

ONE HUNDRED FOURTEENTH CONGRESS
Congress of the United States
House of Representatives
COMMITTEE ON ENERGY AND COMMERCE
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MEMORANDUM

February 10, 2015

To: Subcommittee on Energy and Power Democratic Members and Staff

Fr: Committee on Energy and Commerce Democratic Staff

Re: Hearing on “Fiscal Year 2016 Department of Energy Budget”

On Wednesday, February 11, 2015, at 2:00 p.m., in room 2123 of the Rayburn House Office Building, the Subcommittee on Energy and Power will hold an oversight hearing on the proposed budget for the Department of Energy (DOE) for fiscal year (FY) 2016.

I. THE FY 2016 DOE BUDGET REQUEST

The President’s FY 2016 budget requests \$29.9 billion for DOE, which represents a \$2.5 billion increase (9.2%) from the FY 2015 enacted level.¹ The proposed FY 2016 budget provides increases for Administration priorities, including energy efficiency and renewable energy, investments in energy infrastructure technologies to improve electric grid reliability and reduce methane emissions from natural gas systems, and the Advanced Research Projects Agency – Energy (ARPA-E). The proposed FY 2016 budget also funds cleaner fossil fuels, continues to support advances in various carbon capture and sequestration (CCS) technologies, including a focus on enhancing CCS from natural gas systems. The requested funding will continue to support the President’s Climate Action Plan, building on the progress made toward achieving the goal of cutting carbon pollution 17% below 2005 levels by 2020 and 26-28% by 2025, and creating a clean energy economy, US energy independence, and American leadership in the clean energy sector.²

¹ Department of Energy, *FY 2016 Congressional Budget Request – Budget in Brief*, at 1 (Feb. 2, 2015) (online at www.energy.gov/sites/prod/files/2015/02/f19/FY2016BudgetInBrief.pdf).

² Office of Management and Budget, *Middle Class Economics: Building a Clean Energy Economy, Improving Energy Security, and Taking Action on Climate Change* (Feb. 2, 2015) (online at www.whitehouse.gov/sites/default/files/omb/budget/fy2016/assets/fact_sheets/building-a-clean-energy-economy-improving-energy-security-and-taking-action-on-climate-change.pdf).

The table below compares the funding levels for specific DOE offices and programs under the \$29.9 billion FY 2016 budget request with funding levels in prior fiscal years.

**Table I. Department of Energy
Budget by Appropriation**
(\$ millions)

	FY2014 Enacted	FY2015 Enacted	FY2016 Request
ENERGY PROGRAMS			
Energy Efficiency and Renewable Energy	\$1,900.6	\$1,914.2	\$2,723.0
Electricity Delivery and Energy Reliability	147.2	147.0	270.1
Nuclear Energy	888.4	833.4	907.6
Fossil Energy R&D	561.9	560.6	560.0
Naval Petroleum and Oil Shale Reserves	20.0	20.0	17.5
Strategic Petroleum Reserve	189.4	200.0	257.0
Northeast Home Heating Oil Reserve	8.0	1.6	7.6
Uranium D&D Fund	598.6	625.0	542.3
Energy Information Administration	117.0	117.0	131.0
Non-Defense Environmental Cleanup	231.7	246.0	220.2
Science	5,066.4	5,067.7	5,339.8
Advanced Research Projects Agency – Energy (ARPA-E)	280.0	280.0	325.0
Departmental Admin. (net)	126.4	125.1	153.5
Office of Indian Energy Policy and Programs	2.5	16.0	20.0
Office of Inspector General	42.1	40.5	46.4
Innovative Technology Loan Guarantee Program	20.0	17.0	—
Advanced Technology Vehicles Manufacturing Loan Program	6.0	4.0	6.0
Tribal Indian Energy Loan Guarantee Program	—	—	11.0
TOTAL, ENERGY PROGRAMS	10,203.8	10,208.0	11,538.0
DEFENSE ACTIVITIES			
National Nuclear Security Administration (NNSA)			
Weapons Activities	7,781.0	8,180.3	8,846.9
Nuclear Nonproliferation	1,954.0	1,615.2	1,940.3
Naval Reactors	1,095.0	1,233.8	1,375.5
Federal Salaries and Expenses	377.0	369.6	402.7
Total, NNSA	11,207.0	11,399.0	12,565.4
Defense Environmental Cleanup	5,000.0	5,453.0	5,527.3
Other Defense Activities	755.0	753.0	774.4

	FY2014 Enacted	FY2015 Enacted	FY2016 Request
Defense Nuclear Waste Disposal	—	—	—
TOTAL, DEFENSE ACTIVITIES	16,962.0	17,605.5	18,867.2
POWER MARKETING ADMINISTRATION (PMAs)			
Southeastern	—	—	—
Southwestern	11.9	11.4	11.4
Western	95.9	91.7	93.4
Colorado River Basins	-23.0	-23.0	-23.0
TOTAL: PMAs	85.2	80.4	82.0
Total	27,224.8	27,402.4	29,923.8

Source: FY2016 DOE budget request

The following sections provide additional information on important aspects of DOE’s proposed budget for FY 2016, specifically crosscutting programs.

