



U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON ENERGY AND COMMERCE

February 29, 2016

TO: Members, Subcommittee on Energy and Power

FROM: Committee Majority Staff

RE: Hearing on “The Fiscal Year 2017 Department of Energy Budget”

On Wednesday, March 2, 2016, at 10:00 a.m. in 2123 of the Rayburn House Office Building, the Subcommittee on Energy and Power will hold a hearing on the U.S. Department of Energy’s budget request for Fiscal Year (FY) 2017.

I. WITNESS

- **The Honorable Ernest J. Moniz**, Secretary, U.S. Department of Energy

II. BACKGROUND

The U.S. Department of Energy (DOE) traces its origins to the World War II Manhattan Project and to the Atomic Energy Act of 1946, amended in 1954. The Atomic Energy Act established the fundamental law for the civilian development and control of nuclear energy. DOE was guided by the policy that, subject to the needs of common defense and security, the research, development, and control of nuclear energy and related technology would be directed toward “improving the public welfare, increasing the standard of living, strengthening free competition in private enterprise, and promoting world peace.”¹

DOE in its current form was established in 1977 pursuant to the Department of Energy Organization Act, which consolidated its core atomic energy and research and development (R&D) programs and responsibilities with various energy-related agencies into a single department.² DOE is comprised of 10 program offices, 21 staff offices, 10 field offices, 21 lab and technology centers, 4 power marketing administrations, as well as the Energy Information Administration and the National Nuclear Security Administration.³ DOE has 14,915 Federal employees and 93,485 contractors (as of the end of FY 2015).⁴

DOE currently engages in a broad range of national security, scientific, and environmental activities, including maintenance of the nation’s nuclear weapons program,

¹ See Atomic Energy Act of 1954 ([42 U.S.C. § 2011 et seq.](#)).

² See [Department of Energy Organization Act \(August 4, 1977\)](#).

³ See [Organization Chart](#); [DOE Offices](#). The Federal Energy Regulatory Commission (FERC) is an independent agency within DOE. FERC is self-funding, recovering costs directly from the industries it regulates through annual charges and fees. See [About FERC](#).

⁴ See [Fiscal Year 2015 Agency Financial Report](#).

nuclear propulsion work for the U.S. Navy, environmental cleanup of the nuclear weapons complex, nuclear waste management and disposal, as well as promotion of scientific and technical innovation, energy conservation, and energy-related research, and other activities.⁵

On February 9, 2016, President Obama proposed a budget of \$32.5 billion for DOE for FY 2017 (October 1, 2016 to September 30, 2017).⁶ The budget requests a 9.8 percent increase, or \$2.9 billion, above the FY 2016 enacted level. FY 2017 funding requests for select offices and programs, and the percentage increase or decrease from the FY 2016 enacted levels, are summarized below:

Mission Innovation: \$5.86 billion (+21%)

Energy Efficiency and Renewable Energy: \$2.1 billion

Electricity Delivery and Reliability: \$177 million

Fossil Energy Research and Development: \$564 million

Nuclear Energy: \$804 million

ARPA-E: \$350 million

Science: \$1.9 billion

Advanced Materials for Energy Innovations: \$113.5 million

Crosscutting Activities to Advance National Energy Goals: \$1.4 billion (+29%)

Energy-Water Nexus: \$96.1 million (+240%)

Exascale Computing: \$285 million (+13%)

Grid Modernization: \$378.5 million (+28%)

Subsurface Technology and Engineering: \$258.3 million (+25%)

Supercritical CO2: \$36.3 million (+12%)

Cybersecurity: \$333.5 million (+3%)

Science and Energy

Office of Science: \$5.57 billion (+4.2%)

Energy Efficiency and Renewable Energy: \$2.9 billion (+40.1%)

Vehicle Technologies: \$469 million (+51.1%)

Bioenergy Technologies: \$279 million (+24%)

Hydrogen and Fuel Cell Technologies: \$106 million (+4.5%)

Solar Energy: \$285.1 million (+18%)

Wind Energy: \$156 million (+63.4%)

Water Power: \$80 million (+14.3%)

Geothermal Technology: \$99.5 million (+40.1%)

Advanced Manufacturing: \$261 million (+14.2%)

Federal Energy Management Program: \$43 million (+59.3%)

Building Technologies: \$289 million (+44.1%)

21st Century Clean Transportation Plan Investments (*mandatory funding*): \$1.3 billion (N/A)

⁵ For links to the offices and descriptions of activities, see [DOE Offices](#).

