

WRITTEN STATEMENT
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TO THE
SENATE APPROPRIATIONS COMMITTEE
SUBCOMMITTEE ON ENERGY AND WATER DEVELOPMENT
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Good afternoon Chairman Alexander, Ranking Member Feinstein, and distinguished members of the Subcommittee. My colleagues and I appreciate the opportunity to appear before you to discuss the U.S. Nuclear Regulatory Commission's (NRC) Fiscal Year (FY) 2020 budget request.

The NRC is an independent Federal agency established to license and regulate the civilian use of radioactive materials in the United States to ensure adequate protection of public health and safety and to promote the common defense and security. The funding that we are requesting for FY 2020 provides the resources necessary to accomplish the NRC's mission while improving the agency's efficiency and effectiveness.

This testimony will also provide an update on the NRC's ongoing regulatory activities and our continuing efforts to adopt efficiencies and streamline agency processes where possible, while continuing to uphold the agency's important safety and security mission. In addition to our inspection and oversight programs, areas of significant activity include overseeing new reactor construction, reviewing applications for small modular reactors (SMRs), preparing to review advanced non-light water reactor designs and accident tolerant fuel (ATF) designs, and reviewing applications for subsequent license renewal and consolidated interim spent fuel storage facilities.

We recognize that the agency needs to enhance our use of risk-informed, innovative approaches and embrace new and diverse ideas in a changing regulatory environment. If the number of operating plants continues to decrease in the coming years, the agency's budget will reflect appropriate and commensurate decreases. The NRC will continue to improve the accuracy and realism of its cost and schedule projections for regulatory actions so that the Congress, the public, and regulated entities will be more fully informed.

FY 2020 BUDGET REQUEST

The NRC FY 2020 budget request, including resources for the NRC's Office of the Inspector General (OIG), is \$921.1 million, including 3,062 full-time equivalents (FTE). The FY 2020 budget request represents an increase of \$10.1 million, or 1.1 percent, when compared to the FY 2019 enacted budget. This requested increase in resources is due to the inclusion of \$38.5 million, including 77 FTE, to support licensing activities for the proposed Yucca Mountain deep geologic repository for spent nuclear fuel and other high-level radioactive waste.

In FY 2020, the NRC proposes to recover \$759.6 million of the requested FY 2020 budget from fees assessed to NRC licensees and applicants. This will result in a net appropriation of \$161.5 million, which is an increase of \$31.4 million when compared to the FY 2019 enacted budget, with \$38.5 million to be derived from the Nuclear Waste Fund for licensing activities related to Yucca Mountain.

FY 2019 Proposed Fee Rule

I would like to turn briefly to some key elements of the FY 2019 Proposed Fee Rule. Annually, the NRC adjusts its licensing, inspection, special project, and annual fees charged to its

applicants and licensees. These adjustments are necessary to implement the requirements of the Omnibus Budget Reconciliation Act of 1990. The Act requires the NRC to recover approximately 90 percent of its annual budget through fees. Based on the Act and the FY 2019 enacted budget, the following items are excluded from the fee-recoverable portion of the budget in the FY 2019 Proposed Fee Rule: international activities, advanced reactor technologies regulatory infrastructure activities, generic homeland security activities, Waste Incidental to Reprocessing activities, and Inspector General services for the Defense Nuclear Facilities Safety Board.

Based on the FY 2019 enacted budget, the NRC is currently proposing to collect \$781.9 million in fees for FY 2019, a decrease from \$789.3 million in FY 2018. Proposed annual fees for FY 2019 have increased for operating reactors, some materials users, and Department of Energy (DOE) transportation activities, while the annual fees for spent fuel storage/reactor decommissioning, research and test reactors, fuel facilities, and the facilities covered by the DOE Uranium Mill Tailings Radiation Control Act Program have decreased. Proposed annual fees for non-DOE uranium recovery licensees remained unchanged.

The NRC held a public meeting on the proposed fee rule on February 13, 2019, which included presentations relating to budget formulation. The public comment period for the FY 2019 Proposed Fee Rule ended on March 4, 2019. Regulated entities continue to express concerns regarding fee increases, particularly in areas where the number of licensees is declining. The NRC is mindful of the impact on fees as the number of licensees declines within a fee category. Our goal is to ensure that fees are equitable, fair, and transparent. We monitor these dynamics and seek to mitigate the impact on the remaining licensees, where possible.

FY 2020 Budget Request

I would now like to highlight specific elements of the FY 2020 budget request.

Nuclear Reactor Safety

The NRC's Nuclear Reactor Safety Program encompasses licensing and oversight of civilian nuclear power plants, research and test reactors, and medical isotope production facilities to protect public health and safety. This program contributes to the NRC's safety and security strategic goals through the activities of the Operating Reactors and New Reactors Business Lines that regulate existing and new nuclear reactors and medical isotope production facilities to ensure their safe and secure operation.

