House Committee on Energy and Commerce
Subcommittee on Energy, Climate, and Grid Security
Hearing Entitled *"The Fiscal Year 2025 Nuclear Regulatory Commission Budget"*
July 23, 2024

Questions for the Record for The Honorable Christopher T. Hanson

The Honorable Cathy McMorris Rodgers

1. As I noted at hearing, in August last year, Commissioners Wright and Caputo issued a voting paper for the Commission to direct NRC staff to implement real-time performance metrics. To our knowledge, no action has been taken on it. What is the status of that matter and what is the priority placed on measuring performance?

RESPONSE:
The voting paper, "Measuring NRC Success," (ML23241B013) is currently with the Commission for consideration. The NRC places a high priority on performance measurement. Establishing organizational goals and objectives, along with meaningful, data-driven performance indicators to support them, helps communicate priorities and shape behaviors. NRC senior leadership, representing all offices and regions, assemble each quarter to analyze enterprise risks and review the performance indicators to ensure that NRC offices are meeting the goals and objectives while operating effectively and efficiently. The staff is bringing more transparency to licensing-related performance monitoring and expanding the area in which performance is monitored.

2. To help set the Commission up for success, Congress enacted reforms in 2019 that directed NRC to issue risk-informed regulations appropriate for advanced reactors. We also discussed last year with you how staff leadership allowed the so-called Part 53 proposal to go to the Commission, even though it ran counter to Congressional direction. You, the Commissioners, sent the proposal back with directions to conform with Congressional intent. This is an important rulemaking. What will you do if staff leadership again sends you a rule that fails to meet Congressional direction?

RESPONSE:

It is the Commission's responsibility to lead the agency by setting policy and providing clear direction for the NRC staff to follow, consistent with Congressional direction. The Commission did this as part of the process associated with the proposed Part 53 rulemaking and will continue to lead the staff forward as the agency proceeds into the final rule stage.

3. There are new and novel technologies and regulatory issues – like so-called "serial manufacturing"— which require the staff to think outside the box. These new approaches are coming faster than expected. How do you incentivize innovative rule development and timely reforms to NRC review processes to accommodate new manufacturing techniques to meet the moment?

RESPONSE:
The NRC uses performance management, monetary awards, time-off awards, and other recognition as outlined in Management Directive 10.72, "Awards and Recognition," to encourage, recognize, and reward employees for excellence and improvements towards NRC operations.

There is also a program at the NRC—InnovateNRC—that is designed specifically to recognize and reward NRC employee contributions to innovation while helping to create a culture that encourages and supports an innovative mindset.

For new reactor licensing, the NRC continues to explore options for innovation in the agency's regulatory approach to prepare for advanced reactor deployment, including serial manufacturing. Some examples include:

- Developing strategies to minimize the licensing timelines for serial or "nth-of-a-kind" reactors. These strategies would rely on the commonality of features and characteristics of manufactured reactors of a single design to generically resolve site safety issues. A similar approach would streamline environmental reviews for sites falling within a predetermined set of postulated parameter values derived from the design and generic site characteristics. The NRC staff plans to identify additional policy issues for the agency to address and associated rulemaking opportunities, where applicable, to support further efficiency improvements. The NRC is encouraging stakeholder input to further this end.
- Developing a proposed generic environmental impact statement to reduce the scope and burden associated with environmental reviews by generically resolving issues that are common to many sites, which will focus the agency's and applicants' efforts on the narrower set of environmental issues that are unique to each site.
- Developing technology-inclusive, performance-based, and risk-informed rules, such as the proposed Part 53 regulations and enhancements to the NRC's emergency preparedness and security regulations. For example, the Part 53 proposed rule, which the NRC recently issued for public comment, contains provisions intended to streamline the deployment of reactors manufactured in a factory by permitting the holder of a manufacturing license to load fuel in the factory, provided mechanisms are in place to prevent criticality. Additionally, pursuant to the Commission's direction, the NRC staff will also conduct further outreach with stakeholders to explore options for factory testing.
- Conducting anticipatory regulatory research to remove obstacles to licensing new technologies.

4. NRC currently exempts certain nuclear medicine extravasations from medical event reporting requirements. But NRC is currently conducting a rulemaking to update its regulations pertaining to extravasations. What are the reasons for the proposed rule, how does it propose to meet NRC statutory obligations, and what is the anticipated timing for completing the rulemaking?

RESPONSE:
Current NRC regulations do not require extravasations to be reported as medical events. In response to a petition for rulemaking and Commission direction, the NRC has developed a draft proposed rule (SECY-24-0067) that would include certain nuclear medicine injection extravasations as reportable medical events. This draft proposed rule also reflects emerging therapeutic nuclear medicine injections, and the corresponding increase in risk to patients due to the higher radiation doses involved relative to diagnostic nuclear medicine injections.

The NRC's proposed rulemaking has been guided by the NRC's statutory mission to regulate the Nation's civilian use of radioactive materials to provide reasonable assurance of adequate protection of public health and safety. The rulemaking also comports with the objectives of the Commission's Medical Use Policy Statement (65 FR 47654; August 3, 2000), which states that the NRC will regulate the use of radionuclides in medicine as necessary to provide for radiation safety, but without intruding into medical judgments affecting patients. Finally, the staff also followed Commission direction from December 12, 2022 (SRM-SECY-22-0043), to explore approaches to reduce reliance on patient reporting, develop regulatory guidance for all medical events, and look for opportunities to accelerate the rulemaking schedule without shortening public comment periods.

The draft proposed rule was provided to the Commission in August 2024. If approved by the Commission, the NRC staff plans to publish the proposed rule in the *Federal Register* for a 90-day public comment period. The NRC will consider all comments received to prepare the draft final rule for the Commission's consideration. If a final rule is approved by the Commission, the staff anticipates it being published in September 2026.

The Honorable Jeff Duncan

1. During the hearing, I asked you to report on what are you telling staff leadership and managers about Congress's expectations from the updated mission as established in the ADVANCE Act. Please describe how NRC staff leadership plans to implement all relevant provisions of the ADVANCE Act, who is leading the effort in each office, including regional offices, and how you are keeping the commission fully, and currently informed of progress implementing this law.

