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on the
Fiscal Year 2019 President's Budget Request
Before the
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Senate Committee on Armed Services

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Chairman Fischer, Ranking Member Donnelly, and Members of the Subcommittee, thank you for the opportunity to present the President's Fiscal Year (FY) 2019 budget request for the Department of Energy's (DOE) National Nuclear Security Administration (NNSA). NNSA deeply appreciates the Committee's strong support for the nuclear security mission and for the extraordinary people and organizations that are responsible for its execution.

The President's FY 2019 budget request for NNSA is $15.1 billion, an increase of $1.2 billion or 8.3% over the FY 2018 request. The request represents approximately 50% of DOE's total budget. This budget request demonstrates the Administration's strong support for NNSA and reinforces the recently released Nuclear Posture Review (NPR) and National Security Strategy (NSS). We will continue to work with the Department of Defense (DoD) to determine the resources, time, and funding required to address policies laid out in the NPR, including the potential low yield ballistic missile warhead, sea launched cruise missile, and B83-1 gravity bomb. We live in an evolving international security environment that is more complex and demanding than any since the end of the Cold War, which necessitates a national commitment to maintain modern and effective nuclear forces and infrastructure. To remain effective, however, recapitalizing our Cold War legacy nuclear forces is critical.

NNSA's enduring missions remain vital to the national security of the United States: maintaining the safety, security, reliability, and effectiveness of the nuclear weapons stockpile; reducing the threat of nuclear proliferation and nuclear terrorism around the world; and providing nuclear propulsion for the U.S. Navy's fleet of aircraft carriers and submarines. The President's FY 2019 budget request is reflective of this Administration's strong support for NNSA and ensures that U.S. nuclear forces are modern, robust, flexible, resilient, ready, and appropriately tailored to deter 21st-century threats and reassure America's allies.

Attracting, training, and retaining a skilled and experienced workforce is critical to NNSA's ability to accomplish its diverse missions. NNSA's dedicated and highly talented cadre of Federal employees and Management and Operating (M&O) contract partners must be supported with the tools necessary to support the complex and challenging responsibilities found only within NNSA's nuclear security enterprise. NNSA's infrastructure is in a brittle state that requires significant and sustained investments over the coming decade to correct. There is

no margin for further delay in modernizing NNSA's scientific, technical, and engineering capabilities, and recapitalizing our infrastructure needed to produce strategic materials and components for U.S. nuclear weapons.

The FY 2019 budget request also reflects the close partnerships between NNSA and other federal departments and agencies. NNSA collaborates with DoD to meet military requirements, support the Nation's nuclear deterrent, and modernize the nuclear security enterprise. NNSA also partners with a range of federal agencies, to prevent, counter, and respond to nuclear proliferation and nuclear terrorism.

NNSA is mindful of its obligation to be responsible stewards of the resources entrusted by Congress and the American taxpayers. Our FY 2019 budget request is the result of a disciplined process to prioritize funding for validated requirements as designated by the Administration and sets the foundation to implement policies from the NPR and NSS.

Weapons Activities Appropriation

The FY 2019 budget request for the Weapons Activities account is $11.0 billion, an increase of $777.7 million or 7.6% over FY 2018 request levels. Nuclear deterrence remains the bedrock of America's national security. Given the criticality of effective U.S. nuclear deterrence to the safety of the American people, allies, and partners, there is no doubt that NNSA's sustainment and replacement program should be regarded as both necessary and affordable. The programs funded in this account support the Nation's current and future defense posture and the associated nationwide infrastructure of science, technology, and engineering capabilities.

The Weapons Activities account supports the maintenance and refurbishment of nuclear weapons to maintain safety, security, and reliability; investments in scientific, engineering, and manufacturing capabilities to certify the enduring nuclear weapons stockpile; and the fabrication of nuclear weapon components. This account also includes investments in enterprise-wide infrastructure sustainment activities, physical and cybersecurity activities, and the secure transportation of nuclear materials.

