



October 10, 2017

TO: Members, Subcommittee on Energy

FROM: Committee Majority Staff

RE: Hearing entitled “Department of Energy Management and Mission Priorities”

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## I. INTRODUCTION

The Subcommittee on Energy will hold a hearing on Thursday, October 12, 2017, at 10:00 a.m. in 2123 Rayburn House Office Building. The hearing is entitled “Department of Energy Missions and Management Priorities.” The hearing will examine the Secretary of Energy’s management and mission priorities for the Department of Energy (DOE). It will also provide Members information to help assess what is necessary to ensure DOE organization and management, missions, and mission-enabling science align with the national security, energy security, and environmental imperatives of the coming decades.

## II. WITNESS

- **The Honorable Rick Perry**, Secretary, U.S. Department of Energy

## III. BACKGROUND

The U.S. Department of Energy is one of the more diverse Cabinet agencies: it performs critical nuclear weapons, national security, and energy security missions; maintains world-class scientific, technological, and engineering capabilities; operates as the largest non-Defense department contracting agency in the federal government; and conducts some of the most challenging environmental remediation projects in the world.

The Department traces its origins and core nuclear weapons, scientific, and technological missions to the World War II Manhattan Project and subsequently, to the Atomic Energy Act of 1946, amended in 1954, which established the Atomic Energy Commission and the nation’s policy of civilian control of nuclear energy.<sup>1</sup> By the early 1970s, concerns about domestic energy supplies and shortages led to more focused attention on energy research and development, as

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<sup>1</sup> See Atomic Energy Act of 1954 ([42 U.S.C. § 2011 et seq.](#)). This policy maintained 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.” It served as a guiding policy for civilian nuclear power development in the United States and export of U.S. nuclear technology internationally.

well as regulatory interventions to ensure reliable and affordable energy supplies.<sup>2</sup> By 1977, in response to the continued energy concerns of the time, Congress and the Administration sought to develop a structure for implementing a coherent national energy policy. As a result, Congress established DOE in its current form, pursuant to the Department of Energy Organization Act.<sup>3</sup> The new agency consolidated the core nuclear weapons and R&D programs of its predecessor agencies with other energy-related programs from throughout the federal government into a single department under the authority of a single Cabinet Secretary.<sup>4</sup>

Today, the Secretary of Energy is responsible for a broad range of national security, scientific, and environmental activities, including maintenance of the nation's nuclear weapons program, nuclear propulsion work for the U.S. Navy, environmental cleanup of the nuclear weapons complex, nuclear waste management and disposal. The Department supports and conducts basic science research and advanced computing research, promotes scientific and technical innovation, energy conservation, and energy-related research. It maintains a strategic petroleum reserve and conducts programs to ensure domestic energy security, reliability, and resilience. It conducts some regulatory programs, and provides a central energy data collection and analysis program through the Energy Information Administration.<sup>5</sup> The Secretary oversees the Department's performance of these various missions through a nationwide enterprise that is comprised of 64 sites across 29 states and the District of Columbia, including 17 National Laboratories. (See Attached.) Roughly 13,500 Federal employees and 96,000 contractors execute these missions.<sup>6</sup>

**Recent budgets.** In the past two fiscal years, DOE has been appropriated roughly \$30 billion to perform its missions. Under the enacted FY 2017 appropriation, defense activities—the National Nuclear Security Administration (NNSA) and environmental cleanup—accounted for \$19.6 billion or roughly 60 percent of the agency's budget. \$11.2 billion was provided for the Department's energy-related programs. These programs include science programs, at about \$5.4 billion; the energy efficiency and renewable energy (EERE) programs, at about \$2 billion, nuclear energy programs at \$1 billion, fossil energy R&D at \$670 million; and electricity delivery and energy reliability programs at \$230 million.<sup>7</sup>

In May this year, President Trump requested \$28 billion for DOE's FY 2018 budget. The request included a \$1.4 billion increase over FY 2016 in NNSA programs and reductions of

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<sup>2</sup> In light of the changing energy policy demands, Congress disbanded the Atomic Energy Commission in 1975 and transferred its nuclear regulatory functions to a newly established Nuclear Regulatory Commission and its defense and R&D moved with other federal energy research programs to a new agency, the Energy Research and Development Organization.