RESPONSE:
The importance of the ADVANCE Act is being actively communicated to the NRC staff. ADVANCE Act implementation is a key priority for the agency. With respect to the mission statement update, in October 2024 the Office of the General Counsel provided recommendations and options to the Commission in "Mission Statement Update Options Pursuant to Subsection

501(a) of the ADVANCE Act of 2024" (ML24281A190). After the Commission votes and provides direction to the staff, guidance will be developed on implementation of the updated mission statement.

The ADVANCE Act requires the NRC to take several additional actions requiring cooperation and teamwork among offices across the agency. As such, the Executive Director of Operations has designated a senior agency leader as a Special Assistant to lead the implementation efforts and a Core Team of senior managers to guide agencywide actions. To date, 35 taskings have been assigned across nearly all 26 NRC offices, including regional offices, each with a designated lead responsible for actions and deliverables under the ADVANCE Act. The Core Team is responsible for maintaining oversight and accountability for each of the taskings associated with implementation of the Act.

The Core Team regularly updates the Commission on the progress of the ADVANCE Act's implementation and the status of upcoming deliverables. Updates are also shared more broadly with all staff at the agency to promote engagement and awareness. The NRC created a public website (https://www.nrc.gov/about-nrc/governing-laws/advance-act.html), which offers an overview of the Act, shows current implementation progress and the project lead for each of the taskings, and provides information on past and upcoming public meetings related to the NRC's work under the ADVANCE Act.

2. Congress is looking for a step change in NRC efficiency and regulatory predictability so the full benefits of nuclear technologies can be realized. Last year, I raised concerns that NRC-review of subsequent licensing for the existing reactors was taking too long, expending too many resources. Reactors that have been relicensed have already been subject to thorough review and to regular inspection of their aging management programs, so renewing a license should be straightforward. Staff had been taking longer for subsequent licensing than they had for initial relicensing—and charging twice as much, on the backs of ratepayers. You agreed with these concerns, yet staff just recently came back to you with a licensing roadmap to say they can only perform reviews at about half the rate they could 20 years ago. I don't think this is acceptable. This prompted the Commission to issue direction to staff to shorten the timing for reviews further than staff proposed.

    a. What is necessary to ensure NRC management will drive performance improvements in licensing sufficient to minimize Commission involvement?

RESPONSE:
The NRC will drive performance improvement for licensing through increased transparency and reliability for planning and tracking of NRC licensing activities, along with prompt, fair, and decisive administration. The NRC's process for using an established schedule and resource estimate following the completion of the NRC's acceptance review for licensing activities is a critical tool to ensure accountability throughout reviews.

The established schedule consists of key milestones and resources through the review period. If implementation of the established schedule or expended resources varies from the planned target, the activity will be flagged for management attention and the NRC will use risk management (e.g., Enterprise Risk Management process or "Be RiskSMART" tool) to manage the risk,

identify contributing factors, take appropriate action, assess lessons learned, and continue to refine its accuracy when establishing schedules and resource estimates.

Specific improvement efforts are underway, and the NRC has started to see returns. For example, the staff's recent subsequent license renewal (SLR) review for the Monticello Nuclear Generating Plant is currently on track to be completed in significantly fewer hours than both the agency's original forecast for the Monticello SLR review and previous SLR reviews the NRC has completed. The NRC staff's initial license renewal review times have also improved. Recently, the NRC issued the Comanche Peak initial renewed license. The agency's review came in almost 6,000 hours under budget. The budget was established in 2022, before the efficiency efforts were started in earnest; therefore, this is a good gauge of the early returns on the changes made. Some of the efficiency efforts were applied to the Comanche Peak review as they were developed, but the most significant change—a tailored technical safety review—was not yet available, suggesting additional efficiencies can be realized in future reviews.

With the implementation of, "Achieving Timely Completion of License Renewal Safety and Environmental Reviews (License Renewal Roadmap)," and in accordance with the Commission's direction in response to COMCTH-24-0003, "License Renewal and Subsequent License Renewal Review Expectations," review hours will continue to decrease as changes and new metrics are applied.

The NRC staff is also continuing to innovate to further drive performance improvements in other ways. Examples of such additional actions include:

- In February 2025, updates to "Generic Aging Lessons Learned for Subsequent License Renewal Report" will be issued to provide enhanced guidance for future application submittals. In addition, changes to "Standard Review Plan for Review of Subsequent License Renewal Applications for Nuclear Power Plants," scheduled for 2025, will provide guidance on how to incorporate the License Renewal Roadmap changes into technical safety reviews.

- The NRC's internal Technical Review Package Tool is being updated to support the automatic processing of the administrative aspects of reviews to reduce the initial processing time for receipt of applications, enabling the staff to expedite the start of its technical reviews. These changes are expected to reduce the total review time and the level of effort for the issuance of a renewed license. The current target date to complete this effort is July 2025.

The agency is tracking completion of license renewal activities to ensure that consistent gains are being made to continue to reduce the time and resources necessary to complete license renewal application reviews (see https://www.nrc.gov/reactors/operating/licensing/renewal/roadmap.html).

3. NRC licensing does not occur in isolation. It is part of the process for what can be major, multi-billion-dollar construction projects. A utility that plans to deploy an advanced nuclear reactor, will have expended about half the projects construction costs by the time NRC issues its construction and operating permit. NRC permitting delays that last months or years can result in huge carrying costs, expensive delays and in cancellations, which can be catastrophic for companies making these investments.

    a. Does the commission understand the impact these delays have on investments in nuclear projects?

RESPONSE:
Yes, the NRC understands that project delays can have substantial impacts on new nuclear projects. The NRC's Principles of Good Regulation have long been Commission policy, including the Efficiency Principle, which states, in part, that "regulatory decisions should be made without undue delay" and which calls for "the best possible management and administration of regulatory activities." The NRC is committed to fulfilling its safety and security mission efficiently.

    b. What is the NRC doing to create more internal discipline and more predictability and certainty for investors?