⁶ For DOE budget materials, see [DOE FY 2017 Budget \(Justification and Supporting Documents\)](#); [President's FY 2017 Budget Department of Energy](#).

Weatherization and Intergovernmental Programs: \$326 million (+23%)
Corporate Support: \$290.9 million (+22.2%)

Electricity Delivery and Energy Reliability: \$262.3 million (+27.3%)
Clean Energy Transmission and Reliability: \$30.3 million (-22.3%)
Smart Grid R&D: \$30 million (-14.3%)
Cybersecurity for Energy Delivery Systems: \$45.5 million (-26.6%)
Energy Storage: \$44.5 million (+117.1%)
Infrastructure Security and Energy Restoration: \$17.5 million (+94.4%)
National Electricity Delivery: \$6.5 million (-13.3%)
Transformer Resilience and Advanced Components: \$15 million (+200%)
State Energy Assurance: \$15 million (N/A)
Grid Institute: \$14 million (N/A)
State Distribution-Level Reform Program: \$15 million (N/A)

Fossil Energy Programs: \$878.5 million (+1.1 million)
Fossil Energy Research and Development: \$360 million (-43%)
Carbon Capture: \$170.3 million (+30%)
Carbon Storage: \$90.8 million (-14%)
Advanced Energy Systems: \$47.8 million (-47%)
Cross Cutting Research: \$59.3 million (+17%)
Fuel Supply Impact Mitigation⁷: \$26.5 million (-38.4%)
Unconventional Fossil Energy Technologies: N/A
NETL Research and Operations: \$76.1 million (-17.3%)
NETL Infrastructure: \$68 million (+75%)
Strategic Petroleum Reserve: \$257 million (+21.2%)
Northeast Home Heating Oil Reserve: \$6.5 million (-14.5%)
Naval Petroleum and Oil Shale Reserves: \$14.9 million (-14.6%)

Office of Nuclear Energy: \$993.9 million (+0.8%)
Nuclear Energy Enabling Technologies: \$89.5 million (-19.8%)
Reactor Concepts R&D: \$108.8 million (-23.3%)
Fuel Cycle R&D: \$250 million (+22.6%)
SMR Licensing Technical Support: \$89.6 million (+43.4%)

Advanced Research Projects Agency - Energy: \$500 million (+72%)

Advanced Research Projects Agency - Energy Projects: \$318 million (+21.5%)
Program Direction: \$32 million (+9.4%)
Advanced Research Projects Agency - Energy Trust (*mandatory funding*): \$150 million (N/A)

Management and Performance

Environmental Management: \$6.1 billion (-1.6%)
Office of Legacy Management: \$154.3 million (-7.7%)
Management: \$59.1 million (-9.1%)

⁷ Formerly Natural Gas Technologies.

Hearing and Appeals: \$5.9 million (+7.6%)
Economic Impact and Diversity: \$11.3 million (+13.2%)
Office of Energy Jobs Development: \$4 million (N/A)

Nuclear Security

National Nuclear Security Administration (NNSA): \$12.9 billion (+3%)
Weapons Activities: \$9.2 billion (+4%)
Defense Nuclear Nonproliferation: \$1.8 billion (-7%)
Naval Reactors: \$1.4 billion (+3%)
Federal Salaries and Expenses⁸: \$412.8 million (+13.5%)

Credit Programs

Innovative Technology Loan Guarantee Program: \$10 million (-41.2%)
Advanced Technology Vehicles Manufacturing Loan Program: \$5 million (-16.7%)

Corporate Management

Congressional and Intergovernmental Affairs: \$6.2 million (-1.6%)
International Affairs: \$19.1 million (+6.2%)
Energy Policy and Systems Analysis: \$31 million (-0.9%)