Maintaining the Stockpile

This year, the work of the science-based Stockpile Stewardship Program again supported the Secretaries of Energy and Defense in certifying to the President for the 22nd consecutive year, that the U.S. nuclear weapons stockpile remains safe, secure, and reliable without the need for nuclear explosive testing. This remarkable scientific achievement is made possible through the work accomplished by NNSA's world-class scientists, engineers, and technicians, and through investments in state-of-the-art diagnostic tools, high performance computing platforms, and modern facilities.

For Directed Stockpile Work (DSW), the FY 2019 budget request is $4.7 billion, an increase of $689.0 million or 17.3% over the FY 2018 request. Included within this request is funding to

support the life extension programs (LEPs) for the W76, B61, and W80, and a major alteration of the W88; and advance the ground based strategic deterrent, by one year to 2019, and investigate feasibility of interoperable aspects for other types of warheads. These LEPs are aligned with the needs outlined in the NPR and with the approved Nuclear Weapons Council strategic plan.

- ***W76-1 LEP***: The $113.9 million requested for the W76-1 LEP directly supports the sea-based leg of the nuclear triad by extending the service life of the original W76-0 warhead. With continued funding, the W76-1 LEP will remain on schedule and on budget to complete production in FY 2019.

- ***B61-12 LEP***: NNSA continues to make progress on the B61-12 LEP that will consolidate four variants of the B61 gravity bomb. This LEP will meet military requirements for reliability, service-life, field maintenance, safety, and use control while also addressing multiple components nearing end of life in this oldest nuclear weapon in the stockpile. With the $794.0 million requested, NNSA will remain on schedule to deliver the First Production Unit (FPU) of the B61-12 in FY 2020. NNSA is responsible for refurbishing the nuclear explosives package and updating the electronics for this weapon. The Air Force will provide the tail kit assembly under a separate acquisition program. When fielded, the B61-12 gravity bomb will support both Air Force long-range nuclear-capable bombers and dual-capable fighter aircraft and bolster central deterrence for the United States while also providing extended deterrence to America's allies and partners.

- ***W88 Alteration 370 Program***: Currently in the Production Engineering Phase (Phase 6.4), the W88 Alt 370 is on schedule, with FPU planned in December 2019. The budget request for this program, which also supports the sea-based leg of the nuclear triad, is $304.3 million in FY 2019.

- ***W80-4 LEP***: The current air-launched cruise missile delivers a W80 warhead first deployed in 1982. Both the missile and the warhead are well past planned end of life and are exhibiting aging issues. To maintain this vital deterrent capability, NNSA requests $654.8 million in FY 2019, an increase of $255.7 million or 64.1% over the FY 2018 request to extend the W80 warhead, through the W80-4 LEP, for use in the Air Force's Long Range Stand-Off (LRSO) cruise missile. This funding supports a significant increase in program activity through the Design Definition and Cost Study Phase on a timeline consistent with the DoD's LRSO missile platform modernization schedule.

- ***Interoperable Warhead 1 (IW1)***: The IW1 program will replace one of the oldest warheads in the stockpile, and provide improved warhead security, safety, and use control. To replace the Air Force employed W78 warhead, NNSA is requesting $53.0 million to support the scheduled restart of the feasibility study and design options work suspended in 2014. Technology development efforts are focused on supporting the W78 warhead replacement and investigate the feasibility of interoperable aspects for

other types of warheads. To reduce risk, investments will initially be made against technologies that are less than technology readiness level 5.

Within DSW, the FY 2019 budget request includes $619.5 million for Stockpile Systems. This program sustains the stockpile in accordance with the Nuclear Weapon Stockpile Plan by producing and replacing limited-life components such as neutron generators and gas transfer systems; conducting maintenance, surveillance, and evaluations to assess weapon reliability; detecting and anticipating potential weapon issues; and compiling and analyzing information during the Annual Assessment process.

The DSW also requests $1.1 billion for Stockpile Services to support the modernization of capabilities to improve efficiency of manufacturing operations to meet future requirements. The Stockpile Services request supports all DSW operations by funding programmatic and infrastructure management, and maintaining the core competencies and technologies essential for reliable and operable stewardship capabilities.