RESPONSE:
The NRC continues to implement methods to make the licensing process more efficient and predictable for all application types, including license applications for advanced reactors, while ensuring the safe and secure use of radioactive materials. For example, current initiatives include:

- Enhanced pre-application activities to facilitate mutual understanding of the regulatory process, awareness of the potential applicant's schedule for submittal, and early review of novel technical issues through the topical report process before an application is submitted.
- Increased use of regulatory audits, where appropriate, to reduce the need to issue formal requests for additional information to an applicant during the staff's review.
- Increased use of dedicated "core teams" to drive consistent, predictable, and efficient technical reviews.
- Increased use of risk-informed decision-making tools to focus agency resources on the issues of greatest importance.
- Development of technology-inclusive, performance-based, and risk-informed regulations and guidance.
- Enhanced licensing workload management process to proactively identify potential challenges to timely reviews earlier and leverage historical data to improve accuracy of predicted review schedules for different types of licensing actions.
- Development of a flexible construction oversight program to ensure that the agency is applying a level of regulatory oversight commensurate with the risk associated with these technologies.
- Development of lessons-learned assessments to document best practices and recommendations for improvement, where appropriate.

c. Companies spending billions have powerful incentive to submit quality applications. What incentives do NRC staff have to provide predictable decisions?

RESPONSE:
The NRC staff are dedicated public servants and are motivated and driven by our important mission to protect public health and safety and the environment. The NRC implements and maintains performance management systems for its employees that encourage excellence and accountability through a focus on results and leadership. The agency is also strengthening the link between performance and strategic planning; clearly and directly linking organizational mission/program goals and individual executive performance and results; and balancing organizational results, stakeholder perspectives, and employee perspectives.

The Honorable Robert E. Latta

1. Maintaining a robust domestic fuel supply chain is a matter of national security, and the current fleet of fuel cycle facilities is growing to support an increased global electricity demand. However, unpredictable NRC annual fees are inhibiting such planned growth. For example, fuel cycle facilities saw an unexpected NRC annual fee increase of 19% in FY23 above FY22 levels. This increase was further compounded by an additional increase of 24% in FY24 above FY23.

    a. What is NRC doing to address this unsustainable pattern and avoid a similar outcome in future years? Did the NRC consider the application of carryover funds to mitigate these increases?

RESPONSE:
The NRC continues to be mindful of the impact of its budget on the fees for all its licensees and applicants. The fuel facilities fee class is particularly small and as such each facility is impacted more significantly by fee fluctuations than facilities in larger fee classes.

Projected workload, which informs the agency budget, is largely based on information from licensees, applicants, and potential applicants. The NRC also continues to work with licensees, applicants, and potential applicants to obtain information to allow the agency to have high confidence in workload projections, and to communicate with external stakeholders during key points in the annual budget cycle where the NRC can best facilitate adjustments.

With respect to the use of carryover funds to mitigate fee increases, the NRC's ability to use carryover to offset fees is dependent on available amounts of carryover in the corresponding control point and Congressional action to direct the use of carryover with a corresponding reduction in current-year budget authority in the annual appropriations process.

    b. Excessive fees risk undermining our energy security. Commissioners, should NRC apply more budget discipline, so its fees do not get out of hand for the small number of fuel facility licensees?

RESPONSE:
As described above, the NRC will continue to assess resource requirements, evaluate programmatic efficiencies, and seek areas of improvement in the budgeting process. Congress also has a role to play in addressing this issue through both authorization and appropriations processes. The agency stands ready to assist and engage Congress on long-term solutions.

2. The events in Ukraine and our competition with China and Russia on nuclear, underscore the need to build out our own nuclear fuel infrastructure, including for advanced fuels. Building on past work, Congress enacted two important laws this year to accelerate the development and expansion of a domestic fueling industry –the Nuclear Fuel Security Act, and the Prohibiting Russian Uranium Imports Act. In the fuel security act Congress directed that NRC expedite its work on fuel facility licensing. It also directed NRC in the ADVANCE Act to maximize efficiency in considering license applications.

    a. Given the national importance of securing the fuel supply chain from Russian influence, what steps is the NRC taking to be efficient and risk informed for licensing new fuel cycle facilities?

RESPONSE:
The NRC has been enhancing its fuel cycle licensing program to integrate risk-informed approaches, focusing resources on safety-significant aspects of licensing decisions, over the last several years and will continue to strengthen this program. In 2019, guidance was issued to staff for the materials programs to prioritize efforts on areas critical to safety.

In 2020, staff leaders set clear expectations for the fuel cycle licensing process, including prioritization, pre-application engagement, requests for additional information, and focused safety evaluations. This strategy supports a licensing process that is thorough, efficient, and transparent to the public. Also in 2020, a working group provided recommendations for improvement across three focus areas: guidance and tool development, planning and processing, and performance and documentation. Since that time, the agency has implemented improvements relating to pre-application engagement, clear process instructions for staff, and more efficient onsite audits as a replacement for traditional written exchanges. These measures continue to evolve based on operating experience and stakeholder feedback, including through the bi-annual Fuel Facility Stakeholders Meeting.

    b. Would you explain how NRC staff are leveraging previously reviewed and approved licensing work to not duplicate efforts on any current or forthcoming applications for fuel cycle facilities?

RESPONSE:
To maintain consistency and avoid duplicating efforts, the NRC staff leverages previously approved licensing work where appropriate, using “Standard Review Plan (SRP) for License Applications for Fuel Cycle Facilities” as a foundational guide. Since its adoption in 2000, this document has provided a structured approach to maintain quality and uniformity in fuel facility licensing reviews. This SRP outlines the responsibilities of NRC technical reviewers, the review criteria, and the regulatory framework for each technical discipline, while also allowing

flexibility for applicants to propose alternative methods to meet the regulatory requirements. In addition, as part of the licensing process, the staff consults prior safety evaluation reports to streamline the review process by focusing on novel or high-risk elements unique to each facility. The staff leverages prior safety evaluation reports to the extent possible, recognizing that their applicability may be more limited for applications involving first-of-a-kind technologies.