Other Offices and Programs

Energy Information Administration (EIA): \$131.1 million (+7.5%)
Power Marketing Administrations: \$83.8 million (+2.3%)
Federal Energy Regulatory Commission: -\$9.43 million (+60%)
Departmental Administration: \$144.8 million (+10.6%)
Office of the Inspector General: \$44.4 million (-4.3%)
Environment, Health, Safety and Security: \$197.2 million (+9%)

III. MISSION INNOVATION

In December 2015, President Obama, along with other world leaders, met in Paris for the 21st Convention of Parties (COP 21) of the United Nations Framework Convention on Climate Change (UNFCCC). As part of COP 21, the United States and 19 other countries launched Mission Innovation, an initiative to accelerate global clean energy innovation by doubling each participating country's public investment in clean energy research and development over the next five years.⁹ Mission Innovation is intended to complement the Breakthrough Energy Coalition, although the two initiatives are not formally affiliated.¹⁰

On February 6, 2016, President Obama issued a [Presidential Memorandum](#) outlining his commitment to the Mission Innovation initiative by announcing \$7.7 billion in discretionary funding for research and development of clean energy activities across 12 agencies, including

⁸ Formerly Office of the Administrator.

⁹ See White House Fact Sheet: "Mission Innovation" (Nov. 29, 2015), available at <https://www.whitehouse.gov/the-press-office/2015/11/29/fact-sheet-mission-innovation>.

¹⁰ See "Breakthrough Energy Coalition," available at <http://www.breakthroughenergycoalition.com/en/index.html>.

DOE.¹¹ Nearly 80 percent of the government-wide Mission Innovation investment supports DOE efforts to bolster clean energy technologies. Specifically, DOE requests \$5.8 billion in discretionary funding for Mission Innovation-related research, development, and demonstration activities, a 21 percent increase from the FY 2016 baseline of \$4.8 billion.¹²

IV. QUADRENNIAL ENERGY REVIEW

On January 9, 2014, President Obama issued a [Presidential Memorandum](#) establishing a Quadrennial Energy Review (QER) Task Force to review existing energy policies in the context of current economic, environmental, and security conditions and provide recommendations for additional executive and legislative actions, as well as establishing priorities for research and development. The QER Task Force is co-chaired by the Director of the Office of Science and Technology Policy and the Special Assistant to the President for Energy and Climate Change, and includes the heads of many other executive agencies and departments, with DOE providing support for inter-agency coordination. DOE's Office of Energy Policy and Systems Analysis (EPSA) serves as the coordinating office for the QER.

On April 21, 2015, the QER Task Force released the report for the [first installment](#) of the QER.¹³ The report highlighted a variety of challenges facing the nation's energy transmission, storage, and distribution systems. The second installment of the QER, which is currently underway, will conduct a comprehensive review of the nation's electricity system, from generation to end use, including a more comprehensive look at electricity transmission, storage, and distribution infrastructure covered in installment one.¹⁴ Throughout 2016, the QER Task Force will hold a series of public meetings to discuss and receive comments on the issues raised in the first review as they related to the second installment. DOE's FY 2017 budget request seeks \$31 million, a \$297,000 decrease from the FY 2016 enacted level of \$31.297 million, to carry out QER-related activities.

V. ISSUES

The following issues may be examined at the hearing:

- Funding priorities;
- Major budget changes;
- Energy-related rulemakings;
- Priority science and research;
- Loans and grants; and

¹¹ See White House Fact Sheet: "President's Budget Proposal to Advance Mission Innovation" (Feb. 6, 2016), available at <https://www.whitehouse.gov/the-press-office/2016/02/06/fact-sheet-presidents-budget-proposal-advance-mission-innovation>.

¹² See DOE Budget Request FY 2017, available at <http://www.energy.gov/cfo/downloads/fy-2017-budget-justification>.

¹³ See DOE QER: "First Installment," available at <http://energy.gov/epsa/downloads/quadrennial-energy-review-first-installment>.

¹⁴ See DOE QER: "Second Installment," summary available at <http://energy.gov/epsa/quadrennial-energy-review-second-installment>.

