



APRIL 3, 2014

# BUDGET HEARING: DEPARTMENT OF ENERGY, NATIONAL NUCLEAR SECURITY ADMINISTRATION WEAPONS ACTIVITIES

U.S. HOUSE OF REPRESENTATIVES, COMMITTEE ON APPROPRIATIONS, SUBCOMMITTEE ON  
ENERGY AND WATER DEVELOPMENT

ONE HUNDRED THIRTEENTH CONGRESS, SECOND SESSION

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## HEARING CONTENTS:

### OPENING STATEMENT:

**Mike Simpson** [\[view pdf\]](#)

Chairman, Subcommittee on Energy and Water Development

### WITNESSES:

**Mr. Bruce Held** [\[view pdf\]](#)

Acting Administrator, National Nuclear Security Administration

**Dr. Don Cook** **[statement not available]**

Deputy Administrator for Defense Programs,  
National Nuclear Security Administration

**Brig. Gen. James C. Dawkins, Jr.** **[statement not available]**

Principal Assistant Deputy Administrator for Military Applications,  
National Nuclear Security Administration

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## **Chairman Mike Simpson**

*Subcommittee on Energy and Water Development, and  
Related Agencies, House Committee on Appropriations*

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### **FY 2015 Budget Hearing on Weapons Activities Programs**

**April 3, 2014**

### **Opening Statement As Prepared**

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I'd like to call this hearing to order. Good morning, everyone.

Mr. Held, I'd like to both welcome you to your first appearance before the Subcommittee, and express our support for your work to steer the NNSA organization while we await Senate confirmation of an Administrator and Deputy Administrator. By all accounts you have provided leadership at a time when the Department is having to make some tough decisions, and your service is greatly appreciated.

Dr. Cook, welcome back. This is the fourth budget request for Defense Programs that you've submitted and the fourth time you've testified before this Subcommittee. And General Dawkins, welcome back. We appreciate your attendance today.

The activities funded under Weapons Activities are needed to sustain our nuclear deterrent and ensure strategic stability at a time when other nations are modernizing their nuclear stockpiles and enhancing their own capabilities. With the recent events in Ukraine and a resurgent Russia, the stability that our nuclear weapons stockpile provides our nation and its allies should be valued more highly than ever.

The President's Budget Request for Weapons Activities is \$8.3 billion, an increase of \$534 million, or 7%, over the fiscal year 2014 level. These increases are being requested in a budget year where funding for overall defense discretionary spending will be essentially flat. In the past, this Subcommittee has supported major increases to the Weapons Activities budget in order to make the investments that are needed to ensure our nuclear weapons stockpile is being effectively maintained. Under these tight budget caps, it's only going to get harder. Increases to the NNSA budget are available only because we cut national security funding elsewhere. This is a zero-sum game, and there are serious concerns about our ability to meet all our defense needs under these constraints. Only the highest priorities that provide the best value for our nation's defense will be successful in competing for this scarce funding.

The programs funded within the Weapons Activities appropriation are extremely important, and the Subcommittee has been very clear that the NNSA is expected to follow through and deliver on its promises in order to rebuild its credibility here in Congress. I am interested in hearing what progress you've made and how you plan to carry out the reforms that are necessary to improve federal oversight of the NNSA's programs, projects, and activities.

The budget request for Weapons Activities is being submitted on the heels of a number of recent decisions that are driving changes to your plans for modernization, such as the decision to defer work on the integrated warhead and to investigate additional alternatives for construction of the Uranium Processing Facility. I look forward to hearing from you on how those modernization plans are evolving and what work you've done to clearly articulate and justify those plans so that our nuclear weapons stockpile remains safe, secure, and effective.

Please ensure that the hearing record, responses to the questions for the record, and any supporting information requested by the Subcommittee are delivered in final form to us no later than four weeks from time you receive them. I also ask that if Members have additional questions they would like to submit to the Subcommittee for the record, that they please do so by 5:00 PM tomorrow.

With those opening comments, I would like to yield to our ranking member, Ms. Kaptur, for any opening comments that she would like to make.

