

NATIONAL NUCLEAR SECURITY ADMINISTRATION

(Discretionary dollars in thousands)

	FY 2013 Current	FY 2014 Enacted	FY 2015 Request	FY 2015 vs. FY 2014	
				\$	%
National Nuclear Security Administration					
Weapons Activities	6,966,855	7,781,000	8,314,902	+533,902	+6.9%
Defense Nuclear Nonproliferation	2,237,420	1,954,000	1,555,156	-398,844	-20.4%
Naval Reactors	994,118	1,095,000	1,377,100	+282,100	+25.8%
Federal Salaries and Expenses/1	377,457	377,000	410,842	+33,842	+9.0%
Cerro Grande Fire Activities	-61	0	0	0	N/A
Total, National Nuclear Security Administration	10,575,789	11,207,000	11,658,000	+451,000	+4.0%

1/Formerly Office of the Administrator

Overview

National Nuclear Security Administration (NNSA) directly contributes to meeting the DOE Strategic Plan for 2014-2018 Goal for “Nuclear Security” and plays a critical role in meeting many strategic objectives in the “Management and Performance” goal. The primary mission of NNSA is to support the security and safety of our nation. NNSA pursues four major national security endeavors consistent with DOE’s Strategic Plan: (1) use science to maintain a safe, secure, and effective nuclear weapons stockpile that deters any adversary and protects our allies; (2) reduce the threat posed by nuclear proliferation and terrorism, including unsecured or excess nuclear and radiological materials both domestically and internationally; (3) prepare to respond to, and mitigate, nuclear and radiological incidents worldwide; and (4) provide safe and effective nuclear propulsion for the U.S. Navy.

The FY 2015 Budget Request supports national security priorities articulated in the 2010 Nuclear Posture Review, the Stockpile Stewardship and Management Plan, and the 2010 National Security Strategy of the United States. These priorities are reflected in the DOE Strategic Plan for 2014-2018 and guide decisions on allocation of resources in the President’s Budget Requests.

Program Highlights

The Weapons Activities FY 2015 Budget Request reflects an increase from FY 2014 Enacted levels to meet the Administration’s commitments to the programs and capabilities required to maintain a safe, secure, and effective nuclear stockpile. Increases are requested for Directed Stockpile Work – particularly for the B61 life extension program and the Science Campaign. The Weapons Request also includes funding for Defense Nuclear Security to support DOE’s physical security reform efforts to emphasize mission performance, responsibility, and accountability. In addition, there are increases in funding for the Information Technology and Cybersecurity program to research and develop information technology and cybersecurity solutions. Funding is also requested in this account to sustain emergency response and nuclear counterterrorism capabilities that are applied against a wide range of high-consequence nuclear or radiological incidents and threats.

The Defense Nuclear Nonproliferation FY 2015 Budget Request is driven by the imperative for U.S. leadership in nonproliferation initiatives both here and abroad. Emphasis continues to be on efforts to eliminate or secure vulnerable nuclear materials from around the world, counter nuclear smuggling, radiological security, and technology development needed for nonproliferation and arms control missions. As part of an ongoing analysis of options to dispose of U.S. surplus plutonium, it has become apparent that the Mixed Oxide (MOX) Fuel Fabrication Facility will be significantly more expensive than anticipated, and therefore, the Budget Request places the MOX Facility in cold stand-by while the Department evaluates plutonium disposition options.

The Naval Reactors FY 2015 Budget Request reflects an increase for the Navy’s fleet of nuclear-powered aircraft carriers and submarines and funds three major projects. The three projects consist of the *Ohio* Replacement, Land-based Prototype Refueling Overhaul, and Spent Fuel Handling Recapitalization, which are needed to deliver Navy-established mission requirements.

For NNSA Federal Salaries and Expenses (formerly the Office of the Administrator account), the FY 2015 Budget Request supports the staffing and Federal support needed to meet mission requirements. Funding is essentially unchanged from FY

2014 enacted levels, after adjusting for funding to pay for moving to a new leased facility for the NNSA Albuquerque Complex and a Congressionally-directed functional transfer out of the Weapons Activities account for Corporate Project Management.

WEAPONS ACTIVITIES – NNSA

(Discretionary dollars in thousands)

