrer Architects LA
 Lindsay Suter Architects
 LMD Architects
 LMN Architects
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 MG Arch LLC
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 Michael Joseph Holtz. FAIA Architect
 Miller Hull Partnership
 MKM Design
 MKSD architects
 MLC Architects, LLC
 mode associates
 Moreland Architecture + Sustainable Design
 Morris Architects Inc.
 Moshier Studio
 ms consultants, inc.
 MS&R Ltd.
 Munn Aarchitecture-PC
 Musser
 N. A. Kershaw, AIA
 NBBJ
 NoackLittle Architecture & Interiors
 NWS Architects, Inc.
 o2 Architecture
 Obra Architects
 Oculus Inc.
 OPN Architects
 Orcutt Winslow
 Oregon Health & Science University
 Ossolinski Architects, PLLC
 Overland Partners Architects
 Pacheco Ross Archhitects
 Pacific Studio Architecture
 Packard Design
 PAE
 Page & Turnbull, Inc.
 Page Southerland Page, Inc.
 Palms Hawaii Architecture LLC
 Papesch Associates
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 Peter T. Gross Architects, P.A.
 PHB Architects
 Philip Franks Architects
 Philip Jones Architect, PLLC
 Phillips | Sekanick Architects
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 Pier Fine Associates
 Pirece/Cooley Architects
 Poirier + Associates Architects
 Potter Lawson
 pwg architecture
 Quad3 Group, Inc.
 Quinn Evans Architects
 R. M. Shanahan Architects, Inc.
 r4 llc
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 RDM Architecture
 Red Iron Architects
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 Ron Neggers, Architect
 Ronald Young AIA, Architect
 Ross Barney Architects
 RS&H
 RTKL
 Ryan Group Architects
 SA ARCHITECTS, LLC
 Sandoval Moots architect LLC
 Santiago Morrice Ramirez
 Sara E.F. Gensburg Ltd
 Sasaki Associates
 Scarmack Architecture
 Schapira Architecture LLC
 schemata workshop, inc.
 Scott Payette Architects
 sDs - Sharkov Design Studio
 Selser Schaefer Architects
 SERA Architects
 Serena Sturm Architects, Ltd.
 Siegel & Strain Architects
 Simply Stated Architecture, PC
 Skidmore, Owings & Merrill, LLP
 Smith Architectural Studio
 Smith Gee Studio
 SmithGroupJJR
 Smithipong & Rosamond Associates, Inc
 SMMA
 Sorrento Consulting, LLC
 SSA Architecture
 Steffen + Schwerin Architects, Ltd.
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 Stirling/Brown Architects, Inc.
 Stock & Associates
 Strada
 Straus-Edwards Associates, Architects
 Street Dixon Rick Architecture, PLC
 Strollo Architects, Inc.
 Studio I Architects Inc
 Studio Carver Architects
 Studio E Architects
 Studio Ma
 studioB design
 Studios Architecture
 Sunset Consultants
 SYNCRO architecture studio
 Szostak Design Inc
 Talent Architectural Studio
 TDSi - The Design Studio, inc.
 Tekton Architecture
 TerraLogos, pc
 Terrapin Bright Green
 Texan Building Solutions
 THA Architecture, Inc.
 The Abo Group
 The Architect's Collaborative
 The Beck Group
 The FWA Group, P.A.
 The Lamb Associates Architects Inc
 The McIntosh Group, LLC
 The Miller Hull Partnership
 The Monticciolo Company
 The Oak Hill Fund
 The Portico Group
 The Sheward Partnership, LLC
 The Write Image
 Thinking Leadership
 Threshold Acoustics LLC
 Tim Brown Architecture, LLC
 Tipping Structural Engineers
 TL Stroh Architects Ltd.
 TLC Engineering for Architecture
 Tom Bassett-Dilley Architect, Ltd
 Toolis
 Town Planning & Design
 Tsoi/Kobus & Associates

