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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) 225-2927
Minority (202) 225-3641

**MEMORANDUM**

**April 29, 2015**

**To: Subcommittee on Energy and Power Democratic Members and Staff**

**Fr: Committee on Energy and Commerce Democratic Staff**

**Re: Hearing on "Strategic Petroleum Reserve Discussion Draft and Title IV Energy Efficiency."**

On Thursday, April 30, 2015 at 10:15 a.m. in room 2322 of the Rayburn House Office Building, the Subcommittee on Energy and Power will hold a legislative hearing on "Strategic Petroleum Reserve Discussion Draft and Title IV Energy Efficiency."

## I. THE STRATEGIC PETROLEUM RESERVE

### A. Background

Congress authorized the Strategic Petroleum Reserve (SPR) in the Energy Policy and Conservation Act (EPCA)[1] as a response to the disruption caused by the 1973-1974 oil embargo.[2] That oil crisis also led to the formation of the International Energy Agency (IEA), of which the United States is a member. As part of its mission to respond to oil supply disruptions, the IEA requires member states to maintain petroleum reserves equaling 90 days of net imports.[3]

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[1] Energy Policy and Conservation Act, Pub. L. No. 94-163 (1975).

[2] Congressional Research Service, *The Strategic Petroleum Reserve: Authorization Operation, and Drawdown Policy* (Aug. 27, 2013) (R42460).

[3] International Energy Agency, *Energy Supply Security 2014* (June 19, 2014) (online at www.iea.org/publications/freepublications/publication/energy-supply-security-the-emergency-response-of-iea-countries-2014.html).

Right now, the United States has reserves totaling approximately 137 days of net imports purchased at an average price of $29.70 per barrel.[4]

Petroleum products are held in four underground salt domes along the Texas and Louisiana coast.[5] The SPR currently contains 691 million barrels of oil, making it the world's largest supply of emergency crude oil.[6] The Energy Policy Act of 2005 required the Secretary of Energy to fill the SPR to its authorized capacity of one billion barrels "as expeditiously as practicable."[7] However, in 2011, Congress and the President abandoned efforts to construct the necessary facilities to reach that goal.[8]

The SPR is managed by the Department of Energy (DOE). EPCA states that the SPR exists to "to reduce the impact of disruptions in supplies of petroleum products."[9] Section 161 of EPCA lays out the primary authorities and requisite conditions for releases from the SPR – the size and scope of which are tied to the severity of a disruption.[10]

The President maintains broad authority to release crude oil in the case of a "severe energy supply interruption" where there is 1) a "significant reduction in supply which is of significant scope and duration," 2) a "severe increase in the price of petroleum product" and 3) such price increase is "likely to cause a major adverse impact on the national economy."[11]

In the three instances when this authority has been used, only a small portion of the SPR has been drawn down and sold.[12] In 1990-91, in connection with the Persian Gulf War, 33.75

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[4] U.S. Department of Energy, *SPR Quick Facts and FAQs* (online at energy.gov/fe/services/petroleum-reserves/strategic-petroleum-reserve/spr-quick-facts-and-faqs).

[5] U.S. Department of Energy, *SPR Storage Sites* (online at energy.gov/fe/services/petroleum-reserves/strategic-petroleum-reserve/spr-storage-sites).

[6] U.S. Department of Energy, *Strategic Petroleum Reserve – Profile* (online at www.spr.doe.gov/dir/dir.html).

[7] Energy Policy Act of 2005, Pub. L. No. 109-58 § 301(e).

[8] U.S. Department of Energy, *Cancellation of Supplemental Environmental Impact Statement for Ancillary Facilities for the Richton Site of the Strategic Petroleum Reserve*, 76 Fed. Reg. 55890 (Sept. 9, 2011).

[9] Energy Policy and Conservation Act, 42 U.S.C. § 6231(b).

[10] *Id.* at § 6241.

[11] *Id.* at § 6241(d).