Overall resources requested in the FY 2020 budget for Nuclear Reactor Safety are \$449.5 million, including 1,824 FTE. This represents a funding decrease of \$9.9 million when compared to the FY 2019 enacted budget. Primarily, the reduction is a result of activities associated with the planned merger of the Office of Nuclear Reactor Regulation (NRR) and the Office of New Reactors (NRO). These two program offices are on track to integrate by October of this year, earlier than previously planned. The merger of NRR and NRO will provide flexibility and improved agility to manage uncertainties associated with the workloads in both the Operating Reactors and New Reactors Business Lines. In addition, there will be efficiencies gained and elimination of redundancies in certain technical programs, administrative support, and supervisory and management oversight. The budget request also proposes \$15.5 million for the continued development of a regulatory infrastructure for advanced nuclear reactor technologies.

Operating Reactors

The Operating Reactors Business Line portion of the Nuclear Reactor Safety Program encompasses the regulation of 96 operating civilian nuclear power reactors and 31 research and test reactors. The NRC is requesting \$361.6 million for operating reactors, including 1,485 FTE, which represents a decrease of \$3.6 million from the FY 2019 enacted budget. When compared to the FY 2019 enacted budget, the resources for research activities appear to increase because \$10.4 million was funded through the application of authorized prior-year carryover in FY 2019. Overall, resources decrease when compared to the FY 2019 total budget authority.

The decrease in funding within the Operating Reactors Business Line is primarily due to the permanent closure of Oyster Creek Nuclear Generating Station and the pending closures of the Pilgrim and Three Mile Island reactors. The decrease is also a result of fewer requests from the States for replenishment of potassium iodide supplies, efficiencies in processing licensing actions, and the completion of post-Fukushima flooding and integrated assessment work. The NRC is reviewing three applications for subsequent license renewal for Turkey Point Nuclear Generating Station in Florida, Peach Bottom Atomic Power Station in Pennsylvania, and the Surry Power Station in Virginia. If approved, they would extend operations at each of these plants for an additional 20 years.

The NRC is committed to enabling the safe use of existing and new technologies, especially those that have the potential to increase safety at NRC-regulated facilities. The U.S. nuclear industry, with DOE's assistance, is planning to deploy ATF in the operating fleet by the mid2020s. In 2018, the NRC developed a project plan to align agency regulatory readiness with industry and fuel vendor plans for regulatory submittals. In FY 2020, the NRC staff will continue

to engage with vendors, licensees, DOE, and other stakeholders to ensure that all sides are prepared for licensing and oversight of ATF.

New Reactors

The New Reactors Business Line portion of the Nuclear Reactor Safety Program is responsible for licensing and overseeing the design, siting, and construction of new nuclear power reactors, including SMRs and advanced reactors, in an efficient manner. The new reactors activities are designed to ensure that new civilian nuclear power reactor facilities are developed in a manner that protects the health, safety, and security of the public.

The FY 2020 budget request for new reactors is \$87.8 million, including 339 FTE, a funding decrease of \$6.3 million when compared to the FY 2019 enacted budget. The decrease in funding within the New Reactors Business Line is primarily due to delays in application submittals, projects nearing completion, and efficiencies gained in several critical areas, including the merger of NRR and NRO. During FY 2020, the NRC expects to continue reviewing the reactor design certifications for the NuScale SMR and the U.S. Advanced Pressurized-Water Reactor (a large light water reactor), as well as the renewal of General Electric-Hitachi's Advanced Boiling-Water Reactor design certification.

The NRC is accelerating its activities related to the development of regulatory infrastructure to support reviews of advanced reactor technologies. Regarding future new reactors, the NRC continues to interact with vendors about prospective SMR and advanced reactor applications. Additionally, we will continue to refine our regulatory processes as we prepare to review these potential applications.

Nuclear Materials and Waste Safety

The Nuclear Materials and Waste Safety Program is responsible for licensing, regulating, and overseeing nuclear materials in a manner that adequately protects the public health and safety. The agency's work provides assurance of the physical security of the materials and waste and protection against radiological sabotage, theft, or diversion of nuclear materials. Through this program, the NRC regulates uranium processing and fuel facilities; research and pilot facilities; and other nuclear materials licensees such as medical, industrial, research, and academic uses. Additionally, through this program, the NRC regulates the following: spent fuel storage; spent fuel and other nuclear material transportation and packaging; decontamination and decommissioning of facilities; and low-level and high-level radioactive waste.

The FY 2020 budget request for this program is \$165.7 million, including 564 FTE. This funding level represents an increase of \$34.7 million when compared to the FY 2019 enacted budget. This increase is due to the inclusion of \$38.5 million in the budget request for continuing licensing activities for the proposed Yucca Mountain deep geologic repository for spent nuclear fuel and high-level radioactive waste.