<sup>3</sup> See [Department of Energy Organization Act \(August 4, 1977\)](#); see also [42 U.S.C Chapter 84](#).

<sup>4</sup> See [A Brief History of the Department of Energy](#) and ["The Institutional Origins of the Department of Energy"](#) available at [energy.gov](http://energy.gov)

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

<sup>6</sup> See [Fiscal Year 2016 Agency Financial Report](#).

<sup>7</sup> For DOE budget specifics, see [DOE FY 2018 Budget \(Justification and Supporting Documents\)](#); See also, ["The President's FY2018 budget Request for the Department of Energy."](#) Congressional Research Service, June 5, 2017 and ["Energy and Water Development: FY 2018 Appropriations."](#) Congressional Research Service, September 20, 2017. ([R44895](#)).

roughly \$2.2 billion in energy programs. For example, the proposal included a \$1.4 billion reduction in EERE programs, more than \$500 million of reductions across the fossil energy and nuclear energy accounts, and an \$86,000 reduction from electricity delivery and energy reliability programs. The President also proposed selling off about half the remaining inventory of the Strategic Petroleum Reserve (SPR). Subsequent House-passed appropriations would fund many of the accounts closer to FY 2016 funding levels, but continue to reduce EERE budget by roughly \$1 billion compared with FY 2016.<sup>8</sup>

**The changing energy and security landscape.** The budget proposals and appropriations underscore the broader policy questions concerning DOE that have been developing in recent years. These questions concern the appropriate future size and focus of DOE programs and missions, particularly in light of the remarkable changes in the U.S. energy landscape over the past decade.

The United States is now the largest producer of oil and natural gas in the world, and reliance on imports is at a historic low.<sup>9</sup> North America's energy systems are increasingly interconnected. DOE reports the value of energy supplies traded among the United States, Canada, and Mexico exceeded \$150 billion annually in recent years.<sup>10</sup> As domestic production of oil and gas reaches record levels, prices have fallen dramatically and have remained low, with nation-wide social, economic, and energy security implications. By these measures, the threats of domestic energy scarcity and supply shocks that propelled formation of DOE 40 years ago are no longer a serious concern. However, new and more complex domestic and global security challenges have been emerging with development of the complex interconnections of the modern energy systems—challenges that were not contemplated in the Department of Energy Organization Act.<sup>11</sup>

How DOE orients its energy-security related missions in light of the nation's current energy abundance and amidst ongoing budget constraints and other agency responsibilities remains a critical question for Congress and the current Administration. Answers will inform future budget priorities and how the Department focuses its core science, R&D, and energy policy responsibilities in coming decades.

In recent years, the Committee has been addressing DOE's future priorities. The 114th Congress enacted several significant pieces of legislation to modernize the nation's energy policy, informed in large part by the Committee's work. For example, the Budget Act of 2015 (P.L. 114-74) and the Fixing America's Surface Transportation Act (FAST Act) (P.L. 114-94) each contains

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<sup>8</sup> Ibid.

<sup>9</sup> U.S. total petroleum and other liquids production averaged 15 million barrels per day (MMbbl/d) in 2016 and U.S. dry natural gas production totaled 25.9 trillion cubic feet (Tcf) in 2014, an increase of about 80 percent and 44 percent respectively from 2005. See, [U.S. Energy Information Administration, United States' Key Energy Statistics and World Rank](#); U.S. net imports of crude oil and petroleum products averaged 4.8MMbbl/d in 2016, a 62 percent decline from 2005. See, [U.S. Energy Information Administration, U.S. Net Imports of Crude Oil and Petroleum Products](#).

<sup>10</sup> Testimony of Melanie Kenderdine, Director of Energy Policy and Systems Analysis, U.S. DOE, before the House Committee on Foreign Affairs, June 9, 2016.

