

**U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
SUBCOMMITTEE ON ENERGY**

HEARING CHARTER

*Recommendations of the Commission to Review
the Effectiveness of the National Energy Laboratories*

**November 18, 2015
2:00 p.m. – 4:00 p.m.
2318 Rayburn House Office Building**

Purpose

The Energy Subcommittee will hold a hearing titled *Recommendations of the Commission to Review the Effectiveness of the National Energy Laboratories* on November 18 at 2:00 p.m. in room 2318 of the Rayburn House Office Building. The hearing will examine key recommendations from the Commission to Review the Effectiveness of the National Energy Laboratories (the Commission) in their report *Securing America's Future: Realizing the Potential of the Department of Energy's National Laboratories* (the Report).¹

Witnesses

- **Mr. TJ Glauthier**, Co-Chair, Commission to Review the Effectiveness of the National Energy Laboratories
- **Dr. Jared Cohon**, Co-Chair, Commission to Review the Effectiveness of the National Energy Laboratories
- **Dr. Peter Littlewood**, Director, Argonne National Laboratory

Background

Pursuant to direction in the Consolidated Appropriations Act of 2014, the Secretary of Energy established the Commission² to undertake an in-depth review of the overall effectiveness of the Department of Energy (DOE) laboratory system. The DOE laboratory complex comprises seventeen laboratories across the United States.³ These laboratories employ approximately 55,000 people and received \$14.3 billion in fiscal year 2014 (\$11.7 billion from DOE and \$2.6 billion from other sources).⁴ On October 28, 2015, the Commission released its final report incorporating public comments titled “Securing America’s Future: Realizing the Potential of the

¹ *Securing America's Future: Realizing the Potential of the Department of Energy's National Laboratories* (the Report), Vol. 2, Technical Chapters and Appendices can be found at:

<http://energy.gov/sites/prod/files/2015/10/f27/Final%20Report%20Volume%202.pdf>

² Consolidated Appropriations Act, 2014, §319.

³ Of the 17 labs, 10 are Office of Science labs, 3 are national security labs overseen by the National Nuclear Security Administration, and 4 are DOE applied labs stewarded by the applicable DOE program office.

⁴ “Securing America’s Future: Realizing the Potential of the Department of Energy’s National Laboratories”, Vol. 2 at page 1.

Department of Energy’s National Laboratories” (the Report). The Commission found that the DOE lab complex provides critical, long-term R&D capabilities to the nation that cannot be carried out solely by academic institutions or the private sector.⁵ Accordingly, the Commission’s first recommendation reflects these findings.

Recommendation 1: *The National Energy Laboratories provide great value to the Nation in their service to DOE’s mission, the needs of the broader national S&T community, and the security needs of the Nation as a whole. The Administration and Congress should provide the necessary resources to maintain these critical capabilities and facilities. It would also benefit all stakeholders if the key committees in Congress would develop a more orderly process of reviewing the National Laboratories, to replace the unrelenting pace of studies evaluating the performance of the DOE laboratories. For example, Congress could initiate a comprehensive review of the entire laboratory system in predetermined intervals.*⁶

The Relationship between the DOE and its Labs

DOE has organized sixteen of its seventeen labs as federally funded research and development centers (FFRDCs) where DOE owns the lab and a contracting organization manages day-to-day operations. This relationship is meant to allow expert organizations to manage the labs while remaining accountable for their performance. The Commission found that the FFRDC model can achieve optimal performance when the operator and sponsoring agency have a relationship built on trust and free of multi-stage transactional burdens. According to the Commission, the current relationship between DOE and many of its labs is less than satisfactory.⁷

Recommendation 2: *Return to the spirit of the FFRDC model (stewardship, accountability, competition, and partnership). DOE and the National Laboratories must work together as partners to restore the ideal nature of the FFRDC relationship as a culture of trust and accountability. DOE should delegate more authority and flexibility to the laboratories on how to perform their R&D, and hold them fully accountable for their actions and results. For their part, to be trusted partners and advisors, the laboratories must be transparent with DOE about their planned activities ahead of time, as well as about their actions and results as they are carried out.*⁸

Laboratory-Directed Research and Development

Laboratory-Directed Research and Development (LDRD) gives lab directors discretion based upon their first-hand knowledge of the direction for potential cutting-edge research to identify and fund research projects. Yet LDRD still requires that DOE approve all projects under this program. The key distinction is that under this program the labs which conduct research are

⁵ *Id.* at page 5.

