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The Inspector General's Assessment of the Most Serious Management and Performance Challenges Facing the U.S. Nuclear Regulatory Commission in Fiscal Year 2026

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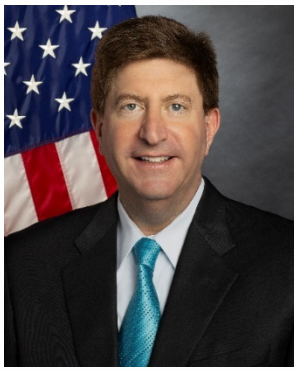

On behalf of the Office of the Inspector General (OIG), U.S. Nuclear Regulatory Commission (NRC) and Defense Nuclear Facilities Safety Board (DNFSB), it is my pleasure to present our assessment of the most significant management and performance challenges facing the NRC in Fiscal Year 2026.

The Reports Consolidation Act of 2000 (Public Law 106-531) requires the OIG to summarize what it considers to be the most serious management and performance challenges facing the NRC every year. The Act also requires the OIG to briefly assess the agency's progress in addressing those challenges.

The challenges herein are not listed in order of priority, nor do they necessarily indicate problems within the agency; rather, they should be considered as areas of focus for the NRC's management and staff. NRC leaders provided their own assessment of the key challenges facing the agency in its response to the OIG's request for input in these areas. We considered their input and independently identified the following five clear, specific, and actionable challenges that require the NRC's continued attention:

1. Reforming and Modernizing Nuclear Regulation while Ensuring Regulatory Integrity;
2. Advancing Policy and Regulatory Approaches for the Reauthorization of Nuclear Plants in Decommissioning Status;
3. Ensuring an Effective Information Security Program and Planning for and Assessing the Impact of Artificial Intelligence;
4. Modernizing Regulatory Frameworks for the Safe Deployment of Advanced Reactors, Small Modular Reactors, and Microreactors; and,
5. Enhancing Financial Efficiency and Resource Management.

By addressing the challenges identified above, the NRC will strengthen its mission execution, help achieve its strategic goals, and maintain a high standard of accountability for its resources. Finally, the OIG has included in this report, summaries of some of the work the NRC has accomplished or plans to complete during Fiscal Year 2026 related to each NRC challenge.

Robert J. Feitel
Inspector General

Challenge #1: Reforming and Modernizing Nuclear Regulation while Ensuring Regulatory Integrity

President Donald J. Trump signed four executive orders on May 23, 2025, to revitalize and modernize the U.S. nuclear energy industry. Executive Order (EO) 14300, *Ordering the Reform of the Nuclear Regulatory Commission*, directs the NRC to streamline its licensing processes and revise existing regulations, focusing on balancing safety with the benefits of emerging nuclear technology. The EO builds on the Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy Act of 2024 (ADVANCE Act), which required the NRC to take steps to streamline its licensing processes, reduce regulatory costs, and promote the development and deployment of advanced nuclear reactor technologies.

EO 14300 also requires the NRC to reorganize and reduce staffing to promote the efficient processing of license applications and the adoption of innovative technology. Personnel and the functions of the Advisory Committee on Reactor Safeguards shall be reduced to the minimum necessary to fulfill the committee's statutory obligations. At the same time, the EO acknowledges that certain NRC functions may need to increase in size, including those devoted to new reactor licensing. The EO further required the NRC to assign a dedicated team of officials to review and revise the agency's regulations to establish fixed deadlines for evaluating licensing requests. The NRC must work with the Department of Government Efficiency Team and the Office of Management and Budget to issue notices of proposed rulemaking affecting these revisions within nine months of the EO date. The NRC must issue the final rules and guidance within 18 months of the EO date.

In addition to its modernization efforts, the NRC must comply with new requirements mandating review of its regulatory actions. EO 14215, *Ensuring Accountability for All Agencies* (Feb. 18, 2025), extended the Office of Information and Regulatory Affairs (OIRA) review requirements under EO 12866 to independent agencies. Requiring the rules of independent agencies, like the NRC, to undergo OIRA review is intended to enhance accountability and promote the consistent implementation of federal law.