3. Would you please provide for the record an explanation of how NRC staff are leveraging previously reviewed and approved licensing work to not duplicate efforts on any current or forthcoming applications?

RESPONSE:
The NRC staff continuously documents and applies best practices from ongoing and completed reviews. For example, in January 2024, the NRC staff issued the "10 CFR Part 52 Construction Lessons-Learned Report" (ML23325A202). This report presents lessons learned and potential improvements that are related to licensing activities, inspection, analyses, and acceptance criteria, construction inspection, and the overall oversight program.

Similarly, staff is applying lessons learned from licensing advanced reactors such as NuScale and Kairos to improve the efficiency of future reviews. For example, for the Kairos Hermes 2 test reactor construction permit application review, the staff leveraged best practices and information from the Kairos Hermes 1 review, which was completed in December 2023. Using this approach, the staff completed the Hermes 2 safety evaluation in 10 months and the environmental review in 12 months, both ahead of schedule. Specifically, the staff:

- Focused the review on the differences between the two applications and incorporated safety findings from Hermes 1 by reference into the Hermes 2 application, when appropriate; and
- Used the results from the Hermes 1 environmental impact statement to issue a Hermes 2 environmental assessment and associated Finding of No Significant Impact.

For operating reactors, the NRC staff leverages experience from previous approvals to streamline reviews by employing digital tools. For example, the agency uses an interactive tool to provide the best estimates of resource and schedule information based on similar, previous applications. In addition, the industry can use NRC-approved topical reports to simplify forthcoming applications.

4. The ADVANCE Act demonstrates the strong bipartisan support for nuclear within this Congress and the nation at-large and continues the work to ensure nuclear energy plays a meaningful and necessary role in our electric grid for many years to come. This legislation is expected to play a substantial role in promoting the development and deployment of new nuclear. However, it is critically important that we protect existing nuclear as well. Can you speak to how the ADVANCE Act, or other initiatives currently being undertaken at the NRC, will supporting existing nuclear generation at a time when we need as much reliable generation as possible?

RESPONSE:
The ADVANCE Act includes several provisions directly applicable to the licensing and regulation of operating nuclear power plants, such as Sections 505 (reactor licensing) and 507 (oversight and inspections), which the staff are actively evaluating and implementing. While the ADVANCE Act is primarily focused on new and advanced reactors, any efficiencies, improvements, or process changes realized by staff in efforts for advanced reactors could potentially be applied to the operating fleet. For example, changes made as a result of Section 506 of the ADVANCE Act regarding environmental reviews would apply to environmental reviews of operating reactors. These improvements would be in addition to staff's ongoing efforts in response to, "Achieving Timely Completion of License Renewal Safety and Environmental Reviews (License Renewal Roadmap)," and the Commission's direction in COMCTH-24-0003, "License Renewal and Subsequent License Renewal Review Expectations." The staff also proactively started looking at process improvements for future power uprate applications and has been actively engaging with stakeholders on how to make those reviews more efficient.

5. We have seen the NRC focus significant time and attention on issues of very low safety significance. Two recent illustrative examples pertain to dry cask storage that have required several years to disposition, one in fact remains open.

    a. What is NRC doing to ensure that resources are used efficiently?

RESPONSE:
The NRC strives for efficiency in our regulatory processes. The focus on enhancing efficiency and timeliness will continue as the staff implements the ADVANCE Act.

With respect to the NRC's inspection program for dry cask storage, NRC Inspection Manual Chapter 2690 identifies five risk-informed safety focus areas to determine if current licensee performance continues to provide reasonable assurance of adequate protection. Appendix D provides detailed guidance for the prioritization of inspection activities at independent spent fuel storage installations. Standard inspection activities were evaluated and prioritized in accordance with their relative risk (i.e., risk of unintended radiological exposure to workers or the public, damage to fuel, breach of confinement or canister integrity, or impact to an operating plant). Priority level 1 activities involve the highest amount of risk, necessitating the greatest level of inspection effort, while priority level 3 activities involve the lowest amount of risk, necessitating the lowest level of inspection effort.

In recent instances where the NRC determined that cask vendors violated NRC requirements, the NRC has taken appropriate actions commensurate with the safety and security significance of the violations. In one example, the NRC used enforcement discretion to efficiently disposition a compliance issue after recognizing the low safety significance of the violations involved. In another instance, the NRC conducted a risk-informed assessment, determined the issue was of very low safety significance, and used an expedited exemption process that did not impede continued cask loadings. In August 2024, the cask vendor submitted an amendment as a corrective action, and the NRC is expediting this safety review to bring this issue to closure.

Additionally, the NRC has implemented the Very Low Safety Significance Issue Resolution process to discontinue evaluation of an issue involving a licensing basis question that is known to be of very low safety significance in which the issue cannot be resolved without a significant level of effort and resources.

b. Has the staff's pursuit of very low safety significant issues contributed to the agency's increase in used fuel licensees' annual fees by 24.9% in 2024?

RESPONSE:
No, there are other drivers for the FY 2024 increase in annual fees for this fee class. Compared to FY 2023, the FY 2024 annual fee for the spent fuel storage/reactor decommissioning fee class increased primarily due to (1) a rise in budgeted resources, (2) an increase in generic transportation costs, and (3) a decrease in service fee billings under 10 CFR part 170. Regarding (1) above, the increase in budgeted resources for this fee class was due in part, to a mandatory increase in salaries and benefits.

Regarding item (2), consistent with the policy established in the NRC's FY 2006 final fee rule, the NRC recovers generic transportation costs by including those costs in the annual fees for licensee fee classes. The resources associated with generic transportation activities are distributed to the license fee classes based on the number of Certificates of Compliance benefitting (used by) that fee class. In FY 2024, there was an increase in the generic transportation budgeted resources for the spent fuel storage/reactor decommissioning fee class compared to FY 2023.