	FY 2013 Current	FY 2014 Enacted	FY 2015 Request	FY 2015 vs. FY 2014	
				\$	%
National Nuclear Security Administration					
Weapons Activities					
Directed Stockpile Work	1,930,057	2,442,033	2,746,604	+304,571	+12.5%
Science Campaign	321,220	369,723	456,430	+86,707	+23.5%
Engineering Campaign	124,414	149,911	136,005	-13,906	-9.3%
Inertial Confinement Fusion and High Yield Campaign	456,676	513,957	512,895	-1,062	-0.2%
Advanced Simulation and Computing Campaign	513,567	569,329	610,108	+40,779	+7.2%
Readiness Campaign	115,311	55,407	125,909	+70,502	+127.2%
Readiness in Technical Base and Facilities	2,089,417	2,067,425	2,055,521	-11,904	-0.6%
Nuclear Programs	0	0	0	0	N/A
Secure Transportation Asset	201,533	210,000	233,813	+23,813	+11.3%
Counterterrorism and Counterproliferation Programs	0	0	76,901	+76,901	N/A
Nuclear Counterterrorism Incident Response	227,088	228,243	173,440	-54,803	-24.0%
Site Stewardship	69,497	87,326	82,449	-4,877	-5.6%
Defense Nuclear Security	0	664,981	618,123	-46,858	-7.0%
NNSA CIO Activities	139,184	0	0	0	N/A
Information Technology and Cybersecurity	0	145,068	179,646	+34,578	+23.8%
Safeguards and Security	665,463	0	0	0	N/A
Defense Nuclear Security	653,463	0	0	0	N/A
Cybersecurity	12,000	0	0	0	N/A
Legacy Contractor Pensions	170,191	279,597	307,058	+27,461	+9.8%
National Security Applications	9,500	0	0	0	N/A
Domestic Uranium Enrichment Research, Development, and Demonstration	0	62,000	0	-62,000	-100.0%
Subtotal, Weapons Activities	7,033,118	7,845,000	8,314,902	+469,902	+6.0%
<i>Adjustments</i>					
Use of Prior Year Balances	-66,263	0	0	0	N/A
Rescission of Prior Year Balances	0	-64,000	0	+64,000	+100.0%
Total, Weapons Activities	6,966,855	7,781,000	8,314,902	+533,902	+6.9%

Appropriation Overview

One of the statutory missions of the National Nuclear Security Administration (NNSA) is to maintain and enhance the safety, security, and effectiveness of the U.S. nuclear weapons stockpile to meet national security requirements. The mission is carried out in partnership with the Department of Defense (DoD), with NNSA providing research, development, and production activities supporting the U.S. nuclear weapons stockpile.

The work performed by NNSA in the **Weapons Activities** programs ensures the accomplishment of the Department’s Strategic Objective 4 — Maintain the safety, security and effectiveness of the Nation’s nuclear deterrent without nuclear testing is accomplished as well as Strategic Objective 5 — Strengthen key science, technology and engineering talent, capabilities, and information resources and modernize the infrastructure, especially in nuclear science and technology, to enhance national security.

While the majority of this account supports the nuclear weapons program, NNSA’s critical security—both physical and cybersecurity—as well as emergency response and counterterrorism and counterproliferation programs are also funded here, in direct support of DOE Strategic Goal 6—Reduce global nuclear security threats.

Program Highlights

- **Directed Stockpile Work**
Directed Stockpile Work continues significant efforts to meet nuclear security priorities, to conduct the stockpile management program, and to continue leveraging science to enhance national security. The FY 2015 Budget Request is organized by Life Extension Programs (LEPs) and Major Alterations, Stockpile Systems, Weapons Dismantlement and Disposition, and Stockpile Services and reflects an investment strategy that sustains the existing stockpile while

providing a strong basis for transitioning to a smaller nuclear stockpile that continues to be safe, secure and effective. Key stockpile initiatives include continuations of the W76 LEP, the B61 LEP, the W88 ALT 370, and the initial study of the Cruise Missile Warhead LEP. Support activities include the production of tritium, plutonium infrastructure sustainment as well as surveillance and assessment activities. The requested increase reflects the ramp up of Phase 6.3 activities for the B61 LEP and an increase for Stockpile Systems, including maintenance (neutron generator activities), surveillance, tritium program requirements, and W88 ALT 370 arming, fuzing, and firing set development efforts.

- **Science Campaign**

Science Campaign develops and applies improved capabilities to assess the safety, reliability, and performance of the weapons' nuclear explosive package. The FY 2015 Budget Request provides increased funding for technical resources required for assessment of Life Extension Program (LEP) options incorporating the reuse or remanufacture of pits, secondaries, other nuclear explosive package components, and other improved safety technologies that may be implemented in future LEPs. Increased funding for experiments and evaluation of options for improved diagnostic capabilities at the U1a facility in Nevada supports certification and annual assessments.

- **Engineering Campaign**

Engineering Campaign develops capabilities to assess and improve the safety, reliability, and performance of the non-nuclear and nuclear explosive package engineering components in nuclear weapons. The FY 2015 Request reflects a balanced workload including decreases in activities associated with validation-related testing and aging/lifetime estimates as well as advanced diagnostic development tools required for current stockpile surveillance, assessments, and future refurbishments.

- **Inertial Confinement Fusion Ignition and High Yield Campaign**

Inertial Confinement Fusion Ignition and High Yield Campaign develops the scientific understanding and experimental capabilities in high-energy-density physics needed to support the stockpile without underground nuclear testing. Experiments in ignition will continue to look at the behavior and physics of ignition targets to improve the predictive capability of the simulations and to provide feedback to resolve the outstanding physics questions and improve target performance. At the end of FY 2015, progress in all three ignition concepts (Direct, Indirect, and Pulsed Power) will be externally reviewed to assess their progress.