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**Statement of Bruce Held  
Acting Administrator  
National Nuclear Security Administration  
U.S. Department of Energy  
on the  
Fiscal Year 2015 President's Budget Request  
Before the  
Subcommittee on Energy & Water Development  
House Committee on Appropriations**

**April 3, 2014**

Chairman Simpson, Ranking Member Kaptur, and Members of the Subcommittee, I come before you today to present the President's FY 2015 Budget Request for the Department of Energy's (DOE) National Nuclear Security Administration (NNSA).

The FY 2015 budget request for the DOE is up 2.6% to \$27.9 billion. The NNSA, which comprises over 40% of the DOE's budget, is up \$451 million or 4%, to \$11.7 billion. In today's fiscal climate, this increase is an indication of the President's unwavering commitment to nuclear security, as outlined nearly four years ago in Prague, and reaffirmed last June in Berlin. Support in this year's budget request is also due to an unprecedented level of transparency and discussion within the interagency on how the NNSA can best support implementation of the two key goals of the Nuclear Posture Review (NPR): to prevent nuclear proliferation and terrorism and to maintain a safe, secure and effective deterrent while we reduce the number of nuclear weapons in the stockpile. This budget request also supports the major initiatives of Naval Reactors, makes investments in physical and cyber security, and funds critical infrastructure recapitalization to support effective operations across the nuclear security enterprise.

Within that context, the Secretary and NNSA Leadership understand that we have an enduring responsibility to steward the taxpayers' dollar effectively and efficiently, and we simply must do better. Therefore, NNSA is looking at ways to improve our governance through a public interest model that will incentivize mission effective and cost efficient solutions to the highest risk nuclear security challenges facing our country. We look forward to seeing the interim recommendations of the Congressional Advisory Panel on the Governance of the NNSA, as well as to reviewing recommendations from other panels focused on governance, including the Secretary of Energy's Advisory Board and the independent commission to study the DOE Laboratories as directed in the FY 2014 Consolidated Appropriations Act.

Another primary area of focus to support effective and efficient implementation of our mission will continue to be project management and improving our cost assessment and estimation capabilities. The Secretary has reorganized the Department to elevate Management and Performance to one of three Under Secretary positions. Within this framework, the NNSA is committed to effectively managing its major projects and has been driving continued

enhancements to contract and project management practices through a reorganized Office of Acquisition and Project Management (APM). In 2013 GAO recognized progress at DOE in execution of nonmajor projects under \$750 million, and narrowed the focus of its High Risk List for DOE to mega-scale, unique nuclear construction projects costing more than \$750 million. APM is leading the NNSA's effort to deliver results by strengthening rigorous and well-justified alternative assessments and evaluations, providing clear lines of authority and accountability for federal and contractor personnel, and improving cost and schedule performance. NNSA is also applying lessons learned from the Office of Science project management methods and is collaborating across the DOE. At its core, DOE/NNSA's ultimate project management goal is to deliver every project on schedule, within budget, and fully capable of meeting mission performance, safeguards and security, quality assurance, sustainability, and environmental, safety, and health requirements.

The Department has just released its new Strategic Plan for 2014-2018, with the goal to "Secure our Nation" and the strategic objective to "enhance national security by maintaining and modernizing the nuclear stockpile and nuclear security infrastructure, reducing global nuclear threats, providing for nuclear propulsion, improving physical and cyber security, and strengthening key science, technology, and engineering capabilities." The Bipartisan Budget Agreement (BBA) sets firm caps on national security spending in FY 2015, and the President's Budget request adheres to them so tough choices had to be made across the NNSA. While Weapons Activities is up 6.9% from FY 2014 enacted levels, and the DNN account is down 20.4%, the Administration and DOE/NNSA remain firmly committed to our nonproliferation efforts and to implementing a robust program following the end of the four-year effort to secure nuclear material. In addition, modernization of the nuclear security enterprise and sustaining the science and technological base directly supports our nonproliferation and counterterrorism missions, so there is great synergy between the Weapons and Nonproliferation programs that we will continue to leverage. Details of the FY 2015 President's Budget Request for the NNSA follow.