Ongoing and Completed Actions

- The NRC had previously established, in response to the Nuclear Energy Innovation and Modernization Act (NEIMA) of 2019, milestones for completing certain actions requested by NRC-regulated entities. As an interim step to implementing requirements in EO 14300, in May 2025, the NRC revised its NEIMA milestones to align with the periods cited in EO 14300. Further changes to the NEIMA milestones will be made once the NRC completes rulemaking efforts related to EO 14300.
- On January 6, 2025, the NRC issued "Advanced Methods of Manufacturing and Construction for Nuclear Energy Projects," a report addressing the agency's initiatives related to advanced manufacturing and construction for nuclear energy projects.

- On January 6, 2025, in response to the ADVANCE Act, the NRC issued "The Modernization of Nuclear Reactor Environmental Reviews," a report discussing the current and future efforts to facilitate efficient, timely, and predictable environmental reviews for nuclear reactor applicants.
- On July 10, 2025, the NRC issued "Improving Oversight and Inspection Programs," a report that outlines the specific improvements identified through an assessment of the NRC's reactor and materials oversight and inspection programs.
- On August 18, 2025, in response to the ADVANCE Act and EO 14300, the NRC issued "NRC Licensing Efficiency Initiatives Update," a report discussing the actions the agency is taking to improve licensing efficiency, predictability, and timeliness.

Challenge #2: Advancing Policy and Regulatory Approaches for Reauthorization of Nuclear Plants in Decommissioning Status

The NRC expects to soon be considering the potential reauthorization of operations for three nuclear power plants currently in decommissioning status. In March 2023, the NRC received a first-of-its-kind licensing request to reauthorize power operations at one of these plants. However, to restart a nuclear power plant, each licensee will need to (1) gain the NRC's approval to restore the licensing basis of the plant to an operational status; (2) return plant components to a status that supports safe operations; and, (3) make the necessary upgrades to meet the proposed operational licensing basis.

In the interim, the NRC has developed inspection requirements to ensure plant operational readiness to provide reasonable assurance of safe operations following the reauthorization of the operating license. The NRC has also developed oversight policies, requirements, and guidance for transitioning from a decommissioned or decommissioning plant to an operational power reactor facility. In its application-specific reviews, the NRC staff will need to carefully review the regulatory and licensing documents for the plants. If the NRC reauthorizes plant operations, NRC staff will have to inspect new and restored components necessary to operate safely, and they will have to continue ongoing oversight to help ensure the sufficiency of all plant systems and programs.

Ongoing and Completed Actions

- The NRC is currently conducting a range of licensing and inspection activities related to the potential restart of the Palisades Nuclear Power Plant, the Christopher M. Crane Clean Energy Center/Three Mile Island Unit 1, and the Duane Arnold Energy Center.
- On April 15, 2025, the NRC established the Duane Arnold Energy Center Restart Panel and charter. The charter defines the responsibilities of the restart panel regarding licensing actions, exemptions, technical issues, and inspections required for Duane Arnold Energy Center to resume commercial operations.
- On March 4, 2025, NRC staff issued the Christopher M. Crane Clean Energy Center/Three Mile Island Nuclear Station, Unit 1, Restart Panel Charter. This charter defines the responsibilities of the Crane Restart Panel regarding inspection and licensing activities until commercial operation resumes. The panel's primary objective is to proactively identify and promptly resolve any licensing, inspection, or regulatory challenges concerning the restart. The members are senior management from across the NRC.
- The NRC has approved a series of licensing and regulatory actions that will pave the way for the restart of the Palisades Nuclear Plant, including the transfer of operating authority for the plant and its independent spent fuel storage facility from Holtec Decommissioning International to Palisades Energy.

Challenge #3: Ensuring an Effective Information Security Program and Planning for and Assessing the Impact of Artificial Intelligence

The security and operations of the NRC's information technology (IT) must remain a focus for the agency. The NRC will be challenged to support a future-ready environment that has the tools, technology, skills, and knowledge necessary to meet the agency's current and future mission needs. Therefore, the NRC must develop and implement an artificial intelligence (AI) framework that supports the identification, development, and implementation of AI uses that enhance the delivery of the agency's mission through improvements in operational efficiency, productivity, and decision-making.

