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U.S. Department of Energy
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Thank you Chairman Chaffetz, Ranking Member Cummings, and Members of the Committee, I appreciate the opportunity to appear before you today to discuss the Department of Energy's efforts at improving the management of its capital asset projects, which is a topic of great importance to the Secretary and Deputy Secretary.

The Department has been focused on improving project management and has made progress. In particular, the Secretary has made improvement of management and performance at the Department of Energy a top priority. The focus on this area spans from the management of our National Laboratories to project management of major capital investments, which is the topic of my testimony before you today.

Evolution of the Department of Energy's Mission

When the Department of Energy was originally formed, it was the progeny of more than 50 organizations from around the Federal government. The new Department brought together offices that were previously housed in the Departments of Agriculture, Commerce, Interior, Housing and Urban Development, and Transportation and absorbed the Federal Energy Administration, Energy Research and Development Administration, and other organizations entirely.

The Department took on the sprawling scientific and industrial nuclear complex under the Atomic Energy Commission. The Department also assumed responsibility for massive nuclear cleanup projects across the country. In response to the oil shocks of the 1970s, U.S. energy policy at the time was designed to protect energy consumers through oil price and allocation controls, establishing national oil reserves, and working to develop new energy technologies.

Today, the means by which the mission is achieved have clearly evolved. For instance, maintaining a safe, secure, and effective stockpile is no longer supported by nuclear weapons tests. The Department of Energy (DOE) now uses high performance computers and other advanced technology to analyze each of the mechanisms of a weapon at a level of detail that was never available during the era of nuclear testing. In fact, our laboratory directors believe they actually understand more about how nuclear weapons work now than during the period of nuclear testing.

Far from the oil shortages of the 1970s, the United States today enjoys an era of relative energy abundance. Our country is now the world's leading producer of oil and natural gas. This energy

revolution is driving down our dependence on imported oil to its lowest level since 1968. Barely a decade ago, the United States imported 60 percent of the crude oil used. Now, within the year, the United States is on track to import only 20 percent.

From our efforts to find affordable and clean energy sources, to underpinning the United States basic research enterprise, to ensuring the security of our nuclear stockpile and reducing the global nuclear danger, to cleaning up the legacy of the Cold War — the Department's work today remains essential to this nation's prosperity, environment, and security. However, far too often we continue to find ourselves stuck with the same institutional stovepipes and outdated management practices that date back to the Department's founding.

To meet our mission, DOE manages some of the largest, most complex, and technically challenging projects in either the public or private sector. This includes 36 projects valued at over $100 million. These range from our Office of Science projects such as the Spallation Neutron Source located at Oak Ridge National Laboratory, which provides the most intense pulsed neutron beams in the world for scientific research and industrial development — to the Office of Environmental Management (EM), which is responsible for the environmental remediation of sites involved in the Nation's nuclear-weapons production complex.

GAO High-Risk List

The portfolio of large projects undertaken by the Department of Energy is not only unique from other projects in the public and private sector, but each DOE project is unique from other DOE projects. These diverse capital projects are truly one-of-a-kind, with uncommon challenges such as handling radioactive conditions or producing extremely bright x-rays for nanoscience. In light of these challenges, the Department has struggled with project and contract management, with too many projects going over budget and taking longer than originally planned.

The Department has been on the Government Accountability Office's (GAO) "High-Risk List," since the list's inception in 1990. This list and its associated documentation identify problematic projects and suggest changes in government management and contract administration to mitigate these problems. However, I am pleased to say that we have made some important progress that has been recognized by the Government Accountability Office and others. In 2009, the GAO removed the Office of Science from the High-Risk list. In 2013, GAO again narrowed its DOE focus to contracts and projects over $750 million in the Department's Office of Environmental Management and National Nuclear Security Administration (NNSA). We expect GAO's 2015 update to focus again on these large contracts and projects in EM and NNSA. However, the Department remains focused on getting off the list entirely.

Project Management Reform

To meet this challenge, the Secretary is instituting changes to improve the Department's performance on major projects across the DOE enterprise on several tracks. One of the first actions the Secretary took was to reorganize the Department at the Under Secretary level to create an Under Secretary for Management and Performance focused specifically on improving

project management and performance and bringing EM, the Office of Legacy Management and the Office of Management under the purview of this new Under Secretary.

The Secretary also made it a priority to recruit senior advisors who report directly to him and who bring management and business experience to the Department. I have a private sector background and have focused on investment and financing in the energy sector since the mid-1980s. I joined the Department in June 2013 as a Senior Advisor to the Secretary and serve as the senior finance advisor and a member of the national security team.

Shortly after I joined the Department, the Secretary asked me to lead a new working group that he established in August 2013 to conduct an in-depth analysis of project management. This working group, which was comprised of senior project management experts from program offices across the Department, took a comprehensive look at the challenges that the Department faces and provided its candid opinions on why projects either fail or succeed in the DOE (including NNSA) environment. The working group also examined case studies to determine what lessons could be learned from the Department's successes and failures in project management.

The working group's findings were issued in a report titled, "Improving Project Management" that was released last month and is available online at http://energy.gov/articles/improving-project-management-department-energy. The report was evaluated by senior leadership, which led to the implementation of the following efforts to improve project management:

- Strengthening the Energy Systems Acquisition Advisory Board
- Establishing a Project Management Risk Committee
- Improving the Lines of Responsibility and the Peer Review Process

I will discuss each of these recommendations and also what the Department is doing to ensure that we improve project management.