Regarding item (3), the annual fee for the fee class (assessed under 10 CFR Part 171) increased in FY 2024 due to a decrease in estimated 10 CFR Part 170 billings compared to FY 2023. Under the Nuclear Energy Innovation and Modernization Act (NEIMA), the NRC must first collect service fees (i.e., estimated 10 CFR Part 170 billings) for NRC work that provides direct benefits to specific, identifiable recipients, such as licensing work, inspections, and special projects. 10 CFR Part 170 billings are inversely related to the proposed annual fee for a fee class; the more the NRC estimates to collect in 10 CFR Part 170 billings, the less it assesses in Part 171 annual fees. In FY 2024, the decrease in the 10 CFR Part 170 estimated billings was primarily due to the completion of the safety and environmental review of the Holtec HI-STORE consolidated interim storage facility application, the termination of the license for the La Crosse Boiling Water Reactor, and a decrease in decommissioning licensing and inspection activities at multiple sites.

The Honorable Brett Guthrie

1. When you were before us last year, I asked about ways to cut down the time it takes for a reactor to come online. Part of this requires quality applications, and that too can involve good pre-application interactions with NRC staff. I understand the NRC says to engage in pre-application "early and often." But I also understand that, in pre-application meetings, the NRC staff often say they cannot provide feedback and would require a formal submission to review. For example, if an applicant requests a pre-application meeting and presents its plan for environmental characterization and drilling for a site, I understand that the staff won't say if it is sufficient or not, they will say that they will review that section of the application once submitted.

a. What is the need or value of that pre-application meeting, if the applicant receives limited feedback?

RESPONSE:
While the NRC staff cannot make regulatory decisions during pre-application meetings, pre-application engagement can provide many benefits. Pre-application interactions allow for the timely identification and resolution of technical and policy issues and a better understanding of regulatory requirements and expectations. Pre-application engagement also permits the NRC staff to become familiar with the proposed design and approaches to be used by the potential applicant, and assists the NRC in determining resource and budget needs to support efficient reviews.

During pre-application reviews, there are several options for prospective applicants to engage with the NRC staff, including submitting white papers and topical reports to obtain written NRC staff feedback. In the case of topical reports, future license applications can reference topical reports that the NRC staff has previously reviewed and found acceptable. The use of topical reports, as appropriate, can enhance regulatory predictability on key licensing and technical issues before an application is submitted.

b. How should the process work?

RESPONSE:
In April 2024, the NRC issued Interim Staff Guidance, "Review of Risk-Informed, Technology-Inclusive Advanced Reactor Applications—Roadmap" (ML23277A225), providing guidance on the benefits and options for voluntary pre-application engagement for advanced reactor developers. As described in this guidance, the NRC offers a range of pre-application engagement activities that involve different levels of effort and can achieve different objectives.

- Low-level engagement involves the NRC staff meeting with a potential applicant and providing verbal feedback on technical or regulatory matters. For example, during these meetings, the staff can provide clarifying information about its licensing processes and expectations for conducting effective and efficient reviews.
- Medium-level engagement involves the NRC staff providing written feedback on white papers. A potential applicant can submit white papers and request written NRC staff feedback on key areas. Feedback provided by the NRC staff aids a potential applicant in identifying technical and policy issues in a timely manner and improving the quality of their future license application.
- High-level engagement involves the NRC staff reviewing a topical report for potential approval. NRC-approved topical reports can be referenced in future license applications, allowing for a single review by the NRC staff of the topic and a staged licensing approach and increasing the efficiency of the license application review.

Additionally, the NRC staff encourages potential applicants to allow the staff to conduct a voluntary pre-application readiness assessment of their draft application at least 6 months prior to the expected date of submittal of the application. This assessment allows the NRC staff to identify early challenges or gaps between the draft application and the technical content required to be

included in the application submitted to the NRC.

c. Should staff be more communicative to applicants' questions in pre-application meetings? Does this undermine NRC efficiency?

RESPONSE:
During pre-application meetings, the NRC staff can articulate the regulatory processes and expectations for reviews and can provide feedback that will be useful in preparation of a future license application. While the NRC staff cannot make regulatory decisions during pre-application meetings, this engagement is beneficial to the staff and potential applicants. Pre-application interactions directly support efficiency in the NRC staff's reviews and have the potential to result in higher quality applications.

2. As you know, I along with Rep. Tonko sponsored provisions incorporated in the ADVANCE Act that requires the Commission to evaluate, implement changes, and report to Congress on efficient, timely, and predictable licensing reviews for new facilities at brownfield and retired fossil fuel sites. The use of these sites has the potential to provide good jobs for those employed at retiring facilities, minimize environmental impacts and need for new infrastructure, and expedite new projects.

    a. What opportunities do you currently see for expanding the use of these sites for new nuclear facilities and expediting the licensing reviews given the existing site infrastructure and detailed information on those sites?

RESPONSE:
The NRC's efforts to implement Section 206 of the ADVANCE Act are currently underway. The NRC staff is exploring ways to expedite the licensing review process for nuclear facilities at brownfield sites and retired fossil fuel sites, including leveraging the data that exists for these sites and minimizing the need for applicants to generate new data. For example, there may be extensive groundwater characterization from onsite and offsite monitoring wells at a covered site, years of data from an existing meteorological tower, or ecological studies and surveys required by a State resource agency for a prior site permit that may be utilized by the agency in its review. Furthermore, there may be existing environmental documents and studies that could be incorporated by reference to streamline the NRC's environmental review process.

The Honorable Larry Bucshon, M.D.

1. Given the significant advantages of advanced reactors over traditional light-water reactors, such as additional safety features, lower cost, reduced waste, increased fuel utilization, enhanced reliability, and so on, do you believe it is important to establish a regulatory process that does not impede the development and construction of this advanced technology?

RESPONSE:
Yes, it is important that the NRC's regulatory process not be an impediment to innovation.