[12] U.S. Department of Energy, *SPR Quick Facts and FAQs* (online at energy.gov/fe/services/petroleum-reserves/strategic-petroleum-reserve/spr-quick-facts-and-faqs). The amount of oil drawn down from the reserve is also governed by logistical limitations. Oil can be pumped from the reserve at a maximum rate of 4.4 million barrels per day for up to 90 days, at which point the draw down rate begins to decline as the storage cavers are emptied. DOE estimates that it would take approximately 13 days for it to conduct a competition, select

million barrels of SPR oil were offered, and 17.3 million barrels were sold. In 2005, after Hurricane Katrina, 30 million barrels of oil were offered, and 11 million barrels of oil were ultimately sold. The most recent withdrawal occurred in June and July 2011, as part of a general release by members of the IEA in response to unrest in Libya.[13] In that release, 30 million barrels of oil were initially offered and 30.6 million barrels eventually sold. All of these drawdowns were done in coordination with other IEA member nations as part of a coordinated emergency response plan.[14]

Under authority added in 1990, EPCA also permits a "limited drawdown" in an event that "constitutes, or is likely to become, a domestic energy supply shortage of significant scope or duration."[15] To invoke this power, the Secretary of Defense must find that the limited drawdown would not impair national security.[16] This authority, enacted in the wake of the Exxon Valdez spill, limits sales to "no more than 30 million barrels over a maximum 60-day period only when the SPR inventory is above 500 million barrels."[17] To date, no drawdown and sale has ever been ordered pursuant to this provision.

In addition to drawdown and sale, DOE has used "exchanges" as a more flexible way to respond to disruptions to commercial oil supplies. EPCA authorizes the Secretary to acquire or "exchange" petroleum product in the SPR.[18] Using this authority, DOE has provided oil from the SPR to companies experiencing supply problems. DOE has engaged in both "competitive exchanges," wherein it solicits bids from multiple sources, and "negotiated exchanges," where an individual refiner contacts DOE to address a supply problem being experienced by the refiner. There is no statutory limit on DOE's exchange authority, but for negotiated exchanges, DOE allows a refiner to request no more than two weeks of anticipated disrupted supplies at any time, although follow-on requests may be considered. While exchanges do not require a Presidential finding, they are limited by the fact that DOE must exchange oil from the SPR at a premium, obtaining either more oil or better quality oil.[19] Under both a drawdown and sale or an exchange, oil from the SPR is provided at competitive prices and DOE can, and has, rejected offers that it did not consider to be in the public interest.

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offers, award contracts, and be prepared to begin delivering oil to the marketplace, in the event of an emergency drawdown.

[13] U.S. Department of Energy, *Strategic Petroleum Reserve – Profile* (online at www.spr.doe.gov/dir/dir.html).

[14] U.S. Department of Energy, *SPR Drawdowns* (online at fossil.energy.gov/programs/reserves/spr/spr-drawdown.html).

[15] Energy Policy and Conservation Act, 42 U.S.C.§ 6241(h).

[16] *Id.*

[17] Congressional Research Service, *The Strategic Petroleum Reserve: Authorization Operation, and Drawdown Policy* (Aug. 27, 2013) (R42460).

[18] Energy Policy and Conservation Act, 42 U.S.C. § 6240(a).

[19] *Id.*

In March 2014, the Secretary conducted a test sale of 5 million barrels "to evaluate the drawdown and sales procedure capabilities" of the SPR.[20] The most recent test sale, while deemed successful in evaluating the drawdown and sales procedures, identified potential issues in both operational and procedural areas related to the drawdown and sale of crude oil in certain situations.[21]

On March 15, 2015, the Committee, on a bipartisan basis, sent a letter to DOE Secretary Moniz citing the need for a strategic review of the SPR and asking questions about, among other things, the size, scope, readiness and maintenance needs of the SPR.[22] Also, the Administration's recently released Quadrennial Energy Review (QER) notes that "the design of the SPR and the infrastructure for utilizing it were determined in 1975, when domestic oil production was in decline… there was no global market for oil, and there were no hedging mechanisms to manage risk."[23] The QER calls for updating the SPR "in light of changed circumstances, including significant maintenance and upgrades to enhance its distribution capability."[24]

### B. SPR Legislative Proposal Discussion Draft

The majority's SPR proposal is standalone legislation that would require the Secretary of Energy, within 180 days of enactment, to conduct a strategic review of the SPR, including identification of near and long-term roles for the SPR. Among other things, the Secretary is also required to develop and submit a plan to "achieve the optimal": 1) capacity, location and composition of petroleum products in the SPR; and, 2) storage and distributional capabilities for the Reserve. The legislation also requires the plan to estimate the (financial) resources necessary for the SPR's "long-term sustainability and operational effectiveness."

## II. ENERGY EFFICIENCY

### A. Background

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[20] U.S. Department of Energy, *Strategic Petroleum Reserve Test Sale 2014 Final Report,* at 1 (Nov. 20, 2014) (online at energy.gov/sites/prod/files/2014/11/f19/2014%20SPR%20Test%20Sale%20Final%20Report.pdf). Section 161(g) of the Energy Policy and Conservation Act (EPCA) requires the Secretary of Energy to conduct a continuing evaluation of SPR drawdown and sales procedures.