Urban Architecture Studio
Urban Bobcat Architects, PC
urbandesigner.com
Valerio Dewalt Train Associates
Vaughn Design Studio
Ver Ploeg Architecture
Vinci-Hamp Architects, Inc.
Vocon Partners
VSBA, LLC
W. E. JACKSON CORPORATION
Wauters Design Group
Webb & Company Architects
Weber Thompson
WGW Architects, Inc.
Whitney Architects Inc.
Wight & Company
William Finnerty architect
William R Massingill AIA
William Rawn Associates, Architects, Inc.
Wilson Consulting Inc
WLC Architects, Inc.
WRNS Studio
WSP | Parsons Brinckerhoff
WTW Architects
ZeroEnergy Design
ZGF Architects



Statement of the Window & Door Manufacturers Association (WDMA)

**U.S. House of Representatives Subcommittee on Energy and Power Legislative
Hearing on Energy Efficiency**

April 30, 2015

On behalf of the Window & Door Manufacturers Association (WDMA), we would like to thank you and the members of the House Committee on Energy & Commerce for conducting today's hearing to explore tools to promote energy efficiency. WDMA is a national trade association representing the leading producers of commercial and residential doors, windows, and skylights for domestic and export markets. Our members sell to distributors, dealers, builders, remodelers, homeowners, architects, contractors, and other specifiers in residential, commercial, and institutional construction markets. WDMA welcomes the Committee's interest in energy efficiency and higher-performing residential and commercial buildings, and is pleased to submit these comments.

Building Codes

WDMA supports the voluntary, consensus-based model code process. It is imperative that when considering building code measures, the targets be based upon sound science, are reasonably achievable and cost effective. It is also imperative that the consensus-based code development process be relied upon for developing the requirements for meeting those targets without undue influence by the Department of Energy (DOE).

WDMA believes Department of Energy (DOE) involvement in the established voluntary model codes and standards development processes should be supportive in nature by providing economic and energy savings research and analysis related to proposed revisions to them. The existing codes and standards development bodies, ASHRAE and the ICC, are already producing increasingly more energy efficient codes through a well-established, open and consensus-based approach with the full participation of stakeholders including DOE. DOE's role should not include actions that advocate, promote, or discourage the adoption of a particular building energy code, code provision, or energy savings target. WDMA believes legislation introduced in the House by Reps. Marsha Blackburn (R-TN) and Kurt Schrader (D-OR), H.R. 1273, the *Energy Savings and Building Efficiency Act of 2015*, which is contained in the discussion draft, is an excellent approach to addressing these concerns.

SAVE Act

WDMA supports fiscally responsible housing programs that make home ownership available to more Americans. The current test for loan affordability used by most covered agencies, commonly known as the "debt-to-income" test, is inadequate because it does not take into account the expected energy cost savings for the homeowner of an energy efficient home. Another loan limitation, commonly known as the "loan-to-value" test, is tied to the appraisal, which often does not adjust for efficiency features of houses.

The SAVE Act would help revitalize the hardest hit sectors of the economy by providing lower rate mortgage financing for cost effective energy improvements; giving builders and homeowners the option to recover the cost of efficiency investments, such as windows and doors; and enabling better federal mortgage underwriting while lowering utility bills for American households. A study conducted in 2013

of more than 70,000 mortgages found that mortgages on energy efficient homes were 32 percent less likely to be in default.¹

Tenant Star

WDMA applauds the passage of S. 535 in both Houses of Congress, which establishes the Tenant Star Program to encourage cooperation between building owners and tenants with regard to energy efficiency upgrades. Most leased buildings currently suffer from a split incentive problem where tenants pay energy bills but are usually not occupants long enough to justify investing in energy-saving investments. WDMA is pleased that President Obama signed this legislation and allowed Tenant Star to move forward.

Federal Green Buildings

WDMA is supportive of language regarding requirements for high-performance green federal buildings. In particular, WDMA supports provisions that will allow multiple green building certification systems as options for the construction of high-performance green federal buildings, and provisions that will allow any rating system or certification system to be included in consideration for such. In addition, WDMA is also supportive of provisions prohibiting an approved system from discriminating against the use of domestic building products that have obtained certifications of responsible sourcing. WDMA believes the noted provisions are essential to any federal program for the construction of green federal buildings.