Several recent NRC actions illustrate our commitment to licensing improvement:

- The NRC recently reached a significant milestone by publishing in the *Federal Register* the proposed rule (known as the Part 53 rulemaking) for the technology-inclusive, risk-informed regulatory framework for advanced reactors as directed by the Nuclear Energy Innovation and Modernization Act (NEIMA). The NRC expects to complete this rulemaking ahead of the NEIMA-required deadline of December 31, 2027.
- The NRC recently published a proposed rule (known as the New Reactor Generic Environmental Impact Statement) and associated guidance that are intended to streamline the NRC's environmental review for new nuclear reactor applications received as part of the reactor licensing process.
- The Commission issued the final emergency preparedness rule for small modular reactors and other new technologies, which appropriately scales emergency planning requirements commensurate with the radiological hazards of the facility.
- The staff recently updated siting guidance to account for the safety features of new reactor designs, consistent with Commission direction.
- The Commission recently approved simplified procedures for mandatory hearings (also known as uncontested hearings), which are statutorily required before authorizing the construction of certain types of nuclear facilities. The NRC used these new procedures for the first time for the mandatory hearing for the Hermes 2 construction permit application, which was issued on November 21, 2024.
- This spring, the NRC staff published the "Advanced Reactor Content of Application" and "Technology-Inclusive Content of Application," which provide applicants for non-light water reactors guidance on using the existing regulations in Parts 50 and 52. Among other things, these guidance documents endorse the methodology in NEI-21-07 and build off of the NRC's prior endorsement of NEI-18-04, the Licensing Modernization Project, in Regulatory Guide 1.233.
- The NRC staff is committed to and actively engaged in identifying further efficiencies and means to expedite review timelines in response to the ADVANCE Act.

2. What is your sense of NRC's ability to meet that demand, today? Do you believe the NRC is prepared to field an increase of applications for advanced reactors while maintaining a timely, yet effective, review process?

RESPONSE:
Yes, the NRC is currently well positioned to review multiple reactor applications at the same time. The NRC has taken specific steps in recent years to enhance its capacity to perform efficient, concurrent reviews of multiple reactor license applications. For example:

- The NRC staff has gained efficiencies through enhancements to work processes, such as using core teams that develop expertise in the designs under review, which can be applied to subsequent reviews.
- The NRC staff has encouraged potential applicants to engage in pre-application discussions with the staff. While voluntary, pre-application discussions provide many benefits, including enhancing the efficiency of application reviews. In April 2024, the NRC issued Interim Staff Guidance, "Review of Risk-Informed, Technology-Inclusive

Advanced Reactor Applications—Roadmap," providing guidance on the benefits and options for pre-application engagement for advanced reactor developers.

- The NRC issued Regulatory Guide 1.206, "Applications for Nuclear Power Plants," in which the NRC encourages the standardization of applications to enhance the safety and reliability of nuclear power plants and facilitates a predictable and consistent method for application review. Standardized designs can play a key role in facilitating efficiencies in the review process. Standardization allows the NRC staff to perform a single technical review for design standard information and make one consistent and justifiable finding. The reviews of subsequent license applications referencing the same design would then focus only on site-specific aspects, including the environmental review. The staff can also use knowledge from initial reviews to enhance the NRC's ability to review subsequent license applications referencing the same design.

The NRC has and is taking additional specific steps to enhance the agency's capacity to conduct efficient, concurrent reactor license application reviews. For example, the NRC is engaging in significant recruitment and hiring efforts to onboard qualified, skilled new employees to strengthen the NRC's workforce to support the anticipated workload and is investing in training employees to ensure that they are prepared to perform timely and effective reviews. Further, the NRC staff is exploring additional options, which include repositioning skilled NRC staff throughout the agency to further augment advanced reactor staffing and using contractors, where appropriate. The staff is continuing to enhance its work processes, such as developing templates for safety evaluations and instituting parallel reviews of documents to accelerate review timelines, where possible. Lastly, the NRC staff is undertaking an array of activities to address provisions of the ADVANCE Act that will further enhance the NRC's ability to efficiently review multiple reactor license applications.

3. The ADVANCE Act made reforms, based on legislation I sponsored with Mr. Peters, to reduce the licensing costs for advanced reactor applicants. Apart from decreasing the hourly regulatory review fees charged to applicants and pre-applicants, has the focus of the safety review process for advanced reactors changed under this law? Reactor applicants will need to meet the same safety standards and oversight as before, correct?

RESPONSE:
Correct. Section 201 of the ADVANCE Act requires the NRC to assess a reduced hourly rate to advanced nuclear reactor applicants and pre-applicants for certain activities effective October 1, 2025, and does not change the focus of the safety review process or the licensing and oversight requirements applicable to advanced nuclear reactor applicants and pre-applicants.

4. The fee reduction provisions will result in significant cost reductions for advanced reactor applicants—almost half according to NRC. But there are other licensing fees all reactors and utilities have to pay, often passed on to ratepayers. Can you each speak to your views about ensuring fees are kept at a reasonable rate?

RESPONSE:
The NRC is committed to the application of fairness and equity in the assessment of fees. NEIMA

requires the NRC to recover, to the maximum extent practicable, approximately 100 percent of its annual budget less certain amounts excluded from this fee recovery requirement. NEIMA also requires that the NRC assess fees fairly and equitably to the various types of licensees and that the fees be reasonably related to the cost of providing regulatory services. Fees are reassessed annually with stakeholder engagement and the proposed annual fee rule is published in the *Federal Register* for public comment.

The NRC recently modified its annual fee regulations to address the economic differences between the current fleet of large operating reactors and potential future small modular reactors (SMRs). In light of increased interest in licensing non-light-water reactors (non-LWRs), in the FY 2023 final fee rule, the NRC amended its annual fee regulations to (1) expand the applicability of the SMR variable fee structure to include non-LWR SMRs; and (2) establish an additional minimum fee and variable rate applicable to SMRs with a licensed thermal power rating of less than or equal to 250 megawatts thermal. The NRC made these changes to be technology-inclusive and to establish a fair and equitable approach for assessing annual fees for SMRs. The NRC will continue to seek areas of improvement to the budgeting process and assess fair and equitable fees for all licensees and applicants.