A. Renewable Energy and Energy Efficiency

The President’s FY 2016 budget requests \$2.7 billion for DOE’s renewable energy and energy efficiency programs, an increase of 42.3% above FY 2015 enacted levels.³ This funding will support applied research, development, demonstration, and deployment related to renewable electricity, energy efficiency, and sustainable transportation. These efforts will advance new and innovative clean energy technologies and strengthen energy efficiency standards to help the nation respond to the challenge of climate change and grow the clean energy economy.

Consistent with the President’s goals, specific funding increases in the FY 2016 budget (relative to FY 2015 enacted levels) center on advanced vehicles and cleaner transportation fuels, with a particular focus on vehicle electrification (+32%); efforts to make renewable electricity from solar, wind, water, and geothermal sources more affordable and more easily integrated into the grid (+41%); and energy efficiency and advanced manufacturing activities (+60%).⁴ The energy efficiency and advanced manufacturing request includes, among other changes, an increase for two additional Clean Energy Manufacturing Innovation Institutes and for research and development on advanced manufacturing and materials (+100%), and increased funding for

³ Department of Energy, *FY 2016 Congressional Budget Request – Budget in Brief*, at 22 (Feb. 2, 2015) (online at www.energy.gov/sites/prod/files/2015/02/f19/FY2016BudgetInBrief.pdf).

⁴ *Id.* at 29.

the Weatherization Assistance Program (+31%),⁵ which helps “increase weatherization retrofits to approximately 33,000 low-income homes nationwide.”⁶

B. Electric Grid Modernization and Enhanced Reliability

The President’s FY 2016 budget request for activities related to electric grid modernization and energy infrastructure resiliency is \$270 million, an increase of 83.3% above FY 2015 enacted levels.⁷ This funding will support the development of next generation technologies and management approaches, the development of reliable electricity infrastructure, and the strengthening of the physical and cyber security of the country’s energy delivery system.

Specifically, the request provides increased funding for enhanced reliability and resiliency and the modernization of the electric system through development of monitoring, analytical decision support, and control capabilities necessary to operate and plan the grid (+17%); development of smart grids to improve reliability, resiliency, and the operational efficiency of the grid (+94%); development and deployment of energy storage to enhance system reliability and resilience and enable greater adoption of renewable energy (+75%); assistance to states, regions, and tribes to facilitate the development of reliable and affordable electricity infrastructure as well as funding related to cross-border transmission and transmission projects on federal lands (+25%); and significantly increased funding for efforts to secure the U.S. energy infrastructure from hazards and to help it more quickly recover from disruptions (+133%).⁸

The President’s FY 2016 budget request also includes \$63 million for the new State Energy Reliability and Assurance Grants Program. This new initiative will help support states, localities and tribes, in long-term planning to address “reliability, efficiency, environmental protection (including climate adaptation), and climate resilience planning and action.”⁹

C. Carbon Capture and Sequestration and Natural Gas

The President’s FY 2016 budget request for research related to carbon capture and sequestration (CCS) is \$369 million, a decrease of 7.7% below FY 2015 enacted levels.¹⁰ While the FY 2016 budget request for CCS is below FY 2015 enacted levels, DOE also continues to fund and manage a robust portfolio of CCS research and demonstration projects funded using prior-year appropriations under the Clean Coal Power Initiative and the American Recovery and

⁵ *Id.* at 31.

⁶ Department of Energy, *Fiscal Year 2016 Budget Presentation*, at 7 (Feb. 2, 2015).

⁷ Department of Energy, *FY 2016 Congressional Budget Request – Budget in Brief*, at 32 (Feb. 2, 2015) (online at www.energy.gov/sites/prod/files/2015/02/f19/FY2016BudgetInBrief.pdf).

⁸ *Id.*

⁹ Department of Energy, *FY 2016 Congressional Budget Request – Volume 3* (Feb. 2, 2015) (online at www.energy.gov/sites/prod/files/2015/02/f19/FY2016BudgetVolume3_6.pdf).