Spent Fuel Storage and Transportation

The Spent Fuel Storage and Transportation Business Line is responsible for licensing and overseeing the safe and secure storage of spent fuel and the safe and secure transport of radioactive materials. The FY 2020 budget request for spent fuel storage and transportation is \$24.2 million, including 101 FTE. When compared to the FY 2019 enacted budget, the resources for licensing activities appear to increase because \$2.4 million was funded in FY 2019 through the application of authorized prior-year carryover. However, resources decrease when compared to the FY 2019 total budget authority. In addition to licensing and

overseeing independent spent fuel storage installations, transportation packages, and storage casks, this business line has two reviews under way for consolidated interim spent fuel storage facilities – one submitted by Holtec International for a proposed facility in New Mexico and another requested by Interim Storage Partners for a facility in Texas. The NRC anticipates the completion of both reviews by mid-2020.

Nuclear Materials Users

The Nuclear Materials Users Business Line portion of the Nuclear Materials and Waste Safety Program supports the licensing and oversight necessary to ensure the safe and secure processing and handling of radioactive materials in medical, industrial, and academic applications. This business line also provides Tribal coordination and programmatic oversight of Agreement States that have assumed NRC regulatory authority under the Atomic Energy Act of 1954. The FY 2020 budget request for this business line is \$59.1 million, including 205 FTE, a funding decrease of \$1.4 million when compared to the FY 2019 enacted budget. The recent agreement with the State of Wyoming was signed on September 25, 2018, and became effective on September 30, 2018. The State of Vermont has applied to become an Agreement State and, if approved, would bring the total number of Agreement States to 39 by FY 2020.

Decommissioning and Low-Level Waste

The Decommissioning and Low-Level Waste (LLW) Business Line portion of the Nuclear Materials and Waste Safety Program supports licensing and oversight of uranium recovery facilities, sites undergoing decommissioning, and disposition of LLW from all civilian sources. The FY 2020 budget request for decommissioning and LLW is \$22.9 million, including 93 FTE, an overall funding decrease of \$1.9 million when compared to the FY 2019 enacted budget as a result of overseeing fewer operating uranium recovery facilities; completing support to the State of Wyoming for the Agreement State transition; and nearing the expected license terminations

for the former Humboldt Bay Power Plant in California, Zion Nuclear Power Station in Illinois, and LaCrosse Boiling Water Reactor in Wisconsin. The FY 2020 budget request provides funding for a number of major activities to include oversight of the national LLW management program, monitoring of DOE's Waste Incidental to Reprocessing determinations and related disposal actions at the Savannah River Site and the Idaho National Laboratory, and decommissioning activities for four research reactors and 20 power reactors.

Fuel Facilities

The Fuel Facilities Business Line portion of the Nuclear Materials and Waste Safety Program is responsible for ensuring that commercial nuclear fuel cycle facilities are licensed and operated in a manner that adequately protects public health and safety and promotes the common defense and security. The FY 2020 budget request for fuel facilities is \$21 million, including 88 FTE, which represents a funding decrease of \$2.2 million when compared to the FY 2019 enacted budget. This decrease in funding is primarily due to an expected decline in work associated with license renewal applications, a decrease in the anticipated number of license amendments, efficiencies gained as a result of changes to the Fuel Facilities Inspection Program and workload projections, a reduction in rulemaking activities involving enhanced security for special nuclear material, and elimination of workload associated with the MixedOxide Fuel Fabrication Facility.

High-Level Waste

The High-Level Waste Business Line portion of the Nuclear Materials and Waste Safety Program supports the NRC's activities for the proposed Yucca Mountain deep geologic repository for the disposal of spent nuclear fuel and other high-level radioactive waste using appropriations from the Nuclear Waste Fund. The FY 2020 budget request for high-level waste

is \$38.5 million, including 77 FTE. The FY 2020 resources would include support for the adjudicatory proceeding; infrastructure activities for facilities and information technology (IT) capabilities; rulemakings associated with the geologic repository operations area; and related support activities such as acquisitions, recruitment, staffing, and training.

The NRC continues to provide monthly updates to Congress on its activities in response to the decision issued by the U.S. Court of Appeals for the District of Columbia Circuit in *In re Aiken County*; these updates provide information on our effort to effectively spend the remaining limited unobligated carryover funds appropriated from the Nuclear Waste Fund for Yucca Mountain activities. At the beginning of FY 2019, there was approximately \$430,000 remaining.

