

Statement of Admiral James F. Caldwell
Deputy Administrator for Naval Reactors
National Nuclear Security Administration
U.S. Department of Energy
on the
Fiscal Year 2017 President's Budget Request
Before the
Senate Committee on Appropriations
Subcommittee on Energy and Water Development

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A strong Navy is crucial to the security of the United States. Navy warships are deployed around the world every hour of every day to provide a credible “forward presence.” With over 45 percent of the Navy’s major combatants being nuclear powered, including 10 aircraft carriers, 14 ballistic missile submarines, 55 attack submarines, and 4 guided missile submarines – it is vital that these ships are ready when and where our Nation needs them. In addition to supporting these nuclear powered combatants, Naval Reactors has also safely maintained and operated two nuclear powered land-based prototypes – both over 38 years old – to conduct research and development and two Moored Training Ships – both over 51 years old – the oldest operating pressurized water reactors (PWRs) in the world. These land-based prototypes, Moored Training Ships, and Naval Nuclear Power Training Command train over 3000 sailors per year to operate our naval nuclear propulsion plants.

Our ballistic missile submarine force remains on patrol, marking over 60 years of peacekeeping capability through strategic deterrence. The Navy had 34 submarine deployments and 26 strategic deterrent patrols during 2015. In addition, at any given time, there were always at least 56 of 71 submarines deployed or on stand-by to deploy within a few days. Our carriers, USS CARL VINSON (CVN 70) and USS THEODORE ROOSEVELT (CVN 71) completed successful deployments to the Central Command area of responsibility, and the USS RONALD REAGAN (CVN 76) turned over with the USS GEORGE WASHINGTON (CVN 73) to serve as the forward-deployed carrier in Japan.

This past year, we also saw the christening of the attack submarine PCU ILLINOIS (SSN 786) and keel laying for the PCU COLORADO (SSN 788) and PCU INDIANA (SSN 789), our fifteenth and sixteenth VIRGINIA-class submarines. We’ve also added another attack submarine to our force by commissioning USS JOHN WARNER (SSN 785), and began a program that delivers two VIRGINIA-class submarines annually. In 2015, we laid the keel for the second FORD-Class CVN, PCU JOHN F. KENNEDY (CVN 79). We currently have 12 submarines and one next generation aircraft carrier in various phases of construction at our shipyards. Initial reactor start-up was achieved in the lead reactor plant of PCU GERALD R. FORD (CVN 78), the first new design aircraft carrier propulsion plant in 40 years. This historic milestone represents the culmination of almost 20 years of dedicated and sustained effort by Naval Reactors and its field activities, our Department of Energy laboratories, nuclear industrial base suppliers, the Navy design team and the nuclear shipbuilders. This is the first step in fully

testing the integrated operations of the propulsion plant, culminating in sea trials this spring. Finally, we continued our reactor plant design and reactor core manufacturing development efforts to support of the new design OHIO-class Replacement reactor plant, including the life-of-ship core.

The firm support of this subcommittee last year enabled safe operation of the fleet, Naval Reactors mandatory oversight, and continued progress on key projects. Naval Reactors' budget request for Fiscal Year (FY) 2017 will continue this work. The funding request is for \$1.420 billion, an increase of \$45 million (3 percent) over the FY 2016 enacted funding level. In addition to supporting today's operational fleet, the requested funding will enable Naval Reactors to deliver tomorrow's fleet by funding three national priority projects and recruiting and retaining a highly skilled work force committed to the Navy and the nation. The projects are:

- Continuing to design the new reactor plant for the replacement of the OHIO-class ballistic missile submarine, which will feature a life-of-ship core and electric drive;
- Refueling a Research and Training Reactor in New York, to facilitate OHIO-class Replacement reactor development efforts and provide 20 more years of live reactor based training for the fleet operators; and
- Building 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 2017 to support these projects, and to 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 our four Program sites – the Bettis Atomic Power Laboratory in Pittsburgh, the Knolls Atomic Power Laboratory and Kesselring Site in greater Albany, and our spent nuclear fuel facilities in Idaho – we can perform the research and development, analysis, engineering and testing needed to support today's fleet at sea and develop future nuclear-powered warships. Importantly, our labs perform the technical evaluations that enable Naval Reactors to thoroughly assess emergent issues and deliver timely responses that ensure nuclear safety and maximize operational flexibility. This technical base supports more than 15,000 nuclear-trained Navy sailors, who safely maintain and operate the 97 nuclear propulsion plants in the fleet 24 hours per day, 365 days per year around the globe. It will also facilitate delivery, as directed by Congress, of our conceptual plan for potential naval application of low enriched uranium.

The requested increase in funding is also required to support the planned ramp up of design efforts for the new reactor plant for the OHIO-class SSBN Replacement – the Navy's number one acquisition priority. Providing unparalleled stealth, endurance, and mobility, our ballistic missile submarine force has delivered more than 60 years of continuous at-sea deterrence, and continues to be the most survivable leg of the nuclear triad. OHIO-class Replacement SSBN activity this year includes reactor plant design and component development to support procurement of long lead components starting in FY 2019. Progress in these areas in FY 2017 maintains schedule alignment with the Navy as the program moves forward to construction start in FY 2021 while retiring technical risk and targeting cost reduction.

Related to OHIO-class Replacement and the Program's training needs, the FY 2017 budget request will support the land-based prototype refueling overhaul at the Kesselring Site in upstate New York. In FY 2017, Naval Reactors will continue the core manufacturing work needed for the refueling overhaul, which will also enable timely construction of the life-of-ship core for OHIO-class Replacement. Further, plant service-life engineering design will be completed in FY 2017 to ensure that the land-based prototype overhaul, performed concurrently with refueling, supports 20 additional years of research, development and training.

The Naval Reactors FY 2017 budget request also contains funds to continue the Spent Fuel Handling Recapitalization Project. After many years of funding reductions, Naval Reactors greatly appreciates Congressional support for this much needed project in FY 2016, where we received the full request of \$86M. Congressional support in 2016 enabled progress, design, and planning for site preparations and long lead material procurements in FY 2017. We will use the \$100M requested in FY 2017 to finalize key facility and equipment requirements and advance facility design to support establishing the Performance Baseline in FY 2018 and the start of construction in FY 2019. Continued Congressional support will help ensure that the facility in Idaho is ready to receive spent nuclear fuel from the fleet in FY 2025. Because the new facility's capabilities are required to support aircraft carrier refuelings and defuelings, any delay to the project schedule would require procurement of additional shipping containers to temporarily store naval spent nuclear fuel at a cost of approximately \$150M for each year the project is delayed.

At the requested funding level, Naval Reactors can safely maintain and oversee the nuclear-powered fleet. Naval Reactors can also continue to advance the OHIO-class Replacement and Land-based Prototype Refueling Overhaul, continue progress on the Spent Fuel Handling Recapitalization Project, and meet our environmental responsibilities.

Naval Reactors is committed to executing our projects on time and on budget, and continuing the search for the safest and most cost effective way to support the nuclear fleet. I respectfully urge your support for aligning funding allocations with the FY 2017 budget request.