The Honorable Tim Walberg

1. As noted in a report from Idaho National Laboratory, reviews by the NRC's Advisory Committee for Reactor Safeguards or ACRS have become burdensome and time-consuming for industry and regulators alike. The ACRS was established when technologies were new and novel. We should return ACRS to this core mission and focus it on issues that would benefit from its expertise, which I've aimed to do in my draft legislation. The consequence of not clarifying the role of the ACRS is that the ACRS, due to resource constraints, may delay the approval and deployment of nuclear power plants with advanced safety features.

    a. What actions has the Commission taken to ensure that the ACRS becomes more efficient in the conduct of its mission?

RESPONSE:
Throughout the ACRS's history, the statutorily established Committee's independent review has been an essential element of reactor licensing, and the Commission continues to value the ACRS's independent technical advice. As the agency prepares to review license applications for new advanced reactor designs, as well as a greater number of license applications, the role of the ACRS, with its diverse technical expertise, continues to be essential for an independent, integrated, and multi-disciplinary review.

The Commission oversees ACRS activities, including engaging with the ACRS on efforts to improve its efficiency. During the Commission's June 7, 2024, meeting with the ACRS, process improvements were a key topic of discussion. The process improvements initiated by the ACRS and discussed with the Commission include: increased project management and coordination with NRC offices, standardized guidance and best practices to apply to the review of new reactor designs, improvements to more effectively and expeditiously conduct reviews of subsequent license renewal applications, increased involvement in

scheduling reviews and early alignment on major ACRS actions, lessons learned relevant to future advanced reactor applications, measures to proactively conduct early reviews of critical topical reports for new and advanced reactor applications, and status updates during the planning portion of each full Committee meeting. Information about the June 7 Commission meeting, including the meeting transcript, slides, and an archived webcast, are available at: https://www.nrc.gov/reading-rm/doc-collections/commission/tr/2024/index.html.

b. Do you believe that the ACRS will ultimately be a bottleneck for new reactor licensing if it is not refocused on novel, safety significant issues?

RESPONSE:
No. The ACRS has not delayed advanced reactor licensing thus far, and the Commission does not believe the ACRS will become a bottleneck to such licensing in the future. The ACRS is receptive to input for improving effectiveness and efficiency as it provides independent advice to the Commission. Through proactive efforts, the staff and the ACRS have focused on reviews of safety-related documents (e.g., topical reports, design certifications, standard design approvals, combined licenses, construction permits, limited work authorizations). These enhancements were successfully implemented and demonstrated during four recent reviews: the later stages of the NuScale design certification, both Kairos Hermes test reactor construction permit applications, and the ongoing NuScale standard design approval application. Their implementation has proven effective in providing both time and cost savings to new small modular and advanced reactor applicants.

Recommendations for further efficiencies identified by ACRS members, NRC staff, and applicants, have also been implemented. As noted in the June 2024 Commission meeting, significant progress has been made in areas such as enhancing focus on novel and safety-significant matters, reducing duplicative meetings, increasing Commission awareness of ACRS activities, increasing communication with NRC staff, reducing costs, and ensuring members conduct tasks in an effective and efficient manner.

The Honorable Greg Pence

1. Congress sought to make sure to enhance NRC's tools for hiring extremely qualified individuals to fill urgent needs. Yet there are also routine workforce operations that NRC must excel at. For example, resident inspectors are the agency's 'boots on the ground' at all operating plants. At a recent Commissioner meeting, staff showed deficiencies in resident inspector retention. The NRC has had some challenges retaining qualified inspectors in these positions.
    a. What is the plan to improve retention?

RESPONSE:
The NRC has implemented several initiatives to increase resident inspector recruitment and retention since 2020. These initiatives are ongoing and are geared toward providing important financial incentives and workplace flexibilities. To date, the NRC has implemented policies or practices to:

- Offer a lump-sum payment option to reimburse resident inspectors for temporary quarters subsistence expenses and house-hunting expenses.
- Establish a new special rate pay scale for resident inspectors at sites where locality adjustments are less than 20 percent of base pay.
- Expand eligibility for "saved pay," which allows qualifying resident inspectors who move from a site to a regional or headquarters position to keep their resident pay rate. Eligibility for saved pay was expanded to resident inspectors who have completed a cumulative total of six years in the resident inspector program, rather than six consecutive years.
- Authorize a 15 percent annual retention payment for resident inspectors through the Group Resident Inspector Program Retention Incentive.
- Shift change-of-station management to the Department of the Treasury to streamline the provision of relocation support to Resident Inspectors.
- Raise awareness, through a resident inspector support group, of the reimbursement process for moving expenses and taxes.
- For a resident inspector at the end of a tour, on a case-by-case basis, allow a period of full-time telework in another NRC position, while the resident inspector waits for their next resident inspector position to start.
- Create a two-year rotational program for former resident inspectors to work remotely for the Office of Nuclear Reactor Regulation, Division of Reactor Oversight at headquarters.
- Establish the Resident Inspector Program Lead position and the Resident Inspector Standing Committee to monitor the health of the resident inspector program and to make recommendations for enhancements.
- Update the resident inspector tour policies in, "Light-Water Reactor Inspection Program—Operations Phase," to provide for additional flexibilities and to clarify guidance with respect to a second resident tour.
- Develop an online centralized location to provide resident inspectors with information regarding program policies and procedures.

b. What policy changes can help enable retention?

RESPONSE:
The Commission is currently considering issues related to the resident inspector program. The NRC staff has not identified any additional policy changes that are currently necessary. The NRC continues to collect data and actively monitor and assess the health of the resident inspector program, including to understand the effects of the recent efforts described above. The NRC will continue to consider whether additional policy changes may be needed to support resident inspector retention in the future.

2. The NRC has ramped up its hiring over the last several years. It seems that coincident with this period of increased hiring, more and more regulatory matters that have been previously resolved are being reopened and reinterpreted.

   a. As you onboard new agency staff, can you explain how the NRC ensures that new hires are being trained on the regulatory process?