Conclusion

It is estimated that there are almost 1 billion single-pane windows still in service in American homes. Replacing those windows with ENERGYSTAR-qualified windows would save 1.12 quadrillion BTUs per year – an average of 20 million BTUs per house. Moreover, replacing single-pane windows from those homes would save an estimated \$10 billion in energy costs in one year, \$175 annually per homeowner. Window, door and skylight replacement is cost-effective, achieves immediate energy savings and contributes favorably to the value of the home.

Federal policies that incentivize window, door and skylight replacement to spur consumer purchases reduce the energy consumption of buildings and lessen our reliance on foreign energy sources. As an added benefit, the overwhelming majority of windows, doors and skylights sold in America are manufactured in America – providing manufacturing, distribution, retail and contractor jobs in every community across the country.

WDMA appreciates the Committee's work to develop proposals that will restore jobs and promote energy efficient retrofits and new construction.

Contact

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 Window and Door Manufacturers Association
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¹ http://www.imt.org/uploads/resources/files/IMT_UNC_HomeEEMortgageRisksfinal.pdf

FRED UPTON, MICHIGAN
CHAIRMAN

FRANK PALLONE, JR., NEW JERSEY
RANKING MEMBER

ONE HUNDRED FOURTEENTH CONGRESS
Congress of the United States
House of Representatives
COMMITTEE ON ENERGY AND COMMERCE
2125 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-6115
Majority (202) 225-2827
Minority (202) 225-3841

May 15, 2015

Ms. Elizabeth Noll
Energy Efficiency Advocate
Natural Resources Defense Council
1152 15th Street, N.W., Suite 300
Washington, D.C. 20005

Dear Ms. Noll:

Thank you for appearing before the Subcommittee on Energy and Power on April 30, 2015, to testify at the hearing entitled "Strategic Petroleum Reserve Discussion Draft and Title IV Energy Efficiency."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

To facilitate the printing of the hearing record, please respond to these questions with a transmittal letter by the close of business on Monday, June 1, 2015. Your responses should be mailed to Will Batson, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, D.C. 20515 and e-mailed to Will.Batson@mail.house.gov.

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,



Ed Whitfield
Chairman
Subcommittee on Energy and Power

cc: The Honorable Bobby L. Rush, Ranking Member, Subcommittee on Energy and Power

Attachment—Additional Questions for the Record



Questions for the Record
Elizabeth Noll
Energy Efficiency Advocate
Natural resources Defense Council

U.S. House of Representatives
Committee on Energy and Commerce
Subcommittee on Energy and Power Hearing on
"Strategic Petroleum Reserve Discussion Draft and Title IV Energy Efficiency"

April 30, 2015

Questions:

As the largest building owner, the efficiency of federal government buildings is crucial to reducing carbon emissions in the United States. Section 433 of the Energy Independence and Security Act requires new and substantially rebuilt federal buildings to meet strong efficiency performance standards to reduce the use of energy generated from fossil fuels. This provision was intended to reduce carbon pollution by promoting energy efficiency and renewable energy in government buildings in a common-sense and reasonable manner. And DOE is currently in the process of developing a rule to implement these important standards.

- 1. Please briefly discuss DOE's revised regulations:**
 - a. Does the revised regulation address concerns previously raised by stakeholders?**
 - b. Has the Department worked with interested stakeholders to ensure the rule is practical, reasonable, and effective?**

In October 2014 the Department of Energy (DOE) issued a Supplemental Notice of Proposed Rulemaking (SNOPR) responding to comments received on the Notice of Proposed Rulemaking (NOPR) and providing additional clarification and consideration in response to the concerns raised. The SNOPR provides the necessary clarification and sought the additional guidance to finalize the rule to implement these standards.

Further Background:

In October 2010, the Department of Energy (DOE) issued a Notice of Proposed Rulemaking establishing regulations implementing the fossil fuel generated energy provisions of the Energy Independence and Security Act of 2007 (EISA). During the comment period and subsequently, stakeholders raised concerns regarding important details in the proposed rule, as well as a lack of clarity on how certain issues might be addressed. For example, stakeholders sought clarification regarding how the Department would establish proper baselines for the Department to define a covered facility and whether that definition might be overly inclusive, and the likely impact of that definition on Energy Saving Performance Contracts. Further, there were questions related to compliance through purchased contracts of renewable energy, onsite renewable generation, and offsets applicable to onsite gas equipment.