At the same time, the NRC's framework must account for federal policies directed at AI usage, including the policies stated in EO 13859, *Maintaining American Leadership in Artificial Intelligence*; EO 13960, *Promoting the Use of Trustworthy Artificial Intelligence in the Federal Government*; and, EO 14179, *Removing Barriers to American Leadership in Artificial Intelligence*. Consistent with the policies in these EOs, the NRC must cultivate an AI-proficient workforce and keep pace with AI technological innovations. In addition, the NRC must continue to meet federal statutory and regulatory mandates for Information Technology and Information Management (IT/IM). The NRC is responsible for maintaining and enhancing IT/IM services and infrastructure to accomplish the agency's mission, while remaining within its statutory budget limitations for corporate support.

AI has the potential to enhance decision-making processes in the nuclear industry by providing insights into the vast amounts of data generated during the design and operation of nuclear facilities. Thus, the NRC must ensure it is positioned to support the agency's timely review of licensees' proposed uses of AI in regulated activities. Expanded adoption of AI technologies within the agency and across the industry presents additional vulnerabilities and risks that must be considered, increasing the numerous challenges posed by cyber threats to potential data security compromises.

Ongoing and Completed Actions

- The NRC published a new agency AI Strategic Plan and AI Compliance Plan on September 30, 2025, per EO 14179 and OMB Memo-25-21. This new plan replaced the previous AI Strategic Plan from 2023.
- The NRC deployed its initial version of the regulatory AI tool, SimplifAI, to provide the agency with program-specific companions that can expedite knowledge discovery and content generation.
- The NRC will be providing a list of AI Use Cases to the Office of Management and Budget (OMB) in December that will then be published on the NRC website in January 2026. In addition, the NRC is drafting an AI Action Plan to outline discreet actions to meet the goals and objectives of its AI Strategic Plan. This plan will include a section on AI Adoption to cultivate an AI-proficient workforce.

- In March 2025, the NRC held its AI Symposium 2025. During the symposium, the NRC and stakeholders held open discussions and the agency provided updates on its progress in addressing regulatory and technical issues related to AI use in the nuclear industry.
- Following up on the Symposium and March 2025 RIC session on AI and Data, the NRC now holds monthly meetings with the Nuclear Energy Institute to discuss industry needs for data curation to ensure AI tools have the correct data to deliver trustworthy results. These data sets are available to the public.
- In October 2024, the NRC implemented policies and procedures for prioritizing risk assessments of externally provided systems and services documented in CSO-PROS-0008, "Process to Assess, Respond, and Monitor ICT Supply Chain Risks." The NRC subsequently published the Generative AI Rules of Behavior in May 2025 to further govern the use of AI solutions.
- The NRC implemented a process to validate that new NRC employees and contractors complete security awareness training within 20 business days of obtaining access to the NRC systems and annually thereafter.

Challenge #4: Modernizing Regulatory Frameworks for the Safe Deployment of Advanced Reactors, Small Modular Reactors, and Microreactors

The NRC faces several challenges in licensing and overseeing advanced reactors, including small modular reactors (SMRs) and microreactors. These challenges center on adapting the agency's reactor-focused regulations, designed for large nuclear power reactors, to address the unique features of new smaller reactor designs. The NRC's challenges include (1) regulatory and licensing hurdles, (2) safety and security concerns, and (3) operational and deployment issues.

Applying legacy regulations developed for large nuclear power reactors to advanced technologies like SMRs and microreactors can lead to unnecessary delays and costs, without delivering proportional safety benefits. The novel nature of these advanced reactors often triggers lengthy licensing reviews, increasing both project timelines and overall costs. Moreover, these technologies introduce new challenges—including challenges related to radioactive contamination risks and waste management—that may not be adequately addressed by existing regulatory frameworks and thus require updated approaches. The NRC also faces the critical task of maintaining public trust by demonstrating transparency and technical competence when evaluating innovative reactor designs, particularly in light of ongoing concerns about nuclear safety and environmental impacts.