Strategic Materials are key for the safety, security, and effectiveness of the Nation's nuclear deterrent and are used for addressing national security concerns such as nuclear nonproliferation and counterterrorism missions. The requested funding is necessary to maintain NNSA's ability to produce the nuclear and other strategic materials associated with nuclear weapons as well as refurbish and manufacture components made from these materials. The program includes Uranium Sustainment, Plutonium Sustainment, Tritium Sustainment, Domestic Uranium Enrichment (DUE), and other strategic materials, such as lithium.

- ***Strategic Materials Sustainment:*** The $218.8 million for the Strategic Materials Sustainment program will develop and implement strategies to maintain the technical base for strategic materials in support of NNSA's nuclear weapons, non-proliferation, and naval reactors activities at NNSA's eight sites.

- ***Uranium Sustainment:*** Funding for Uranium Sustainment supports the program to maintain existing enriched uranium capabilities through enhanced equipment maintenance while preparing to phase out mission dependency on Building 9212, a Manhattan Project-era production facility at the Y-12 National Security Complex (Y-12) in Oak Ridge, Tennessee. The funding request of $87.2 million will assist NNSA in sustaining uranium manufacturing capabilities while accelerating planning and execution of the Building 9212 Exit Strategy to reduce risks associated with transitioning enriched uranium capabilities to the Uranium Processing Facility (UPF) that is under construction.

- ***Plutonium Sustainment:*** The $361.3 million requested for Plutonium Sustainment supports continued progress to meet pit production requirements. The requested funding increase would support efforts to begin the long term plan to develop a capability to produce no fewer than 80 W87-like war reserve pits per year by 2030, as directed in the NPR.

- ***Tritium Sustainment:*** The FY 2019 budget request of $205.3 million will support the Nation's capacity to provide the tritium necessary for national security requirements. Tritium will be produced by irradiating Tritium Producing Burnable Absorber Rods in designated Tennessee Valley Authority nuclear power plants and by recovering and recycling tritium from gas transfer systems returned from the stockpile at the SRS Tritium Extraction Facility.

- ***Lithium Sustainment:*** The FY 2019 budget request establishes a separate Lithium Sustainment Program of $29.1 million that supports a Lithium Bridging Strategy to maintain the production of the nation's enriched lithium supply in support of the nuclear security mission, DOE's Office of Science, and DHS.

- ***Domestic Uranium Enrichment:*** The DUE program, with a request of $100.7 million in FY 2019, will continue efforts to make available when needed the necessary supplies of enriched uranium for a variety of national security needs.

For Research, Development, Test, and Evaluation (RDT&E), the FY 2019 budget request is $2.0 billion, a decrease of $33.0 million or 1.6% below the FY 2018 request.

Increases for the Science Program ($564.9 million) provide additional funding to support subcritical experiments for pit reuse and advanced diagnostics for subcritical hydrodynamic integrated weapons experiments that produce key data for stockpile certifications.

The Engineering Program ($211.4 million) sustains NNSA's capability for creating and maturing advanced toolsets and technologies to improve weapon surety and support annual stockpile assessments.

The Inertial Confinement Fusion Ignition and High Yield Program in FY 2019 ($418.9 million) will continue to build upon prior accomplishments. These efforts continue to provide key data to reduce uncertainty in calculations of nuclear weapons performance and improve the predictive capability of science and engineering models in high-pressure, high-energy, high-density regimes.

The RDT&E request for FY 2019 includes $703.4 million for the Advanced Simulation and Computing (ASC) Program, and continues NNSA's program of collaboration with DOE's Office of Science to implement DOE's Exascale Computing Initiative. NNSA's ASC Program will support stockpile stewardship by developing and deploying predictive simulation capabilities for nuclear weapons systems. NNSA is taking major steps in high-performance computing by deploying increasingly powerful computational capabilities at both Los Alamos National Laboratory (LANL) and Lawrence Livermore National Laboratory.

The Secure Transportation Asset (STA) program provides safe, secure movement of nuclear weapons, special nuclear material, and weapon components to meet projected DOE, DoD, and

other customer requirements. The Office of Secure Transportation has an elite workforce performing sensitive and demanding work; agents are among the most highly trained and dedicated national security personnel operating within the United States. The FY 2019 budget request of $278.6 million continues our efforts to modernize and replace the existing fleet of transporters and efforts to hire and train an additional 40 agents. The FY 2019 funding also supports the Safeguards Transporter (SGT) risk reduction initiatives to extend the life of the SGT to meet the STA mission capacity.