<sup>11</sup> For a fuller discussion of the changing "energy security paradigm," see DOE's report to Congress: "[Valuation of Energy Security for the United States](#)," January 2017 at <https://energy.gov/epsa/downloads/valuation-energy-security-united-states-report-congress>.

provisions to modernize the SPR and improve its emergency response capability. The FAST Act also contains provisions enabling DOE to improve emergency preparedness for energy supply disruptions, protect critical electric infrastructure security, and prioritize energy security in federal decision-making. Finally, the Consolidated Appropriations Act of 2015 (P.L. 113-235) lifted the 1970's-era export restrictions on crude oil.<sup>12</sup>

**Improving DOE mission management and performance.** Many troublesome and well-publicized challenges confronting DOE's mission fulfillment – project delays and billion-dollar cost overruns, safety and security problems, oversight failures – relate to the essential structure and organizational philosophy of the agency, which relies on contractors to perform agency missions. Ensuring effective agency management and performance across its missions has long posed tremendous contract administration and oversight challenges for the Department and the Secretary.<sup>13</sup> The Committee has continued its focus on identifying what is necessary to improve DOE management and operational performance throughout the Department and will continue to monitor how the Secretary seeks to address management and performance.<sup>14</sup>

#### IV. ISSUES

The following issues may be examined at the hearing:

- What are the Secretary's priorities relating to energy security missions?
- What are the priorities relating to R&D and technology development?
- What role should the agency have regarding regulations that effect energy supply and reliability?
- What is necessary to ensure effective, efficient performance of agency missions?

#### V. STAFF CONTACTS

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

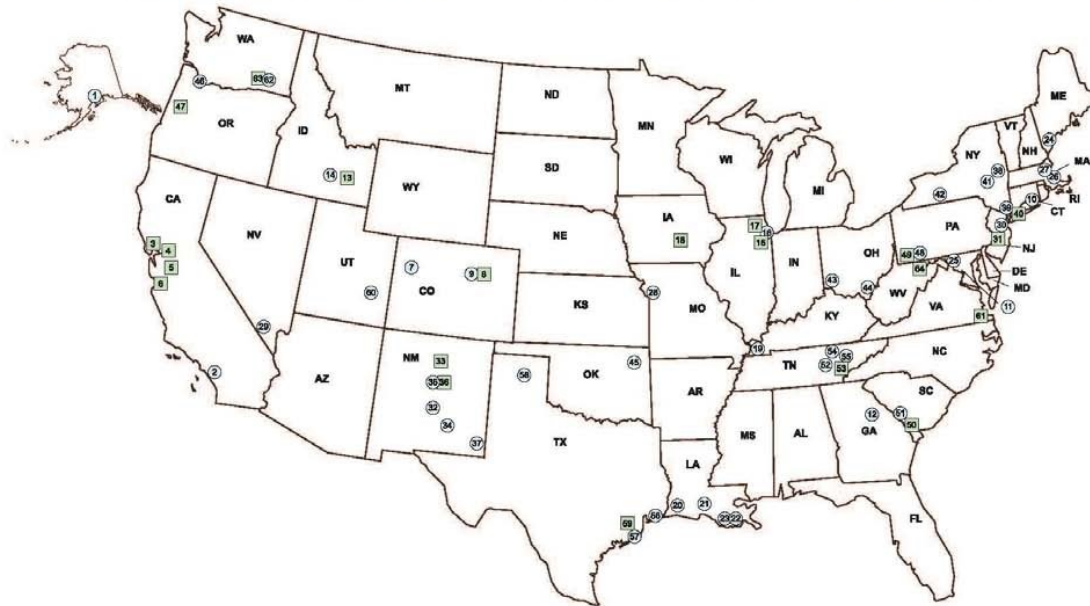
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<sup>12</sup> In this Congress, the Committee continues to work on various DOE authorities across its portfolio. The Committee has already moved DOE related legislation through the House that would strengthen DOE's state energy assurance and emergency preparedness programs (H.R. 3050), would enhance the agency's mission training energy sector workforce (H.R. 338), and would provide DOE the review authority on cross-border electricity projects (H.R. 2883).

<sup>13</sup> At present, the Government Accountability Office (GAO) designates two DOE program elements as "[high risk](#)" – the Office of Environmental Management, which is responsible for the safe cleanup of the nation's nuclear weapons complex, and the National Nuclear Security Administration (NNSA), two departmental elements responsible for 64 percent of DOE's annual budget. See GAO's [2017 High Risk Report](#).

<sup>14</sup> See, for example, the Committee's [September 27, 2017](#) and [March 31, 2017](#) letters to the GAO. See also, "DOE for the 21st Century: Science, Environment, and National Security Missions," Subcommittee on Oversight and Investigations, February 25, 2016. [Serial No. 114-119](#).