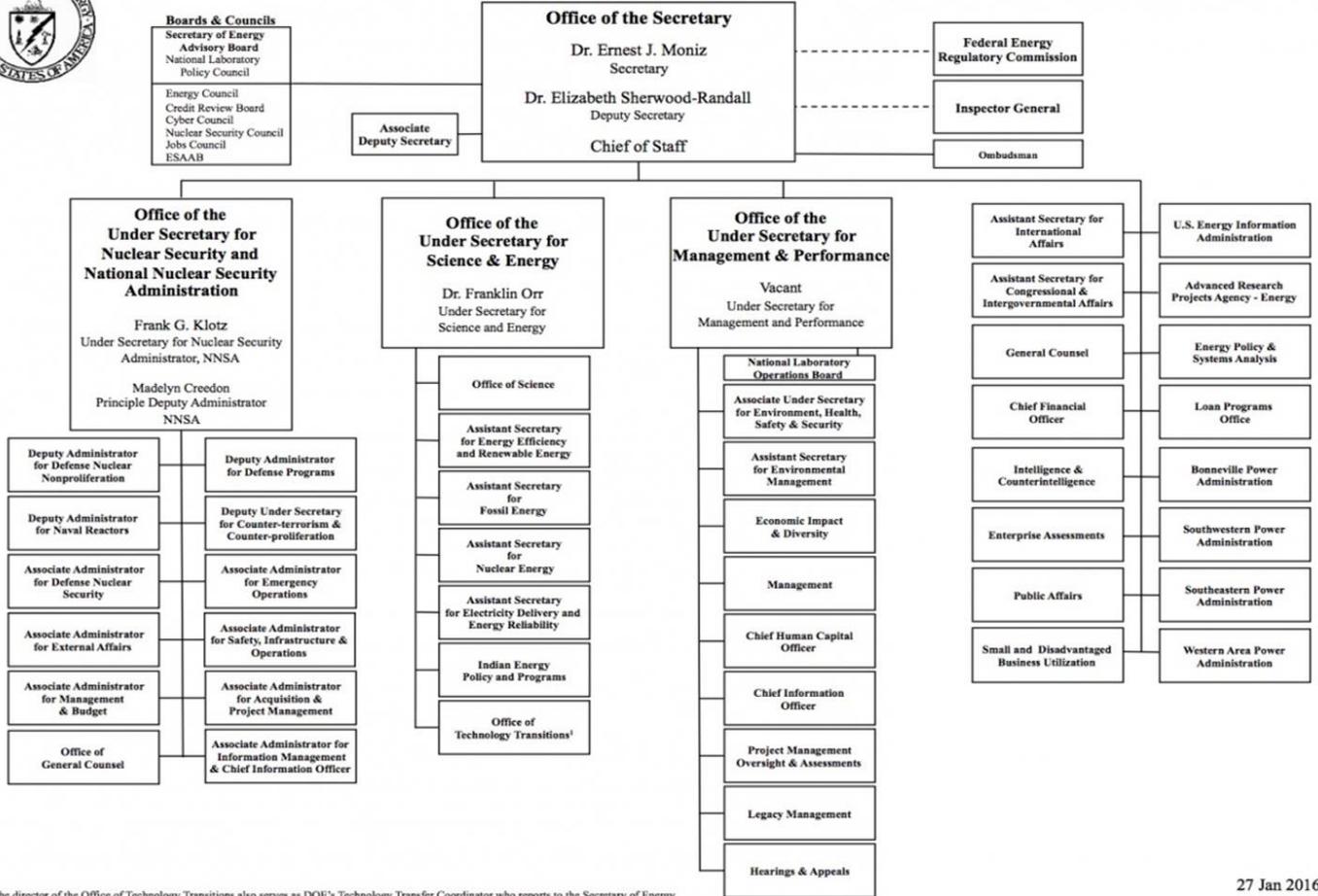
- Management and security reforms.

VI. STAFF CONTACT

If you have any questions regarding the hearing, please contact Tom Hassenboehler of the Committee staff at (202) 225-2927.

Appendix 1

DEPARTMENT OF ENERGY



¹ The director of the Office of Technology Transitions also serves as DOE's Technology Transfer Coordinator who reports to the Secretary of Energy