NNSA's Office of Defense Programs also maintains the vitality of the broader nuclear security enterprise that supports other agencies' nuclear missions. An important aspect of this effort is investment in Laboratory, Site and Plant Directed Research and Development. As confirmed by independent reviews, this type of defense research and development investment provides basic research funding to foster innovation and to attract and retain scientific and technical talent and is critical to the long-term sustainment of our national laboratories.

Improving Safety, Operations, and Infrastructure

NNSA's diverse national security missions are dependent upon the safety and reliability of its infrastructure. More than half of NNSA's facilities are over 40 years old, and roughly 30% date back to the Manhattan Project era. If left unaddressed, the condition and age of NNSA's infrastructure will put NNSA's missions, the safety of its workforce, the public, and the environment at risk. As reaffirmed in the NPR, "An effective, responsive, and resilient nuclear weapons infrastructure is essential to the U.S. capacity to adapt flexibly to shifting requirements. Such an infrastructure offers tangible evidence to both allies and potential adversaries of U.S. nuclear weapons capabilities and can help to deter, assure, hedge against adverse developments, and discourage adversary interest in arms competition." The FY 2019 budget request for Infrastructure and Operations is $3.0 billion, an increase of $199.6 million or 7.1% above the FY 2018 request. The FY 2018 National Defense Authorization Act provided NNSA and its M&O partners with additional flexibility to address the challenges of modernizing the enterprise by increasing the minor construction threshold to $20 million. This reform supports efforts to address deferred maintenance through recapitalization projects that improve the condition and extend the design life of structures, capabilities, and systems to meet NNSA's nuclear weapons and nonproliferation program needs.

The FY 2019 budget request for Infrastructure and Operations includes $1.1 billion for Line Item Construction projects. The requested amount provides the remaining funding of $48.0 million for the Albuquerque Facility, supports UPF at Y-12 ($703.0 million), and continues the Chemistry and Metallurgy Research Replacement project at LANL ($235.1 million). The FY 2019 budget also includes $19.0 million in funding to begin the first steps toward the construction of a new lithium production facility and $6 million for the 138kV Power Transmission System Replacement project to replace and upgrade the current power transmission system for the Mission Corridor at NNSS. Delivering these projects on budget and schedule is contingent upon stable and predictable funding profiles, and the President's budget request being supported.

Many of NNSA's excess process-contaminated facilities will ultimately be transferred to DOE's Office of Environmental Management for disposition. In the interim, NNSA is focusing on reducing risks where possible. For example, NNSA has made critical investments to stabilize high-risk process contaminated facilities until ultimate disposition, including at Y-12's Alpha 5 and Beta 4 facilities. NNSA also remains committed to reducing the risk of non-process contaminated facilities by dispositioning facilities where possible. In late 2017, NNSA, with the support of Congress, completed the transfer to a private developer of over 200 acres of the aging Bannister Federal Complex in Kansas City, Missouri, eliminating $300 million of repair needs.

Later this spring, completion of the Pantex Drummond Office Building (formerly known as the Administrative Support Complex) at the Pantex Plant outside of Amarillo, Texas will allow NNSA to move nearly 1,000 employees into a modern, energy efficient workspace. After completion of the Pantex Drummond Office building NNSA will also be able to dispose of dilapidated, 1950s-era buildings and eliminate approximately $20 million in deferred maintenance.

Defense Nuclear Security's (DNS) FY 2019 budget request is $690.6 million, an increase of $3.7 million or 0.5% over the FY 2018 Request. To execute its enterprise security program, DNS provides funding to the sites for: protective forces, physical security systems, information security and technical security, personnel security, nuclear material control and accountability, and security program operations and planning. The request manages risk among important, competing demands of the physical security infrastructure and includes planning and conceptual design funds for a series of future projects to sustain and recapitalize the Perimeter Intrusion Detection and Assessment Systems at the Pantex Plant and Y-12. Preliminary estimates are included within the recently completed *10-year Physical Security Systems Refresh Plan*. Future budget requests will reflect refined and detailed funding requirements.