## **Weapons Activities**

The Weapons Activities account request for FY 2015 is \$8.3 billion, an increase of \$534 million or 6.9% over FY 2014 enacted levels. It is comprised not only of the Defense Programs portfolio, which is responsible for all aspects of stockpile management, but also our physical and cyber security activities, our emergency response and counterterrorism and counterproliferation capabilities, and enterprise-wide infrastructure sustainment. Each element is addressed in detail below.

### **Defense Programs**

The Defense Programs portion of the Weapons Activities account is up \$499.5 million, or 7.8% from FY14, to \$6.9 billion. It funds the Nuclear Weapons Council (NWC) approved "3+2" strategy with some schedule adjustments, which aims to implement NPR guidance to reduce the number and types of weapons in the stockpile while maintaining a safe, secure and

effective deterrent. The request also continues to invest in the scientific and engineering foundation and in critical infrastructure. Building on last year's jointly conducted planning process for nuclear weapons modernization activities, DOE/NNSA and DoD agreed on a prioritized plan to meet requirements within current fiscal constraints of the Bipartisan Budget Act. Specifically, the FY 2015-19 Budget proposal requests funding for the following modernization activities:

- Complete production of the W76-1 warhead by FY 2019;
- Achieve the B61-12 life extension program (LEP) First Production Unit (FPU) by second quarter FY 2020;
- Achieve the W88 ALT 370 FPU by first quarter FY 2020;
- Defer the interoperable warhead (W78/88-1) LEP FPU by five years to FY 2030;
- Delay the Long-Range Standoff warhead FPU by one to three years to FY 2025-2027;
- Continue funding engineering design and to study alternative approaches to deliver the Uranium Processing Facility by 2025.

The Directed Stockpile Work request at \$2.7 billion supports transitioning to a smaller, modernized nuclear stockpile while continuing sustainment efforts. The requested increase reflects the ramp up of Phase 6.3 activities for the B61 LEP and an increase for Stockpile Systems, including maintenance, surveillance, plutonium sustainment, and tritium program requirements.

In support of the Research, Development, Test, and Evaluation (RDT&E) program, the Campaigns request is \$1.8 billion to provide increased technical resources needed for the certification of the existing stockpile and qualification of LEP options and components. For example, within the Inertial Confinement Fusion and High Yield Campaign, the National Ignition Facility (NIF) has achieved recent success with a stockpile stewardship experiment that exhibited significant "self heating," which is an important step essential to achieving ignition on the NIF. This platform will be used for years to come in studying a multitude of physical processes of relevance to nuclear weapons. Today, these physics environments are only accessible on laboratory-based high energy density facilities, such as the NIF, since the U.S. has been under a unilateral testing moratorium since 1992. The FY 2015 request for the NIF is \$328.5 million.

Another area of significant investment by the DOE is in exascale computing. NNSA's Advanced Simulation and Computing Campaign (ASC) provide leading edge, high-end modeling, and simulation capabilities that capture and allow us to apply all that we know about weapons physics and engineering. The FY 2015 ASC budget request includes \$50 million for the Advanced Technology Development and Mitigation sub-program, established in FY 2014, which funds projects that pursue long-term simulation and computing goals relevant to both exascale computing and the broad national security missions of the NNSA. Both the NNSA and DOE's Office of Science continue to collaborate in this area of advanced computing systems, with the Office of Science request providing \$91 million towards the development of capable exascale systems.

Two decades after its beginning, the Stockpile Stewardship Program continues to deliver tangible results from the combined use of our leading edge computation and experimental tools. Specifically our level of understanding of how nuclear weapons work is far greater today than when we were testing. A core mission of the DOE remains to certify the safety, security and effectiveness of the nuclear deterrent; this is done each year by the Lab Directors and STRATCOM Commander, which continues to support our unilateral testing moratorium consistent with the Comprehensive Test Ban Treaty.

### **Infrastructure**

The Readiness in Technical Base and Facilities (RTBF) request at \$2.1 billion supports the underlying physical infrastructure and operational readiness for the nuclear security enterprise. The request includes funds to upgrade nuclear safety systems, improve the workplace environment for plant and laboratory employees, and reduce safety and mission risks across the enterprise in support of operational readiness. The Site Stewardship request of \$82.4 million also ensures the overall health and viability of the enterprise.