⁶ *Id.* at 14.

⁷ *Id.* at 18.

⁸ “Securing America’s Future: Realizing the Potential of the Department of Energy’s National Laboratories,” Vol. 2 at page 179.

able to put forth proposals. LDRD funds reportedly built foundational expertise necessary to implement the Joint Center for Energy Storage Research (JCESR) at Argonne National Lab and the Joint Bioenergy Institute (JBEI) at Lawrence Berkeley Lab among others.⁹ According to the Report, the Commission finds that mandatory DOE review of each individual project “may be excessively costly and burdensome to both Departmental and laboratory staff.”¹⁰ The Commission also found that LDRD is crucial to recruiting and retaining top tier researchers, especially at National Nuclear Security Administration laboratories.¹¹ Currently, LDRD funds are limited to six percent (burdened) of each lab’s R&D budget.¹²

Recommendation 19: *The Commission strongly endorses LDRD programs, both now and into the future, and supports restoring the cap on LDRD to 6 percent unburdened, or its equivalent. The Commission recognizes that, in practice, restoring the higher cap will have the largest impact on the LDRD programs of the NNSA laboratories.*¹³

Partnering with Industry

The DOE labs partner with the private sector through multiple channels, including cooperative research and development agreements (CRADAs), licensing agreements, user facility agreements, and technical training.¹⁴ Since the 1980s, the labs have been formally responsible to support technology transfer to the private sector while government and public support for this concept have varied.¹⁵ Under the Energy Policy Act of 2005, the Department established a technology transfer coordinator, technology transfer working group, and energy technology commercialization fund to support R&D partnerships between the labs and the private sector.¹⁶ Yet, the Commission found that barriers to partnership between the labs and small businesses persist, including the complexity of contractual terms for partnerships, extended delay for negotiation and DOE approval of contracts, and a high transactional cost for collaboration in part due to advanced funding requirements.

Recommendation 25: *All DOE programs and laboratories should fully embrace the technology transition mission and continue improving the speed and effectiveness of collaborations with the private sector. Innovative technology transfer and commercialization mechanisms should continue to be pursued and best practices in other sectors, including academia, should be examined.*¹⁷

⁹ *Id.* at page 179. See also *Id.* at 183, footnote 232 “Burdened” means overhead is charged to LDRD projects.

¹⁰ *Id.* at 175.

¹¹ The NNSA laboratories responsible for maintaining the nuclear weapons stockpile are Los Alamos National Laboratory, Lawrence Livermore National Laboratory, and Sandia National Laboratories.

¹² Consolidated Appropriations Act, 2014, §309

¹³ “Securing America’s Future: Realizing the Potential of the Department of Energy’s National Laboratories,” Vol. 2 at page 185.

¹⁴ *Id.* at page 203.

¹⁵ *Id.* at 204.

¹⁶ Energy Policy Act of 2005, §1001.

¹⁷ “Securing America’s Future: Realizing the Potential of the Department of Energy’s National Laboratories,” Vol. 2 at page 213.

Ensuring Results

The Commission recognizes that many other groups have studied this subject and made similar recommendations without seeing their efforts realized. The Commission noted its concern that “despite the extensive examination of these issues, none of these reports has led to the comprehensive change necessary to address the well-documented, persistent challenges confronting the Department and its laboratories.”¹⁸ The Commission’s final recommendation calls for a mechanism to ensure meaningful change.

Recommendation 36 (emphasis added): *A standing body should be established to track implementation of the recommendations and actions in this report, and to report regularly to DOE, the laboratories, the Administration, and the Congress on progress, results, and needed corrective actions. The standing body could assist Congressional committees in developing a rational plan for future evaluations of the DOE laboratories.*¹⁹

Supplemental Material

- “Securing America’s Future: Realizing the Potential of the Department of Energy’s National Laboratories,” Vol. 1, Executive Report.
- “Securing America’s Future: Realizing the Potential of the Department of Energy’s National Laboratories,” Vol. 2, Technical Chapters and Appendices.

¹⁸ *Id.* at page 289.

¹⁹ *Id.* at 297.