Information Technology and Cybersecurity enable every element of NNSA's missions. The FY 2019 budget request is $221.2 million, an increase of $34.4 million, or 18.4% over the FY 2018 request. The cybersecurity program continuously monitors enterprise wireless and security technologies to meet a wide range of security challenges. The requested funding increase will be used to continue working toward a comprehensive information technology and cybersecurity program to deliver secure crucial information assets. The funding will continue to mature the cybersecurity infrastructure, comprising almost 100 sensors and over 70 data acquisition servers located across the nation.

Defense Nuclear Nonproliferation Appropriation

The FY 2019 budget request for the Defense Nuclear Nonproliferation account is $1.9 billion, an increase of $69.5 million or 3.9% above the FY 2018 request. Defense Nuclear Nonproliferation account activities address the entire nuclear threat spectrum by helping to prevent the proliferation of nuclear weapons, counter the threat of nuclear terrorism, and respond to nuclear and radiological incidents around the world. The FY 2019 budget request funds two program mission areas under the Defense Nuclear Nonproliferation account: the Defense

Nuclear Nonproliferation (DNN) Program and the Nuclear Counterterrorism and Incident Response (NCTIR) Program.

Nonproliferation Efforts

The Office of Defense Nuclear Nonproliferation works with international partners to remove or eliminate vulnerable nuclear material; improve global nuclear security through multilateral and bilateral technical exchanges and training workshops; help prevent the illicit trafficking of nuclear and radioactive materials; secure domestic and international civilian buildings containing high-priority radioactive material; provide technical reviews of U.S. export license applications; conduct export control training sessions for U.S. enforcement agencies and international partners; strengthen the International Atomic Energy Agency's ability to detect and deter nuclear proliferation; advance U.S. capabilities to monitor arms control treaties and detect foreign nuclear programs; and maintain organizational readiness to respond to and mitigate radiological or nuclear incidents worldwide.

The Material Management and Minimization (M3) program provides an integrated approach to addressing the risk posed by nuclear materials. The FY 2019 budget request is $332.1 million. The request supports the conversion or shut-down of research reactors and isotope production facilities that use highly enriched uranium (HEU) and acceleration of new, non HEU-based molybdenum-99 production facilities in the United States, which recently contributed to the approval of the first Food and Drug Administration-approved U.S.-origin technology to produce the medical isotope. Additionally, the request for M3 supports the removal and disposal of weapons usable nuclear material and continues the transition to the dilute and dispose strategy for surplus plutonium disposition, including the completion of the independent validation of lifecycle cost estimate and schedule for the dilute and dispose strategy.

The Global Material Security program works with partner nations to increase the security of vulnerable nuclear and radioactive materials and improve ability to deter, detect, and investigate illicit trafficking of these materials. The FY 2019 budget request for this program is $337.1 million and includes efforts to secure the most at-risk radioactive material in U.S. high-threat urban areas by 2020.

The Nonproliferation and Arms Control program develops and implements programs to strengthen international nuclear safeguards; control the spread of nuclear and dual-use material, equipment, technology and expertise; verify nuclear reductions and compliance with nonproliferation and arms control treaties and agreements; and address enduring and emerging proliferation challenges requiring the development of innovative policies and approached. The FY 2019 budget request for this program is $129.7 million. This increase serves to improve the deployment readiness of U.S. nuclear disablement and dismantlement verification teams and to enhance export control dual-use license and interdiction technical reviews.

The Defense Nuclear Nonproliferation Research and Development program supports innovative

unilateral and multilateral technical capabilities to detect, identify, and characterize foreign nuclear weapons programs, illicit diversion of special nuclear material, and nuclear detonations worldwide. The FY 2019 budget request for this program is $456.1 million.