Specifically, RTBF construction supports continued design activities for the Uranium Processing Facility Project (UPF) at \$335.0 million, an increase of \$26 million from FY 2014, while assessing whether there are alternative designs to accomplish the mission incrementally and at an affordable pace. NNSA remains concerned about the cost growth and sequestration impacts facing the UPF Project. In January 2014, NNSA chartered Oak Ridge National Laboratory Director Thom Mason to lead a team to develop and recommend an alternative approach to the UPF Project. NNSA is committed to our build to budget strategy to deliver the UPF Project by 2025, with Building 9212 capabilities, for not more than \$4.2-6.5 billion.

The NNSA continues to pursue steps to maintain continuity of plutonium capabilities at Los Alamos National Laboratory (LANL)--to include analytical chemistry (AC) and materials characterization (MC) capabilities--with a commitment to cease programmatic operations in the 62-year old Chemistry and Metallurgy Research (CMR) facility by 2019. NNSA has developed a three-step Plutonium Infrastructure Strategy, to include: 1) Maximizing the use of the Radiological Laboratory Utility Office Building (RLUOB); 2) Reusing laboratory space in Plutonium Facility (PF)-4; and 3) Evaluating options for modular additions to PF-4. The first two steps allow the NNSA to move programmatic operations from the CMR facility; the third addresses the PF-4 lifetime while enabling production capability and analytical support enhancements to meet requirements. NNSA also continues to pursue investments in upgrading safety system in PF-4 as part of the overall approach to maintaining plutonium capability.

NNSA's request reflects the partnership between NNSA and DOD to modernize the nuclear deterrent, and as in last year's Budget, DoD is carrying a separate account for the outyears that contains funds for NNSA's Weapons Activities and Naval Reactors. These funds are transferred to NNSA during budget development and underscore the close link between these activities and DoD nuclear requirements and missions. We urge your subcommittee's support for



alignment of the appropriations process and allocations, including the 302(b) allocation, with the President's Budget. The requested allocation, within the spending caps set by the Bipartisan Budget Act, support these NNSA and DoD priorities. If not achieved, it could place modernization funding and implementation of our long-term stockpile sustainment strategy at risk.

### **Physical and Cyber Security**

Improving the effectiveness and efficiency of Departmental operations is a top priority. Shortly after beginning his tenure, the Secretary of Energy directed the Department to undertake a thorough review of our security management. It became clear that DOE's approach to securing the Department's assets, including the special nuclear materials, could be strengthened by establishing greater accountability and clearer lines of authority.

Therefore, in February, the Secretary announced his new vision for enhancing the Department's health, safety, security and independent assessments. First, we have put in place a Chief Security Officer (CSO) under each of the three Under Secretaries, each empowered and held accountable for managing all security operations within their organizations. The CSOs will form the nucleus of a new DOE Security Committee, chaired by the Associate Deputy Secretary, which will develop unified security strategies across the DOE complex and raise the focus on protecting our people and DOE physical and information assets. Second, we are moving the Department's key support functions for security, health and safety under the leadership of the Under Secretary for Management and Performance in order to improve the effectiveness and efficiency of Departmental operations. Third, we are establishing a new Office of Independent Enterprise Assessments (IEA), reporting directly to the Office of the Secretary. This reorganization will set us on a stronger course to achieving our goals and mission more effectively, efficiently and safely.

In light of these reforms, the primary mission of NNSA's Office of Defense Nuclear Security and the Chief Security Office is to develop and implement sound security programs to protect Special Nuclear Material, people, information, and facilities throughout the nuclear security enterprise. The NNSA's Defense Nuclear Security request is \$618 million to provide protection from a full spectrum of threats for NNSA personnel, facilities, nuclear weapons, and information.

The Information Technology and Cybersecurity (renamed from "NNSA CIO Activities") request is substantially increased to \$179.6 million to provide protection against increasing cyber security threats. Information Technology and Cybersecurity supports the national nuclear security enterprise by providing information technology and cybersecurity solutions such as enterprise wireless capabilities and continuous monitoring technologies to help meet security and proliferation resistance objectives. The increase reflects expenses for items such as improvement to the cyber infrastructure at the NNSA sites, requirements for classified computing, and Identity Credential and Access Management.