[21] *Id.*

[22] Letter from Chairman Upton, Ranking Member Pallone, et al. to Secretary Moniz (Mar. 18, 2015) (online at http://energycommerce.house.gov/letter/letter-doe-secretary-moniz-requesting-additional-information-strategic-petroleum-reserve-spr).

[23] U.S. Department of Energy, *Quadrennial Energy Review: Energy Transmission, Storage, and Distribution Infrastructure,* at 5-6 (Apr. 24, 2015) (online at energy.gov/sites/prod/files/2015/04/f22/QER%20Full%204.24.15_0.pdf).

[24] *Id.*

During the last 45 years, energy efficiency improvements have had a significant impact on the U.S. economy. For instance, an American Council for an Energy-Efficient Economy (ACEEE) study notes that between 1970 and 2012, 74% of the growth in energy demand was met through gains in efficiency rather than new energy supply.[25]

Through statutes and DOE rulemakings, dozens of national energy efficiency standards for appliances and equipment have been enacted over the past 30 years. A recent ACEEE report found that these existing standards will provide net savings of $1.1 trillion through 2035, while reducing peak electricity demand by about 240 gigawatts in 2035, and separately reducing annual carbon emissions by 470 million metric tons (the amount of carbon pollution equal to the annual emissions from approximately 118 coal-fired power plants).[26] The report states: "Absent standards, the typical household's electricity use over this period would have been about 35% higher." [27] In 2010, overall U.S. electricity use was 7% lower than it would have been without the existing standards. [28]

The ACEEE report also examined the impact of adopting new or updated standards for 34 product categories within a four-year period. ACEEE found that these new or updated standards would reduce electricity consumption by a further 7% of projected consumption in 2035. Consumers saved an estimated $170 billion over this period, and an additional 200 million metric tons of carbon pollution were avoided. According to the report, on average, the benefits of the standards would be four times higher than the costs.

In President Obama's State of the Union speech, delivered on February 12, 2013, , the President set a national goal of doubling energy productivity by 2030. In order to help achieve this goal, he proposed an energy efficiency *Race to the Top* program, to encourage states to adopt and implement effective energy efficiency policies by awarding federal financial support to the states with the best results.

The President's proposals overlap with some of the recommendations made by the Alliance to Save Energy Commission on National Energy Efficiency Policy (ASEC), which issued a report in 2013. [29] The bipartisan commission plan sets forth a range of proposals to double energy productivity by 2030, including strengthened efficiency standards and building codes, innovative financing programs, efficiency improvements to government buildings and

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[25] American Council for an Energy-Efficient Economy, *Calculating the Nation's Annual Energy Efficiency Investments* (Feb. 2013) (online at aceee.org/research-report/e133).

[26] American Council for an Energy-Efficient Economy, *The Efficiency Boom: Cashing in on the Savings from Appliance Standards* (Mar. 9, 2012) (online at aceee.org/research-report/a123).

[27] *Id.*

[28] *Id.*

[29] Rhodium Group, on behalf of the Alliance to Save Energy, *American Energy Productivity: The Economic, Environmental and Security Benefits of Unlocking Energy* Efficiency (Feb. 7, 2013).

vehicle fleets, utility policies that make full use of all cost-effective demand-side management, building efficiency information disclosure, and increased federal research, development, deployment, and technical assistance.[30] According to ASEC, achieving this goal would generate net savings of $327 billion a year, save the average household over $1,000 per year in energy costs by 2030, increase U.S. economic output by as much as 2% in 2030, and create 1.3 million jobs.[31]

### B. Energy Efficiency Discussion Draft

The majority's energy efficiency discussion draft, "Title IV – Energy Efficiency and Accountability," is comprised of a number of existing bipartisan proposals, along with some new provisions. While the discussion draft does contain provisions supported and sponsored by Democratic members of the committee, it is a product developed by the majority for discussion purposes.

The following is a section-by-section description of the Energy Efficiency discussion draft:

Sec. 4111. Energy Efficient and Energy Saving Information Technologies. This section, combined with section 4112, contain the provisions of H.R. 1268, the "Energy Efficient Technology Act," sponsored by Rep. Eshoo. The language amends the Energy Independence and Security Act of 2007 (EISA) to require federal agencies to coordinate with the Office of Management and Budget (OMB), DOE and the Environmental Protection Agency (EPA) in the development of an implementation strategy for the maintenance, purchase, and use of energy-efficient and energy- saving information technologies. The provision also sets out specific items for consideration in developing an implementation strategy and requires the establishment of performance goals for evaluating the agencies' efforts.