Energy Systems Acquisition Advisory Board

One of the insights that became clear through the analysis is the need for a Department-wide perspective on individual projects. There is also a clear need for senior leadership to be directly involved in the oversight of major capital asset projects.

Accordingly, we are strengthening the Energy Systems Acquisition Advisory Board or "ESAAB." This board is comprised of the Department's most senior leaders and chaired by the Deputy Secretary.

ESAAB was originally charged with overseeing all projects larger than $750 million and making recommendations to the Deputy Secretary. However, as the number of large projects has decreased over the years, the number of ESAAB meetings has correspondingly dwindled. For example, before the Salt Waste Processing Facility ESAAB meeting in August 2014, it had been two and half years since the group had last convened.

Through these changes, we are strengthening the board from an ad hoc body, to a dynamic organization that will meet quarterly at a minimum. The ESAAB will now review all projects with an estimated cost of greater than $100 million, with a specific focus on projects that are struggling to meet performance baselines.

Project Management Risk Committee

The Energy Systems Acquisition Advisory Board will be supported by a new Project Management Risk Committee comprised of the Department's top project management experts. These project management experts are the same people who spent a year developing key project management recommendations and writing the "Improving Project Management" report.

The Project Management Risk Committee will provide risk assessment and advice to the Department's senior leadership. It will also review and analyze projects before all critical decisions and baseline change proposals and provide peer reviews and in-house consulting to projects across the entire Department. The committee will meet twice a month at a minimum and focus on projects with a budget of $100 million or more. The committee's first order of business is to review the recommendations in the "Improving Project Management" report and recommend specific actions to the Secretary within 60 days.

Improving the Lines of Responsibility and the Peer Review Process

Unclear ownership creates a culture where everyone is in charge, but no one is responsible for holding contractors accountable for results. It is critical that a single manager has responsibility over a project and is empowered to ensure that the venture is effectively executed.

Going forward, the Department is improving accountability by ensuring that for each project the appropriate Under Secretary will now designate a clear owner who has budgetary and programmatic responsibility. There must also be a clear line of responsibility that extends from the Under Secretary to the project owner to the Federal Project Director.

Where it does not already exist, each Under Secretary is now establishing a Project Assessment Office that does not have line management responsibility for project execution. These offices will have direct access to senior Department officials and will conduct annual peer reviews of projects over $100 million or lower when appropriate. This process is based on the highly successful peer reviews in DOE's Office of Science. The Secretary has mandated that all of DOE's programs have a similar process in place.

Immediate Action

There are also several other recommendations from the project management working group's report that the Secretary has already tasked the Department's leadership with implementing.

First, the Department will now request full funding in a single fiscal year for all new projects under $50 million, unless there is justification to make an exception. Full funding in a single fiscal year increases the opportunity for performance-based fixed price contracts, which in turn

increase accountability and the likelihood of achieving baseline goals. When full funding in a single fiscal year is not obtained and extends over multiple fiscal years, as the Department has seen time and time again, the result is often poor planning, higher acquisition costs, cancellation of projects, and the resulting loss of sunk costs.

Second, for all projects over $50 million, program offices must now conduct an alternatives analysis that is totally independent of the contractor organization responsible for the project. This will ensure that the Department has an unbiased perspective on all alternatives before committing to a particular project.

Finally, the Department will establish a project management leadership institute to create and sustain a culture of project management excellence across the entire enterprise. We plan to engage our key stakeholders to help us think through the creation of the institute and the coursework that we put forward.

Conclusion

As public servants, we have a solemn responsibility to be responsible stewards of taxpayer dollars. The reforms and processes we are instituting at the Department of Energy with respect to project management are critical steps to ensuring that we meet this responsibility. We are encouraged by the work done over the last year toward this effort, and now our focus is on making sure that we effect permanent improvements through our execution of projects.

Thank you. I am pleased to answer your questions.

John J. MacWilliams was appointed in June 2013 as Senior Advisor to the Secretary of Energy at the U.S. Department of Energy. In this role he serves as the Secretary's senior finance advisor and is a member of his national security team.

Prior to DOE, he was a Managing Partner of Tremont Energy Partners, LLC, a private investment firm based in Cambridge, Massachusetts, that was formed in 2003. Prior to Tremont, he was Vice Chairman, Investment Banking, at JP Morgan Chase and a Partner of JP Morgan Partners. Mr. MacWilliams was a founding partner in 1993 of The Beacon Group, LLC, a private investment firm located in New York, which was acquired by JP Morgan Chase in 2000. He was also Partner and Co-Head of the Beacon Group Energy Investment Funds, a portfolio of more than 30 global private equity investments throughout the energy industry. Prior to the formation of The Beacon Group, Mr. MacWilliams was with Goldman Sachs & Co., where he was head of Goldman Sachs' international structured finance group based in London. Prior to joining Goldman Sachs, he was an attorney at Davis Polk & Wardwell in New York.

He holds a B.A. from Stanford University, an M.S. from Massachusetts Institute of Technology, and a J.D. from Harvard Law School.