## **Emergency Response and Counterterrorism**

The Nuclear Counterterrorism Incident Response (NCTIR) request of \$173.4 million applies technical assets from the nuclear security enterprise to resolve and manage nuclear and radiological incidents, especially those involving terrorism. It addresses this threat by maintaining and using response teams to manage the consequences domestically or internationally should an attack or incident result in radiation exposure to the public. NCTIR conducts training programs to train and equip response organizations and uses strategies that integrate NNSA expertise with law enforcement or military capabilities to locate, identify, and disable a terrorist nuclear device.

The Counterterrorism and Counterproliferation (CTCP) program request is \$76.9 million to provide the foundation for the U.S. Government's capability to understand and counter nuclear terrorism and nuclear threat devices. The program also provides a technical understanding of foreign nuclear weapons outside of state control. Based on this expertise, the program informs national policies and international guidelines, as well as enabling domestic and international nuclear counterterrorism engagements.

## **Defense Nuclear Nonproliferation**

The Defense Nuclear Nonproliferation (DNN) request is \$1.6 billion, a decrease of \$398.8 million, or about 20.4%, from the FY 2014 level. The programs under DNN have been accurately described as “defense by other means.” The majority of the decrease is due to the decision to place the Mixed Oxide (MOX) Fuel Fabrication Facility construction project at the Savannah River Site in cold stand-by to allow further study of more efficient options for plutonium disposition. Other decreases reflect the conclusion of the President’s four year effort to secure nuclear materials worldwide and bring the FY 2015 request in line with funding levels before the acceleration needed to implement the four-year effort.

We have met — and in some cases exceeded — the goals set in April 2009 following the President’s Prague speech by:

- removing or confirming disposition of 5,113 kilograms of highly enriched uranium (HEU) and separated plutonium from 41 countries and Taiwan (enough material for more than 200 nuclear weapons and in excess of the target of 4,353 kilograms);
- completing material protection, control and accounting (MPC&A) upgrades at 32 buildings containing metric tons of weapons-usable material in Russia (for a cumulative total of 218 buildings secured in the former Soviet Union since 1994); and
- working with Russia and former FSU countries to establish effective and sustainable MPC&A capabilities at the national level.

Going forward in FY 2015, the Administration remains firmly committed to disposing of surplus weapon-grade plutonium. Over the past year, we have been working closely with the MOX project contractor and others to determine if there are opportunities to make the current MOX fuel approach for plutonium disposition more efficient. During the same time that we were

analyzing the current MOX fuel approach, we have been analyzing alternatives to accomplish the plutonium disposition mission, including reactor and non-reactor based approaches. DOE expects to complete the options analysis and an external independent review in the next 12-18 months. It is now clear that the MOX approach will be significantly more expensive than anticipated—at a \$30 billion lifecycle cost estimate—even with potential contract restructuring and other improvements that have been made to the MOX project. As a result, the MOX project will be placed in cold stand-by, meaning we will cease all construction activities in order to minimize costs. The Fissile Materials Disposition request is \$311 million, including \$221 million to put the MOX project in cold stand-by, while assessing more cost effective options. NNSA must immediately take prudent actions to commence lay-up to preserve our investment while minimizing costs. The remaining funding will continue to support activities for disposition of plutonium and highly enriched uranium.

While much was accomplished under the four-year effort, serious threats still remain. Significant stockpiles of HEU still exist in too many places, and global inventories of plutonium are steadily rising. DNN programs, working closely with a wide range of international partners, key U.S. federal agencies, U.S. national laboratories, and the private sector will continue to remove and/or dispose of the dangerous nuclear materials that are still very much a part of our world today. The FY 2015 budget request for other DNN programs provides funding to continue remaining high-priority nuclear and radiological threat reduction efforts, following completion of the accelerated four-year effort activities. This includes \$333 million for the Global Threat Reduction Initiative (GTRI) and \$305 million for the International Material Protection and Control (IMPC) program. FY 2015 priority efforts include the removal of an additional 125 kilograms of HEU and plutonium from high priority countries; the protection of an additional 105 buildings with high-activity radioactive sources; the consolidation of all category I/II material into a new high security zone at a nuclear material site in Russia; preventing illicit trafficking by closing key gaps in the radiation detection architecture through the provision of fixed and mobile detection equipment; and the initiation of new nuclear security activities in the Middle East.