Nonproliferation Construction consolidates construction costs for DNN projects. The FY 2019 budget request is $279.0 million. As in FY 2018, the Administration proposes termination activities for the Mixed Oxide (MOX) Fuel Fabrication Facility project and continuing to pursue the dilute and dispose option to fulfill the United States' commitment to dispose of 34 metric tons of plutonium. The $220.0 million for the MOX Facility will be used to continue terminating the project and to achieve an orderly and safe closure. The scope and costs will be refined in subsequent budget requests when the termination plan for the MOX project is approved. The request also includes $59.0 million for the Surplus Plutonium Disposition project to support the dilute and dispose strategy.

Nuclear Counterterrorism and Incident Response (NCTIR)

The FY 2019 budget request for NCTIR is $319.2 million, an increase of $41.8 million or 15.1% over the FY 2018 request. NNSA's Counterterrorism and Counterproliferation (CTCP) program is part of broader U.S. Government efforts to assess the threat of nuclear terrorism and develop technical countermeasures. The scientific knowledge generated by this program underpins the technical expertise for disabling potential nuclear threat devices, including improvised nuclear devices, supports and informs U.S. nuclear security policy, and guides nuclear counterterrorism and counterproliferation efforts, including interagency nuclear forensics and contingency planning.

The Counterterrorism and Counterproliferation program provides a flexible, efficient, and effective response capability for any nuclear/radiological incident in the United States or abroad by applying the unique technical expertise across NNSA's nuclear security enterprise. Appropriately trained personnel and specialized technical equipment are ready to deploy to provide an integrated response for radiological search, render safe, and consequence management for nuclear/radiological emergencies, national exercises, and security operations for large National Security Special Events.

The CTCP program maintains an operational nuclear forensics capability for pre-detonation device disassembly and examination, provides operational support for post-detonation assessment, and coordinates the analysis of special nuclear materials. Readiness is maintained to deploy device disposition and device assessment teams, conduct laboratory operations in support of analysis of bulk actinide forensics, and to deploy subject matter expertise and operational capabilities in support of ground sample collections that contribute to conclusions in support of attribution.

NNSA's Aerial Measuring System (AMS) provides airborne remote sensing in the event of a nuclear or radiological accident or incident within the continental United States, as well as in support of high-visibility national security events.

The AMS fleet consists of three B200 fixed-wing aircraft with an average age of 33 years and two Bell 412 helicopters with an average age of 24 years. The age of the current aircraft leads to unscheduled downtime resulting in reduced mission availability. A recently concluded Analysis of Alternatives on the AMS aircraft determined that recapitalization of the aging aircraft fleet is necessary to continue to provide Federal, state, and local officials with rapid radiological information following an accident or incident. The FY 2019 budget requests $32.5 million as part of a two-year replacement process for the five aircraft.

The equipment used by NNSA's emergency response teams is aging, resulting in increasing maintenance costs and increasing risks to the emergency response mission. This budget includes funding for incremental recapitalization of incident response equipment consistent with lifecycle planning to maintain operational readiness. This budget also includes funding for state-of-the-art, secure, deployable communications systems that are interoperable with the Federal Bureau of Investigation and DoD mission partners that will help provide decision makers with real-time technical recommendations to mitigate nuclear terrorist threats.

The Emergency Operations program's FY 2019 budget request includes $36 million under NCTIR to support NNSA's Office of Emergency Operations. This funding will support NNSA's all hazard emergency response capabilities, such as providing incident management training and exercise planning, and managing the Emergency Communications Network capability for the Department.

Naval Reactors Appropriation

Advancing Naval Nuclear Propulsion

Nuclear propulsion for the U.S. Navy's nuclear-powered fleet is critical to the security of the United States and its allies as well as the security of global sea lanes. NNSA's Naval Reactors Program remains at the forefront of technological developments in naval nuclear propulsion by advancing new technologies and improvements in naval reactor performance. This preeminence provides the U.S. Navy with a commanding edge in naval warfighting capabilities.