In October 2014, DOE issued a Supplemental NOPR to address and seek additional comment on the concerns regarding the 2010 proposal. The SNOPR made adjustments from the 2010 proposal that both reflect stakeholder comments and set out a workable path to achieve the provision's goals. In particular, DOE responded to the comments received on the NOPR and requested comment on additional approaches to the scope of the requirements in the context of major renovations, the potential use of renewable energy certificates for compliance, and a streamlined process for agencies to seek a downward adjustment from the required reduction levels. It also proposes special accommodations for efficient combined heat and power systems that rely on natural gas, all of which help create a rule that is practical, reasonable, and effective.

Summary of Supplemental NPOR:

- i. Regulatory Scheme: The SNOPR addresses requirements for new construction and major renovations of Federal commercial and high-rise residential buildings, as well as Federal low-rise residential buildings.
- ii. Rulemaking Basis: The statute requires that covered Federal buildings be designed so that the fossil fuel-generated energy consumption of the buildings is reduced, as compared with such energy consumption by a similar building in FY 2003, by certain percentages by target years.
- iii. Covered Buildings: The original proposed rule would apply to certain new Federal buildings, and major renovations to Federal buildings, as specified in section 433 of EISA 2007. By statute, the term "Federal building" means any building to be constructed by, or for the use of, any Federal agency, including buildings built for the purpose of being leased by a Federal agency, and privatized military housing. (42 U.S.C. 6832(6)). The SNOPR narrowed the scope to new Federal buildings and major renovations to Federal buildings covered by EISA 2007.
 1. Federal buildings covered by EISA 2007 include new Federal buildings, or major renovations to Federal buildings, that are also: (1) public buildings, as defined in 40 U.S.C. 3301 for which a transmittal of a prospectus to Congress is required

- under 40 U.S.C. 3307; or (2) Federal buildings for which the construction cost or major renovation cost is at least \$2,500,000 (2007 dollars, adjusted for inflation).
- iv. Definitions: The proposal contains definitions for “combined heat and power (CHP) system,” “district energy system,” “fiscal year,” “major renovation,” “power purchase agreement (PPA),” “proposed building,” and “renewable energy certificate.” The rulemaking also proposes to define 16 categories of commercial buildings and one category of multi-family high-rise residential buildings in 10 CFR part 433 and one category of low-rise residential buildings in 10 CFR part 435.
 - v. Fossil Fuel-Generated Energy Consumption Requirements: For buildings for which design for construction begins in the FY’s 2013 to 2029, tables of the proposed maximum allowable fossil fuel-generated energy consumption by building type and climate zone are provided.
 - 1. For major renovations that are less than whole building renovations (system or component level retrofits) DOE is proposing that the maximum allowable fossil fuel-generated energy consumption in FY 2013 through 2029 be based on a percentage of the whole building energy consumption represented by the renovated system or component.
 - vi. Fossil Fuel-Generated Energy Consumption Determination: To determine compliance with the fossil fuel reductions, agencies would be required to estimate the fossil fuel-generated energy consumption of their proposed building design and compare that estimate to the allowable fiscal year percentage reduction target.
 - 1. DOE has proposed a calculation to make this estimated fossil fuel-generated energy consumption for the proposed building.
 - 2. The regulations would establish criteria for on-site renewable electricity generation and off-site renewable electricity generation (including generation represented by renewable energy credits). DOE has also proposed a clarification as to how electricity associated with district heating or cooling systems, district chilled water, and CHP systems would be treated.
 - vii. Petitions for Downward Adjustment:
 - 1. Under the provision of Section 433 of EISA 2007 and as proposed, agencies other than GSA (and including GSA-tenant agencies with significant control over building design) would be able to petition DOE for an adjustment to the fossil fuel requirement for a specific building if meeting the requirement is technically impracticable in light of the agency’s functional needs for the building.
 - a. A petition for a downward adjustment would need to include a description of the building and associated components and equipment, an explanation of why compliance with the requirements is technically impracticable in light of the functional needs of the building, a demonstration that all cost-effective energy efficiency and on-site renewable energy measures were included in the building design, and a description of measures that were evaluated but rejected.