Another core program is DNN Research & Development (R&D) program, at \$361 million in the FY 2015 budget request. DNN R&D develops new technologies and methods that advance national and international capabilities to detect and characterize foreign nuclear weapons production activities and detonation events and the movement of special nuclear material (SNM). DNN R&D is a national-level program providing applied research and development in nuclear security and treaty verification technology leveraged by interagency partners at the Departments of Homeland Security, Defense and State, and the throughout broader U.S. Government.

Finally, the Nonproliferation and International Security (NIS) program request is \$141 million, which supports activities that prevent and counter WMD proliferation, including continued support of U.S. efforts to address proliferation by Iran, North Korea, and proliferation networks; implementation of statutory export control requirements; support for treaty verification and transparency; implementation of the Next Generation Safeguards Initiative to strengthen

International Atomic Energy Agency safeguards; and efforts to reduce proliferation risks associated with the expansion of nuclear power.

These activities are carried out in support of an interagency strategy for nuclear threat reduction and in close coordination with related programs in the Department of Defense, Department of State, and other agencies. Though difficult choices are inevitable in the current budget environment, NNSA continues to strongly support the nuclear nonproliferation mission. We are proud that the Office of Defense Nuclear Nonproliferation is responsible for delivering the majority of the pledges made by the United States under the Nuclear Security Summit process. The President and Energy Secretary recently represented the United States at the third such Summit in The Hague, where they highlighted additional commitments the United States intends to meet by the 2016 Summit, which will be hosted in the United States, and continued to encourage international commitment to and investment in meeting these critical nonproliferation challenges.

### **Naval Reactors**

The budget request for Naval Reactors is \$1.4 billion, an increase of \$282.1 million, about 25.8% from the FY14 level. The request includes the base funding required to safely maintain, operate and oversee the Navy's 83 nuclear-powered warships. The Naval Reactors budget request includes three high priority programs: OHIO-class Replacement submarine; refueling of the Land-Based Prototype reactor plant; and the Spent Fuel Handling Recapitalization Project. These new projects are essential to maintaining a credible sea-based strategic deterrent, to maintain the research and training capabilities of the Land-based Prototype, and to maintain the capability to safely inspect, store and package naval spent nuclear fuel.

### **NNSA Program Direction—Federal Salaries and Expenses**

NNSA Federal Salaries and Expenses (FSE), formerly "Office of the Administrator," request is \$411 million, an increase of \$34 million or 9% from the FY 2014 level. The increase reflects two requirements: a \$20 million one-time cost to fund the move of the NNSA Albuquerque Complex to a different leased facility, and a \$12 million increase associated with the transfer of Corporate Project Management from the Weapons Activities account, consistent with Congressional direction in the FY 2014 Consolidated Appropriations Act. The FY 2015 Budget Request provides support for 1,710 Federal FTEs – a 9.3 percent reduction relative to FY 2012 enacted levels – in response to today's constrained budget environment. FSE remains critical to supporting the NNSA mission and workforce.

Separately in the FY 2015 budget request, the Administration has proposed an additional \$56 billion in funding across the Government through the Opportunity, Growth and Security Initiative (OGSI). The OGSI supports the President's broad vision for investing in growth, opportunity, and national security and advancing important Presidential goals while respecting the budgetary consensus developed under the Bipartisan Budget Agreement of December

2013. The OIGSI allocates around \$600 million to further support NNSA's critical mission and infrastructure investments.

## **Conclusion**

The NNSA implements a vital mission, responsible for nuclear security at home and abroad, and delivering the technology, capabilities and infrastructure essential to a 21<sup>st</sup> century organization. An emphasis on mission effective and cost efficient nuclear security solutions will be critical for the NNSA to succeed in today's fiscal climate where difficult choices must be made but where our workforce continues to rise to the challenge and deliver.