# DOE Laboratories, Plants, and other Field Sites



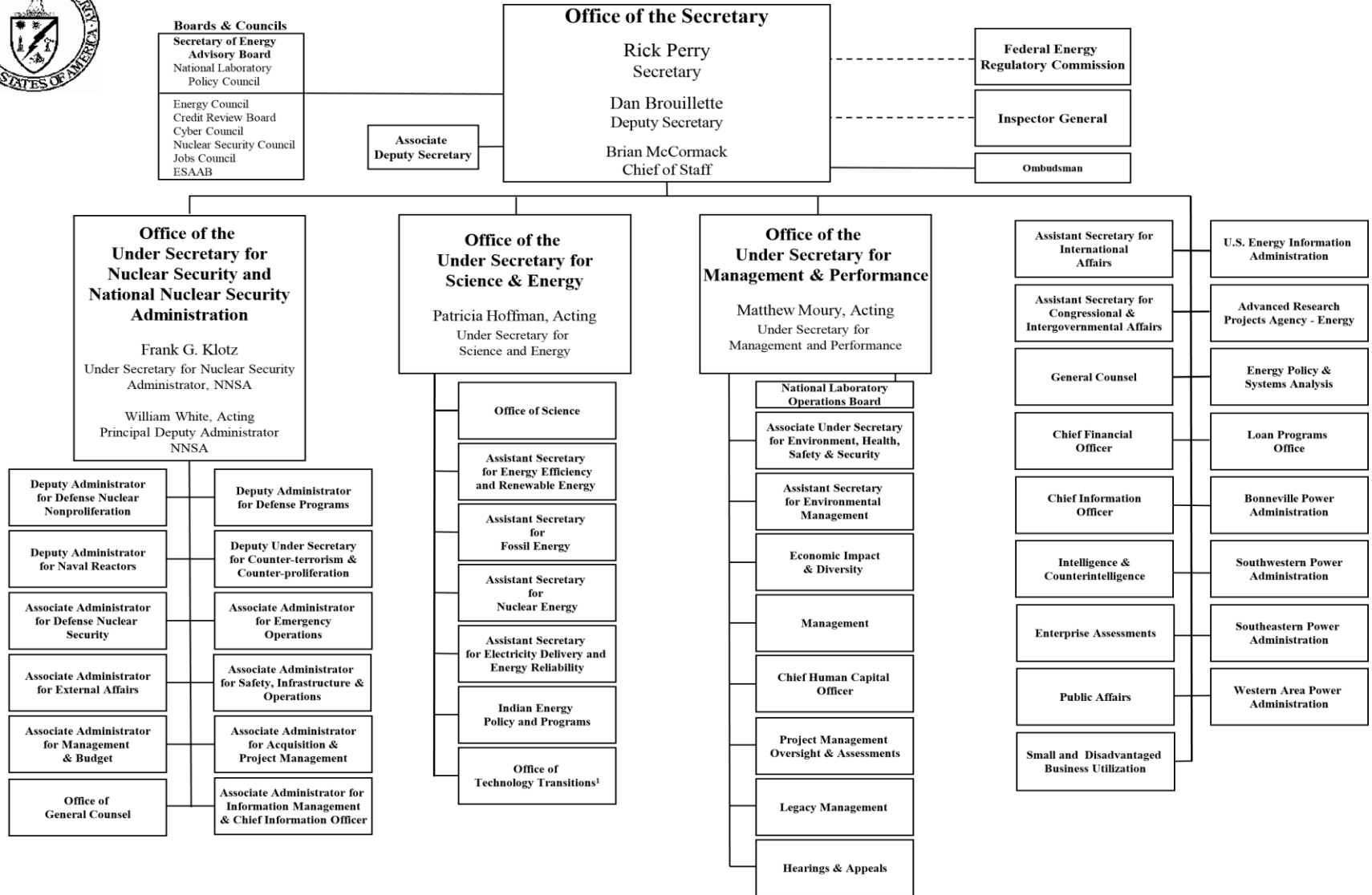
\* Federal Field/ Site Offices are co-located with many of the DOE locations listed  
 ■ Indicates DOE National Laboratory