The Naval Reactors FY 2019 budget request is $1.8 billion, an increase of $308.9 million or 20.9% above the FY 2018 request. In addition to supporting today's operational fleet, the requested funding is the foundation for Naval Reactors to deliver tomorrow's fleet and recruit and retain a highly-skilled workforce. One of Naval Reactors' three national priority projects, continuing design and development of the reactor plant for the COLUMBIA-Class submarine, featuring a life-of-ship core and electric drive, will replace the current OHIO-Class fleet and provide required deterrence capabilities for decades. The project to refuel a Research and Training Reactor in New York will facilitate COLUMBIA-Class reactor development efforts to provide 20 more years of live reactor-based training for fleet operators. Funding will also be used to support construction of a new spent fuel handling facility in Idaho that will facilitate

long term, reliable processing and packaging of spent nuclear fuel from aircraft carriers and submarines.

Naval Reactors has requested funding in FY 2019 to support these projects and fund necessary reactor technology development, equipment, construction, maintenance, and modernization of critical infrastructure and facilities. By employing a small but high-performing technical base, the teams at Bettis Atomic Power Laboratory in Pittsburgh, Knolls Atomic Power Laboratory and Kesselring Site in greater Albany, and the spent nuclear fuel facilities in Idaho can perform the research and development, analysis, engineering, and testing needed to support today's fleet at sea and develop future nuclear-powered warships. The laboratories also perform the technical evaluations that enable Naval Reactors to thoroughly assess emergent issues and deliver timely responses to provide nuclear safety and maximize operational flexibility.

NNSA Federal Salaries and Expenses Appropriation

The NNSA Federal Salaries and Expenses FY 2019 budget request is $422.5 million, an increase of $3.9 million or 0.9% over the FY 2018 request. The FY 2019 budget request provides funding for 1,715 full-time equivalents for the effective program and project management and appropriate oversight of the nuclear security enterprise. Since 2010, NNSA's program funding has increased 50%, while staffing has decreased 10%. NNSA has partnered with the Office of Personnel Management to develop a staffing analysis, now in its second phase, of a Human Capital Management Plan that assesses current personnel levels compared to mission needs. The results of the staffing analysis will be used to inform future recommendations on appropriate staff size and provide the type and number of scientists, engineers, project managers, foreign affairs specialists, and support staff needed to accomplish the mission. Part of the evaluation includes a review of current staff skill sets and areas where skills are needed for project and program management, applicable oversight, and day to day operations of the nuclear security enterprise.

Thanks to the support of Congress, NNSA received a 10-year extension to continue to use the Demonstration Project personnel system. The pay for performance personnel system provides an important tool to retain and attract top talent for NNSA's national security missions. With the pay to perform personnel system, we are able to compete for personnel with other highly technical federal and private organizations, motivate and retain high-performing employees, and deal with poor performers. NNSA uses the Demonstration Project in conjunction with the Excepted Service hiring authorities to hire key personnel for the current and next generation workforce with critical nuclear security expertise.

Management & Performance

Since 2011, NNSA has delivered approximately $1.4 billion in projects, a significant portion of NNSAs total project portfolio, 8% under original budget. This past February, the High Explosive Pressing Facility at Pantex achieved CD-4 and was completed $25 million under the approved baseline. We are committed to encouraging competition and increasing the universe of

qualified contractors by streamlining major acquisition processes. NNSA will continue to focus on delivering timely, best-value acquisition solutions for all programs and projects, by using a tailored approach to contract structures and incentives that is appropriate for the special missions and risks at each site. The Office of Acquisition and Project Management continues to lead improvements in contract and project management practices; provide clear lines of authority and accountability for program and project managers; improve cost and schedule performance; and ensure Federal Project Directors and Contracting Officers with the appropriate skill mix and professional certifications are managing NNSA's work.

Conclusion

NNSA's diverse and enduring national security missions are crucial to the security of the United States, the defense of its allies and partners, and global stability. The U.S. nuclear deterrent has and will continue to remain the cornerstone of America's national security, and NNSA has unique responsibilities to maintain and certify the continued safety, security, reliability, and effectiveness of that nuclear deterrent.

Nuclear nonproliferation and nuclear counterterrorism activities are essential to promoting the peaceful use of nuclear energy and preventing malicious use of nuclear and radiological materials and technology around the world. Providing naval nuclear propulsion to the U.S. Navy is crucial to the United States to defend interests abroad and protect the world's commercial shipping lanes. Each of these critical missions depends upon NNSA's capabilities, facilities, infrastructure, and world-class workforce.