Sec. 4112. Energy Efficient Data Centers. This section amends EISA to require DOE and EPA to collaborate with stakeholders in the implementation of the data center energy efficiency program and other measures to improve data center energy efficiency. Among other things, the provision requires DOE to update a 2007 report to Congress on server and data center efficiency, as well as maintain a program to certify specialists in evaluating energy usage and efficiency opportunities in data center. The section also addresses public availability of Federal data center energy usage and efforts to harmonize global standards and metrics for data center efficiency.

Sec. 4113. Report on Energy and Water Savings Potential from Thermal Insulation. This section contains the provisions of H.R. 568, the "Thermal Insulation Efficiency Improvement Act," introduced by Reps. Kinzinger and McNerney. The provision requires the Secretary of Energy to report within one year on the impact of thermal insulation on both energy and water use systems for potable hot and chilled water in federal buildings and on the return on investment of installing the insulation.

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[30] *Id.*

[31] *Id.*

Sec. 4114. Federal Purchase Requirement. This provision includes multiple changes to the definition of "renewable energy" within the federal renewable energy purchase requirements established in section 203 of EPACT 2005. The first change expands the definition beyond electric energy to allow certain "thermal energy" projects –presumably geothermal heat pumps-- to qualify as renewable energy that can be purchased to meet the federal renewable purchase requirements. The provision also appears to attempt to narrow the definition of municipal solid waste eligible to satisfy renewable purchase requirements by excluding recyclable paper. Further, the language adds the term "qualified waste heat resource" to the definition of renewable energy and defines the term to include exhaust heat, gas that would otherwise be flared, incinerated or vented, and "a pressure drop in any gas for industrial or commercial process."

Sec. 4115. Repeal of Fossil Fuel Consumption Percentage Reduction Requirements for Federal Buildings. This section repeals a key portion of section 433 of EISA which established energy efficiency performance standards for the design of new federal buildings and those federal buildings undergoing major renovations. The provision strikes language in current law that requires federal buildings to be designed to result in decreased consumption of fossil fuels, including a 100 percent reduction by 2030 compared to a similar building in 2003.

Sec. 4121. No Warranty For Certain Certified Energy Star Products. This section contains the provisions of H.R. 504, the "Energy Star Program Integrity Act," introduced by Reps. Latta and Welch. The language amends the Energy Star program codified in EPACT 2005 to limit the liability arising from the disqualification of a product from Energy Star under certain circumstances. The provision also gives the EPA Administrator to approve corrective measures and decide whether or not consumer compensation is appropriate when making a determination as to whether a product qualifies for the liability shield.

Sec. 4122. Inclusion of Smart Grid Capability on Energy Guide Labels. This section contains provisions of section 4 of H.R. 2685, the "Smart Grid Advancement Act of 2013," sponsored by Rep. McNerney in the 113th Congress. The language amends section 324 of EPCA to direct the Federal Trade Commission (FTC) to initiate and complete within a three-year period, a rulemaking develop labels informing consumers of the capabilities and limitations of certain products enabled for "smart grid" use.

Sec. 4123. Voluntary Verification Programs for Air Conditioning, Furnace, Boiler, Heat Pump, and Water Heater Products. This section is analogous to H.R. 1785, the "Voluntary Verification Program Act of 2015," introduced by Rep. Latta. Under Title III of EPCA, the Secretary sets mandatory standards for energy efficiency, while the Secretary and EPA Administrator establish voluntary standards under the Energy Star Program. Title III also lays out requirements for the testing and verification of products subject to mandatory or voluntary standards. The language in this section requires the Secretary to recognize voluntary verification programs for certain products to demonstrate compliance with DOE energy efficiency and conservation standards. It also makes similar changes with regard to compliance with the voluntary standards established through the Energy Star Program; it is unclear what, if any impact, this change would have on liability limitation included in section 4121.

Sec. 4124. Residential Non-Weatherized Gas Furnaces and Mobile Home Furnaces. Prohibits DOE from promulgating a final rule updating efficiency standards for non-weatherized gas furnaces and mobile home furnaces until an advisory group completes an analysis of and determination regarding, the technical feasibility and economic justification for a nationwide efficiency standard that "would effectively require such furnaces to be condensing furnaces." The language requires that the advisory group include, at a minimum: manufacturers and distributors of, and contractors that work with, certain natural gas furnaces, home builders, building owners, natural gas utilities, and electric utilities, as well as energy efficiency advocates and consumer groups. In addition, the provision mandates certain factors be examined in the required analysis, including "the projected industry-wide loss in net present value to original equipment manufacturers that would result from adoption of such a nationwide standard.