- b. Additionally, DOE's rulemaking proposes separate, streamlined downward adjustment processes for major renovations that are whole building renovations and for major renovations that are system or component level retrofits.

In addition to soliciting comment through the Supplemental NOPR, DOE has met with a range of groups about the proposal. In November of 2012, the following organizations met with DOE and expressed their shared interest in a well-designed, effective and reasonable approach to the energy efficient design of federal facilities: American Council for an Energy-Efficient Economy, American Gas Association, The American Institute of Architects, American Public Gas Association, ASHRAE, Environment America, Environment and Energy Study Institute, Federal Performance Contracting Coalition, Natural Resources Defense Council, Sierra Club and U.S. Green Building Council. The conversation between the Department and these organizations was particularly valuable because of the diversity of organizational perspectives represented and the progress that was made in identifying important details had not been adequately addressed in the Department's 2010 NOPR.

In summary, the Department has, through the meetings held with stakeholders, consideration of public comments, and issuance of the Supplemental NOPR, demonstrated that it has heard stakeholders' concerns with the 2010 proposed rule and is committed to addressing those concerns and creating an effective and practical final standard.

If enacted, section 4115 of the draft would repeal the fossil fuel use reduction requirements under section 433. This provision is based on the premise that these efficiency requirements are unreasonable and unworkable. However, the private sector has made great strides in achieving, and in some cases surpassing, the goals of section 433.

1. **Is it premature to write off this provision as unworkable before DOE completes its rulemaking?**
2. **Should the federal government be leading by example in this area?**

The U.S. Department of Energy has recently revised the proposed regulations, and the revisions appear to be both workable and a positive step for an economic and sustainable energy future. We believe it is premature to write off this provision as unworkable before DOE has completed its rulemaking. It is particularly valuable for the federal government to demonstrate leadership by showing how rapidly and economically such energy efficiency gains can be achieved.

The discussion draft on Energy Efficiency that was under consideration at the April 30, 2015 hearing recognizes the enormous opportunity for the federal government to save money and

reduce the environmental impacts associated with energy use in federal facilities. The federal government spends about \$6 billion each year on energy in owned and leased buildings. The federal government is the largest consumer of energy in the United States, with 350,000 buildings and 600,000 road vehicles in the federal fleet. In fiscal year 2007, federal buildings accounted for 36 percent of the U.S. government's energy use. The General Services Administration, the Department of Defense, the Department of Energy and other agencies have been on a steady path of improvement and implementation of measures. Also, they conduct ongoing technical and economic analyses. These efforts indicate that far more savings are available through cost-effective efficiency technologies, given adequate investment and implementation. The draft proposal also recognizes the important role played by Energy Savings Performance Contracts and utilities in harnessing energy efficiency opportunities, and enhances the ability of federal agencies to tap their financing and implementation capability.

Section 4115, in contrast with other provisions related to federal facilities in this bill, is counterproductive to the mid- and long- term effort to achieve substantial gains in energy efficiency and reduce environmental impacts. In particular, it would repeal 42 U.S.C. 6834(a)(3)(D)(i), which establishes a requirement to gradually phase out the use of fossil fuels in federal facilities. The largest contribution to that phase-out would occur through improvements in energy efficiency. It is particularly valuable for the federal government to demonstrate leadership by showing how rapidly and economically such energy efficiency gains can be achieved. Accordingly, Section 4115 does not belong in an energy efficiency bill. At a minimum, any repeal would need to be balanced with specific and detailed provisions that would ensure that the federal government remains a leader in energy efficiency and reliably deliver energy efficiency savings that are achievable. We recognize that some stakeholders had previously identified concerns with elements of 42 U.S.C. 6834(a)(3)(D)(i), particularly as interpreted in a draft rulemaking by the U.S. Department of Energy. But, the U.S. Department of Energy has recently revised the proposed regulations, and the revisions appear to be both workable and a positive step for an economic and sustainable energy future.