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| <p><b>Alaska</b></p> <p>1. Arctic Energy Office</p> <p><b>California</b></p> <p>2. Energy Technology Engineering Center<br/>             3. Lawrence Berkeley National Laboratory<br/>             4. Lawrence Livermore National Laboratory<br/>             5. Sandia National Laboratories<br/>             6. SLAC National Accelerator Laboratory</p> <p><b>Colorado</b></p> <p>7. Grand Junction Office<br/>             8. National Renewable Energy Laboratory<br/>             9. Western Area Power Administration</p> <p><b>Connecticut</b></p> <p>10. Northeast Home Heating Oil Reserves</p> <p><b>District of Columbia</b></p> <p>11. DOE Headquarters – Forrestal Building</p> <p><b>Georgia</b></p> <p>12. Southeastern Power Administration</p> <p><b>Idaho</b></p> <p>13. Idaho National Laboratory<br/>             14. Radiological Environmental Sciences Laboratory</p> <p><b>Illinois</b></p> <p>15. Argonne National Laboratory<br/>             16. Chicago Office<br/>             17. Fermi National Accelerator Laboratory</p> <p><b>Iowa</b></p> <p>18. Ames Laboratory</p> <p><b>Kentucky</b></p> <p>19. Paducah Gaseous Diffusion Plant</p> | <p><b>Louisiana</b></p> <p>20. Strategic Petroleum Reserve - West Hackberry Site<br/>             21. Strategic Petroleum Reserve - Bayou Choctaw Site<br/>             22. Strategic Petroleum Reserve Project Management Office<br/>             23. St. James Terminal</p> <p><b>Maine</b></p> <p>24. Northeast Gasoline Supply Reserve</p> <p><b>Maryland</b></p> <p>25. DOE Headquarters – Germantown Campus</p> <p><b>Massachusetts</b></p> <p>26. Northeast Gasoline Supply Reserve<br/>             27. Northeast Home Heating Oil Reserve</p> <p><b>Missouri</b></p> <p>28. Kansas City National Security Campus</p> <p><b>Nevada</b></p> <p>29. Nevada National Security Site</p> <p><b>New Jersey</b></p> <p>30. Northeast Home Heating Oil Reserve<br/>             31. Princeton Plasma Physics Laboratory</p> <p><b>New Mexico</b></p> <p>32. Inhalation Toxicology Research Institute<br/>             33. Los Alamos National Laboratory<br/>             34. National Training Center<br/>             35. NNSA Albuquerque Complex<br/>             36. Sandia National Laboratory<br/>             37. Waste Isolation Pilot Plant</p> <p><b>New York</b></p> <p>38. Separations Process Research Unit<br/>             39. Northeast Gasoline Supply Reserve<br/>             40. Brookhaven National Laboratory<br/>             41. Knolls Atomic Power Laboratory<br/>             42. West Valley Demonstration Project</p> | <p><b>Ohio</b></p> <p>43. EM Consolidated Business Center<br/>             44. Portsmouth Gaseous Diffusion Plant</p> <p><b>Oklahoma</b></p> <p>45. Southwestern Power Administration</p> <p><b>Oregon</b></p> <p>46. Bonneville Power Administration<br/>             47. National Energy Technology Laboratory – Albany</p> <p><b>Pennsylvania</b></p> <p>48. Bettis Atomic Power Laboratory<br/>             49. National Energy Technology Laboratory – Pittsburgh</p> <p><b>South Carolina</b></p> <p>50. Savannah River National Laboratory<br/>             51. Savannah River Operations Office</p> <p><b>Tennessee</b></p> <p>52. East Tennessee Technology Park<br/>             53. Oak Ridge National Laboratory<br/>             54. Office Scientific and Technical Information<br/>             55. Y-12 Plant</p> <p><b>Texas</b></p> <p>56. Strategic Petroleum Reserve - Big Hill Site<br/>             57. Strategic Petroleum Reserve - Bryan Mound Site<br/>             58. Pantex Plant<br/>             59. National Energy Technology Laboratory - Sugar Land</p> <p><b>Utah</b></p> <p>60. Moab UMTRA Project</p> <p><b>Virginia</b></p> <p>61. Thomas Jefferson National Accelerator Facility</p> <p><b>Washington</b></p> <p>62. Hanford<br/>             63. Pacific Northwest National Laboratory</p> <p><b>West Virginia</b></p> <p>64. National Energy Technology Laboratory – Morgantown</p> |
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\* EFFECTIVE DATE: NOVEMBER 2016



# DEPARTMENT OF ENERGY



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