¹⁰ Department of Energy, *FY 2016 Congressional Budget Request – Budget in Brief*, at 35 (Feb. 2, 2015) (online at www.energy.gov/sites/prod/files/2015/02/f19/FY2016BudgetInBrief.pdf).

Reinvestment Act. Additionally, the FY 2016 budget request for DOE's CCS programs expands DOE's existing coal and industrial CCS project portfolio to fund a new program to demonstrate CCS at natural gas power systems.¹¹ The President's FY 2016 budget request also includes \$19.3 million (+93%) for a new subprogram focused on Supercritical Carbon Dioxide Technology. Development of these technologies will help improve, "efficiency, cost, footprint and water use," for most heat sources, with the goal of reducing the overall costs of CCS.¹²

The President's FY 2016 budget request also includes \$44 million for other natural gas technologies, an increase of 75% above FY 2015 enacted levels.¹³ This request includes \$15 million in new funding to reduce methane emissions from natural gas systems, \$10 million in new funding to help quantify methane emissions from the natural gas value chain, as well as \$19 million to reduce the environmental impacts of shale gas development. These investments will help cut carbon pollution and reduce other environmental impacts while minimizing waste of the nation's valuable and finite natural gas resources.¹⁴

D. Research and Development of Breakthrough Technologies

Created in 2007, ARPA-E "catalyzes and accelerates energy technologies that will enhance the economic and energy security of the United States through the development of transformational technologies that reduce imports of energy from foreign sources, increase energy efficiency, and reduce energy-related emissions, including greenhouse gas emissions."¹⁵ ARPA-E looks for a credible path to commercialization when launching projects, and it has a dedicated technology-to-market team to assist with its projects. To date, the program has funded over 400 projects.¹⁶

The President's FY 2016 budget request for ARPA-E is \$325 million, an increase of 16% above FY 2015 enacted levels. The funding will support two broad thematic strategic areas: (1) transportation systems, which seek to create a diverse set of technological options to reduce the country's dependence on oil; and (2) stationary power systems, which seek to create a diverse set

¹¹ *Id.*

¹² *Id.* at 37; *see also* Department of Energy, *FY 2016 Congressional Budget Request – Volume 3* (Feb. 2, 2015) (online at www.energy.gov/sites/prod/files/2015/02/f19/FY2016BudgetVolume3_6.pdf).

¹³ Department of Energy, *FY 2016 Congressional Budget Request – Budget in Brief*, at 35 (Feb. 2, 2015) (online at www.energy.gov/sites/prod/files/2015/02/f19/FY2016BudgetInBrief.pdf).

¹⁴ Department of Energy, *FY 2016 Congressional Budget Request – Volume 3* (Feb. 2, 2015) (online at www.energy.gov/sites/prod/files/2015/02/f19/FY2016BudgetVolume3_6.pdf).

¹⁵ Department of Energy, *FY 2016 Congressional Budget Request – Budget in Brief*, at 43 (Feb. 2, 2015) (online at www.energy.gov/sites/prod/files/2015/02/f19/FY2016BudgetInBrief.pdf).

¹⁶ *Id.*

of technological options to reduce energy demand, create low-cost renewable power generation, and provide greater reliability and security in the delivery of electricity.¹⁷

E. Potential Areas of Interest Not Funded

There are some areas of potential interest to Members not funded in the Department's FY 2016 Budget.

First, like last year's budget, the FY 2016 request does not propose specific funding to address impacts from unconventional oil development, such as shale oil production in the Bakken and Eagle Ford formations. These are areas where widespread flaring of natural gas continues to result in carbon pollution and wasted natural gas resources.

Second, the budget again fails to request funds to continue activities related to the establishment of a permanent high-level nuclear waste repository at Yucca Mountain in Nevada as provided for in the Nuclear Waste Policy Act. Instead, the Department continues to pursue strategies for consent based-interim storage and permanent disposal sites along lines recommended by the President's Blue Ribbon Panel on nuclear waste. Dr. Moniz served as a member of that panel prior to becoming Secretary of Energy.

II. WITNESS

The following witness has been invited to testify:

The Honorable Ernest Moniz
Secretary
U.S. Department of Energy

¹⁷ Department of Energy, *FY 2016 Congressional Budget Request –Volume 4* (Feb. 2, 2015) (online at www.energy.gov/sites/prod/files/2015/02/f19/FY2016BudgetVolume4_5.pdf).