Corporate Support

The NRC's corporate support involves centrally managed activities that are necessary for agency programs to operate and achieve goals more efficiently and effectively and includes acquisitions, administrative services, financial management, human resource management, IT and information management, training, outreach, and policy support. The FY 2020 requested budget for corporate support comprises approximately 32 percent of the agency's total budget and reflects a decrease of \$0.4 million when compared to the FY 2019 enacted budget. Within the Corporate Support Business Line, \$6.6 million was funded in FY 2019 through the application of authorized prior-year carryover. However, when compared to the FY 2019 total budget authority, the FY 2020 budget request reflects a decrease of \$7.0 million. The budget request supports continuing efforts to modernize IT, leverage common contracts and best practices to drive cost reductions and efficiencies, improve the management of major acquisitions, focus on the highest value work, and improve the customer experience with federal services.

Office of the Inspector General

The NRC's OIG is a statutory entity whose mission is to independently and objectively audit and investigate programs and operations to promote effectiveness and efficiency and to prevent and detect fraud, waste, and abuse. The FY 2020 budget request for the NRC OIG is \$13.3 million, which includes \$11.3 million in salaries and benefits to support 63 FTE and \$2.0 million in program support. These resources will support Inspector General auditing and investigation functions for both the NRC (\$12.1 million) and the Defense Nuclear Facilities Safety Board (\$1.2 million).

CHANGING REGULATORY ENVIRONMENT

The NRC has initiated efforts to implement requirements of the Nuclear Energy Innovation and Modernization Act, which was signed into law on January 14, 2019. The legislation changes the way the NRC determines how fees are assessed to licensees and applicants, including limiting the annual charge to each operating reactor licensee, and includes requirements related to our fee invoicing process. The Act also specifies a cap on the percentage of the annual budget request that the NRC can devote to corporate support costs. These fee- and budget-related requirements take effect on October 1, 2020 (FY 2021). In addition, the legislation requires the NRC to take certain actions related to the licensing process for advanced reactors and research and test reactors while soliciting input from DOE, industry, a diverse set of technology developers, and other public stakeholders. The legislation also includes a number of other provisions related to various topics. The NRC is progressing in each area to ensure timely implementation of the Act's requirements and submitted the first set of congressional reports required by the Act in April 2019.

In January of this year, the NRC directed the staff to publish the Mitigation of Beyond-Design-

Basis Events Rule, based on lessons learned from the March 2011 accident at Japan's Fukushima Daiichi plant. This rule is the result of seven years of activities that have tangibly enhanced safety at U.S. nuclear power plants. The NRC and its nuclear power plant licensees will continue to monitor and review post-Fukushima efforts outside of the rulemaking context, including analyses of whether additional safety improvements are necessary in response to updated site-specific seismic and flooding risk assessments.

We are mindful of the importance of a highly skilled staff and the need to maintain our expertise while our workload continues to evolve. Strategic Workforce Planning is vital to helping the NRC identify the knowledge, skills, and abilities necessary to perform our mission now and into the future. In addition to our continuing efforts to find efficiencies, use resources wisely, and streamline processes, the NRC has undertaken additional initiatives to ensure that our workforce is trained, equipped, and resourced to address current and future challenges.

The NRC's focus on transformation and innovation continues. At last year's hearing, we reported that the Executive Director for Operations had established a Transformation Team whose charter was to identify potential transformational changes to our regulatory framework, culture, and infrastructure. In October of 2018, the Commission held a public meeting, entitled *Transformation at the NRC*. At this meeting, the Commission met with NRC staff and two external panels that included nuclear industry, other Federal agencies, and non-governmental organizations to discuss the NRC staff's recommendations in a paper that is now before the Commission. In March of this year, the Commission held a second public meeting with NRC staff on this topic, as well as external panelists with a wealth of knowledge and experience related to transformation and innovation at other agencies and in the private sector. During this meeting, the external panelists shared best practices, success stories, and lessons learned.

Separately, the agency sought assistance from a consulting firm to evaluate how industry and the NRC's regulatory environment might look in 2025 and beyond. In January 2019, the NRC published a report on those findings. The report, entitled "*The Dynamic Futures for NRC Mission Areas*," describes four possible scenarios or hypotheses to inform the agency's near- and mid-term planning related to budget, workload, workforce issues, agency organization and structure, and opportunities to innovate. The NRC staff is currently evaluating the report and will prepare a paper seeking Commission approval by June 30, 2019. This paper will discuss how the staff will monitor conditions to determine which scenarios may be unfolding and will identify actions that would be beneficial to meet the future regulatory environment.

CLOSING

In conclusion, safety and security continue to be the NRC's main focus. The FY 2020 budget request reflects the NRC's continuing efforts to achieve additional efficiencies while maintaining reasonable assurance of adequate protection of public health and safety and the security of our Nation.

Chairman Alexander, Ranking Member Feinstein, and distinguished Members of the Subcommittee, this concludes my written testimony. On behalf of the Commission, thank you for the opportunity to appear before you and also for your support of the vital mission of the NRC. We would be pleased to respond to your questions.