Section 505 of the ADVANCE Act requires the NRC to facilitate efficient, timely, and predictable reviews of applications. Similarly, Section 208 of the ADVANCE Act requires the NRC to develop risk-informed and performance-based strategies and guidance for the licensing and regulation of microreactors. If licensing reviews for new and advanced reactors are not conducted in a timely and effective manner, deployment of emerging SMR and advanced reactor technologies could be delayed. This may lead industry and other stakeholders to conclude that the NRC is not prepared to implement the changes needed for future reviews. The NRC must, therefore, demonstrate that it can efficiently license and regulate advanced reactors, including SMRs, while retaining the capability to manage extensive licensing and regulatory actions related to the existing commercial nuclear power reactor fleet.

Ongoing and Completed Actions

- The NRC is developing Part 53 of Title 10 in the Code of Federal Regulations (the "Risk-Informed, Technology-Inclusive Regulatory Framework for Commercial Nuclear Plants") to provide a new licensing pathway for advanced reactors. The rule is intended to streamline the licensing process and reduce the need for exemptions from the NRC's rules.
- In May 2025, the NRC approved the standard design for NuScale's US460 small modular reactor.

- In February 2025, NRC staff published a new webpage specific to microreactors.[1] This webpage describes the regulatory activities that staff are pursuing regarding microreactors, including the Integrated Microreactor Activities Plan. The Integrated Microreactor Activities Plan includes actions the staff identified to enhance the regulatory framework flexibility to support the diverse technologies and deployment models under consideration by microreactor developers and potential applicants.
- Also in February 2025, NRC staff published a *Prospective Applicant Landing Pa*ge that provides guidance for prospective applicants.[2] This webpage was designed to provide information, guidance, and support for entities that are currently in the development process for a nuclear reactor design or reactor-related project, but have not yet contacted the NRC.

[1] https://www.nrc.gov/reactors/new-reactors/advanced/modernizing/microreactors.html

[2] https://www.nrc.gov/reactors/new-reactors/advanced/new-app.html

Challenge #5: Enhancing Financial Efficiency and Resource Management

Growing demand for new technologies and scrutiny of licensing fees have increased the need for financial efficiency and more effective resource management. The NRC is required by the Nuclear Energy Innovation and Modernization Act (Public Law 115-439) (NEIMA) to recover, to the maximum extent practicable, its annual budget authority through fees, with certain activities specifically excluded from the fee recovery requirement. While the NRC has taken steps to improve the fee-setting process, it should ensure consistency, fairness, and transparency across all regulated entities to maintain public trust. Significant increases in budgeted costs or changes in the fee methodology could result in unexpected financial burdens for licensees.

In addition, the ADVANCE Act directs the NRC to reduce fees for advanced nuclear reactor applicants and pre-applicants for certain activities, beginning in fiscal year 2026. To meet this requirement, the NRC will charge these applicants an hourly rate that is significantly lower than the full-cost rate for other applicants. Under section 5(a) of EO 14300, the NRC also must establish deadlines for licensing actions and place fixed caps on hourly fees in a manner that enforces these deadlines.

Effective internal controls are critical as the NRC's operational demands and external expectations for the agency's efficiency increase. These controls include implementing disciplined budgeting practices, optimizing resource allocation, and preventing fraud, waste, and abuse in agency programs. In addition, the NRC must continue to meet federal requirements for accountability and financial reporting. Meeting these requirements involves adhering to federal financial management standards, timely submitting performance and financial reports, and ensuring that accurate financial data is available to Congress and other stakeholders.

Ongoing and Completed Actions

- Effective October 2025, the NRC will bill the reduced hourly rate for advanced nuclear reactor applicants and pre-applicants, as required by the ADVANCE Act.
- In November 2024, the NRC received an unmodified (clean) audit opinion on its fiscal year 2024 financial statements and internal controls over financial reporting.
- In May 2025, the OIG concluded that the NRC complied with the requirements of the Payment Integrity Information Act of 2019 for FY 2024.

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Write:
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Office of the Inspector General
Hotline Program
MS O12-A12
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Rockville, Maryland 20852-2738

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