- **Advanced Simulation and Computing Campaign**

Advanced Simulation and Computing Campaign (ASC) provides leading edge, high-end modeling, and simulation capabilities that capture and allow us to apply all that we know about weapons physics and engineering. These capabilities consist of weapon codes, weapons science, platforms, and computer facilities. Applications of these capabilities include the meeting of current stockpile assessment and certification requirements; evaluation of future stockpile manufacturing, safety, and security requirements; and assessment of foreign weapons, potential events and devices. The FY 2015 ASC budget request includes \$50 million for the Advanced Technology Development and Mitigation sub-program, established in FY 2014, that funds laboratory code and computer engineering projects that pursue long-term simulation and computing goals relevant to both exascale computing and the broad national security missions of the NNSA.

- **Readiness Campaign**

Readiness Campaign develops and deploys modern manufacturing capabilities to produce materials and components in compliance with weapon design and performance requirements, and in alignment with LEPs and refurbishment schedules. The increase from FY 2014 is driven by support requirements for the B61 LEP.

- **Readiness in Technical Base and Facilities**

Readiness in Technical Base and Facilities (RTBF) provides the underlying physical infrastructure and operational readiness for the national nuclear security enterprise, ensuring that facilities are operational, safe, secure, and compliant with regulatory requirements by sustaining essential infrastructure-focused activities and a defined level of readiness through facility and capability investment. RTBF plans, prioritizes, and constructs state-of-the-art facilities, infrastructure, and scientific tools for the enterprise while also maintaining the existing infrastructure and planning for the disposition of facilities.

- **Site Stewardship**
 Site Stewardship ensures the overall health and viability of the national nuclear security enterprise, with a focus on: long-term stewardship activities under the Environmental Projects and Operations program necessary to meet Federal and State environmental regulatory requirements identified in legally enforceable site permits, cleanup agreements, and legislation to ensure safe cleanup levels are met; stabilization, consolidation, packaging and disposition of nuclear materials under the Nuclear Materials Integration program; and research and education enhancements at under-represented colleges and universities funded by the Minority Serving Institution Partnership Programs (MSIPP) to develop the needed skills and talent for NNSA's enduring technical workforce at the laboratories and production plants.
- **Secure Transportation Asset**
 Secure Transportation Asset (STA) provides for the safe and secure movement of nuclear weapons, special nuclear materials, and weapon components to meet projected DOE and DoD requirements. Program Direction in this account pays for the secure transportation workforce, including Federal Agents. In FY 2015, STA will continue its asset modernization and workforce capability initiatives: the design of the Mobile Guardian Transporter, the phased deployment of the Advanced Radio Enterprise System, the First Production Unit of the upgrade to the Trailer Communications System, the continued replacement of vehicles and tractors, and the restoration of Federal Agent staffing levels. STA will ensure all supporting systems remain efficiently integrated to support Defense Programs.
- **Defense Nuclear Security**
 Defense Nuclear Security provides protection for NNSA personnel, facilities, nuclear weapons, special nuclear material, and information from a full spectrum of insider and outsider threats. The physical security budget is based on risk-informed decisions and is consistent with the Department's Graded Security Protection policy. FY 2015 reflects a rebalancing between functional security areas, most notably a reduction in protective force staffing at Los Alamos National Laboratory due to the completion of a new perimeter intrusion detection and assessment system, reduced estimates on the cost of providing protective force services through the Management and Operating partners at Y-12, and completion of minor construction projects.
- **Information Technology and Cybersecurity (formerly NNSA CIO Activities)**
 Information Technology and Cybersecurity (formerly NNSA CIO Activities) supports the national nuclear security enterprise, leading Federal efforts to research and develop information technology and cybersecurity solutions, including continuous monitoring, enterprise wireless and security technologies (i.e., identity, credential, and access management) to help meet security, proliferation resistance. In addition, by making the NNSA Data Centers more efficient, the program directly supports the climate goals mission of DOE through climate modeling. The increase in the Information Technology and Cybersecurity Request reflects expenses for: improvement to the cyber infrastructure at the NNSA sites; requirements for classified computing environment directed by the Committee on National Security Systems, an interagency body responsible for safeguarding the National Security Systems; limited Identity Credential and Access Management; network infrastructure costs for the NNSA sites; and Public Key Infrastructure tokens for authentication to Secret Networks and applications.
- **Nuclear Counterterrorism Incident Response**
 Nuclear Counterterrorism Incident Response (NCTIR) applies technical assets from the national 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 comprised of technical specialists to respond to and manage the consequences domestically or internationally should an attack 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. It also manages the effects of an attack by collaborating with Federal, State, and local emergency management organizations.
- **Counterterrorism and Counterproliferation Programs**
 Counterterrorism and Counterproliferation Programs (CTCP) promotes the understanding of nuclear threat devices, including improvised nuclear devices, foreign nuclear weapons (with emphasis on loss of custody), and their constituents (namely nuclear and energetic materials). Key CTCP technical activities sustain and exercise the U.S. Government's ability to understand and prevent nuclear terrorism and to counter nuclear device proliferation.