Sec. 4131. Greater Energy Efficiency in Building Codes. This section contains the provisions of H.R. 1273. The "Energy Savings and Building Efficiency Act," introduced by Reps. Blackburn and Schrader. Proponents of these provisions say they are intended to increase transparency and cost-effectiveness in the development of model energy codes, which set the baseline for energy efficiency in buildings, by ensuring that DOE code change proposals: 1) are made available to the public, including calculations on costs and savings; 2) are subject to the official rulemaking process, allowing for public comment; and 3) take into account small business concerns. This section also prohibits DOE from advocating for certain technologies, building materials or construction practices and requires that any code or proposal supported by the DOE has a payback of ten years or less.

Sec. 4141. Use of Energy and Water Efficiency Measures in Federal Buildings. This section contains the provisions of H.R. 1629, the "Energy Savings Through Public-Private Partnerships Act," sponsored by Reps. Kinzinger and Welch. The language requires Federal energy managers to provide, as part of their compliance certifications, an explanation regarding any life-cycle cost-effective energy-saving or water-saving measures that have not been implemented. It also requires DOE to report on: 1) the status of each federal agency's energy savings performance and utility energy service contracts; 2) the investment value of those contracts; 3) the guaranteed energy savings for the previous year relative to the actual energy savings for the previous year; 4) the plan for entering into such contracts in the next year; and, 5) why any previously submitted plans for such contracts were not implemented. In addition, the provision amends the definition of federal building energy conservation measures to include improvements to "energy consuming devices and required support structures." The provision also prohibits federal agencies from limiting the recognition of operation and maintenance savings associated with systems modernized or replaced with the implementation of energy conservation measures, water conservation measures, or any series of energy conservation measures and water conservation measures. Furthermore, the language provides for the inclusion of related operation and maintenance expenses in federal agency payments of energy, water and wastewater treatment expenses, pursuant to an energy savings performance or utility energy service contract.

The provision revises the definition of "energy savings" to include 1) the use, sale, or transfer of energy incentives, rebates, or credits from governments or utilities as well as 2) any

revenue generated from a reduction in energy or water use, more efficient waste recycling, or additional energy generated from more efficient equipment.

Sec. 4142. Utility Energy Service Contracts. This section contains the provisions of H.R. H.R. 1630, the "Utility Energy Service Contracts Improvement Act," sponsored by Reps. Kinzinger and Welch. This provision authorizes federal agencies to award Utility Energy Service Contracts (USECs) for a period of up to 25 years, and it directs that a USEC must include requirements for measurement, verification, and performance assurances of the energy savings expected to be gained through the USEC.

Sec. 4151. Coordination of Energy Efficiency Retrofitting Assistance for Schools. This section contains the provisions of H.R. 756, the "Streamlining Energy Efficiency for Schools Act" sponsored by Reps. Cartwright and Welch. This provision amends the Energy Policy and Conservation Act to require DOE's Office of Energy Efficiency and Renewable Energy (EERE) to establish a clearinghouse to disseminate information regarding available programs and financing mechanisms that may be used to help initiate, develop, and finance energy efficiency, distributed generation, and energy retrofitting projects for schools. The language requires EERE to consult with appropriate agencies to develop a list of programs and financing mechanisms that are, or may be, used for the projects. It also requires EERE to coordinate with appropriate agencies to develop a collaborative education and outreach effort to streamline communications and promote the programs and financing mechanisms.

## III. WITNESSES

The following witnesses have been invited to testify:

**Panel One:**

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

**Panel Two:**

**Christopher Peel**
Corporate Senior Vice President and Chief Operation Officer
Rheem Manufacturing Company
*On behalf of the Air-Conditioning, Heating, and Refrigeration Institute*

**Kateri Callahan**
President
Alliance to Save Energy

**Frank Thompson,**
President
Sweetwater Builders, Inc.

*On behalf of the National Association of Home Builders*

**Elizabeth Noll**
Energy Efficiency Advocate
Natural Resources Defense Council

**John W. Somerhalder II**
Chairman, President and Chief Executive Officer
AGL Resources
*On behalf of the American Gas Association*

**Rona Newmark**
Vice President, Intelligent Efficiency Strategy
EMC Corp.
*On behalf of the Information Technology Industry Council*

**Mark Wagner**
Vice President, U.S. Government Relations
Johnson Controls, Inc.
*On behalf of the Federal Performance Contracting Coalition*