RESPONSE:
The NRC has professional development programs and training for new employees, and knowledge management is an integral part of the agency's culture and the responsibility of every employee. The NRC has several formal technical qualification programs that develop necessary technical competencies, knowledge, and skills needed to successfully implement the regulatory processes that the agency performs. The qualification programs consist of self-study activities, on-the-job training, and formal classroom training. These programs are also designed to introduce new staff to NRC policies and objectives as an independent safety and security regulator and the management directives that facilitate smooth operations within the NRC. The staff has a strategic direction initiative to update our standard review plan, including companion training on the regulatory process, which will provide confidence that staff consider previous agency actions in decision making.

b. How do you ensure that both new hires and agency management are knowledgeable of the regulatory history and are dispositioning issues in a manner that considers past precedent?

RESPONSE:
The NRC has various information technology tools for sharing regulatory history and past precedent and to enhance knowledge management for both new hires and agency management. Generally, the NRC staff considers how similar issues were resolved in the past in its decision-making processes. The training on the regulatory process mentioned in the response to a. above will further emphasize the importance of considering previous actions. The NRC uses its formal backfitting process to consider potential changes to regulatory positions, and decisions made under this process can be appealed by licensees.

c. As the agency works to be more risk-informed, as Congress requires, do you have mandatory training on risk for the entire technical staff? If not, can you commit to address this area as you take a holistic approach to the training aspects of Section 507 of the Advance Act?

RESPONSE:
The formal qualifications programs for most technical positions require training related to risk analysis. The NRC has engaged in several training campaigns to integrate risk-informed decision-making into the NRC's culture and continues to offer training on risk-informed decision-making to all agency staff. The agency implemented a risk-informed decision-Making (RIDM) initiative to enhance the integration of risk information into the NRC's decision-making practices and processes to improve the technical basis for regulatory activities, increase efficiency, and improve effectiveness. As part of the RIDM initiative, many staff participated in events and training, such as "Introduction to Risk-Informed Decision Making," which introduces staff to the concept of RIDM along with the various applications of risk information and insights used by applicants, licensees, and the NRC, including specific RIDM acceptance guidelines and regulatory thresholds and their bases.

The NRC also conducted a training campaign to institutionalize the "Be RiskSMART" framework for making risk-informed decisions. Be RiskSMART is a plain language framework that assesses risk to focus on issues of greater safety significance and that uses risk information

to inform the agency's regulatory decisions in all areas, including in the technical, corporate, and legal arenas. This training campaign included training staff in using a risk-informed decision-making model to make risk-related decisions in their work.

The Honorable Randy K. Weber

1. Congress passed the Fiscal Responsibility Act amending the National Environmental Policy Act, and it became law in 2023. The NRC has since taken more than a year to even propose a rulemaking plan. The estimated rulemaking schedule (P.6) estimates that it will take almost 4 years to complete the rulemaking once the Commission approves the NRC staff's plan, and rates this rulemaking a 'medium' priority. This is not in line with Congressional intent to modernize and streamline permitting reform now to meet the needs of the nation. The NRC has extensive experience with both Environmental Impact Statements and Environmental Assessments.

    a. Why is this taking so long and how will you accelerate implementation?

RESPONSE:
The NRC is in compliance with the requirements of the National Environmental Policy Act (NEPA) amendments, which took effect immediately upon the Fiscal Responsibility Act's (FRA) enactment.

Following the enactment of the FRA in June 2023, the NRC implemented several immediate changes to the NRC's NEPA process to ensure compliance with the revised requirements, such as page limits and completion deadlines for NEPA documents.

In SECY-24-0046: "Implementation of the Fiscal Responsibility Act of 2023 National Environmental Policy Act Amendments" (ML24078A013), the NRC staff identified additional opportunities to enhance clarity, reliability, efficiency, and transparency in the NRC's NEPA implementing regulations and procedures and recommended a rulemaking. The staff's SECY paper is currently before the Commission for its consideration.

Some of the proposed changes in SECY-24-0046 can be, and have been, implemented in individual reviews on a site-specific basis while the rulemaking effort is ongoing. For example, during the review of the Kairos Hermes 2 test reactor construction permit application, the NRC prepared an environmental assessment (EA) first rather than proceeding directly to preparation of an environmental impact statement (EIS), as NRC's current regulations would normally require for this type of facility. The NRC staff issued exemptions from the pertinent NRC regulations to support this approach. The Hermes 2 example demonstrates that the agency can gain efficiencies, where appropriate, under the regulatory scheme currently in place while generic changes are being evaluated as part of the rulemaking process.

    b. Congress just directed you to be identify more ways to be efficient in siting reviews. How is this a medium priority?

RESPONSE:
The NRC took immediate actions to implement changes to the agency's NEPA process in response to the statutory requirements of the FRA. SECY-24-0046 recommends to the Commission a rulemaking that is a medium priority based on the NRC's Common Prioritization of Rulemaking (CPR) methodology because the CPR methodology generally prioritizes rulemakings having closer ties to NRC strategic plan goals such as ensuring nuclear safety or security. The Commission is currently deliberating the matter.

c. How does the NRC prepare for an influx of site permits efficiently if it won't set the policy until 2028?

RESPONSE:
Although the NRC staff's rulemaking proposal that is under Commission consideration contemplates a multi-year rulemaking timeframe, the NRC has already implemented changes to its NEPA processes to ensure compliance with the statutory amendments.

The NRC is taking a risk-informed approach to environmental reviews on a case-by-case basis, ensuring that the level of review and NEPA documentation is commensurate with the level of potential environmental impact. As noted above, the Hermes 2 example (EA versus EIS) demonstrates that the agency can gain efficiencies, where appropriate, in its environmental reviews today using the regulatory scheme already in place.

More broadly, the NRC's preparation for efficient review of site permits has included: realigning its Environmental Center of Expertise to staff projects more effectively; focusing on increased hiring and use of contractor support; setting shorter environmental review schedules and page limits for its NEPA documents; developing innovative procedures to ensure timely interagency consultations and compliance; increasing the use of virtual meetings and audits; streamlining administrative processing of public comments; and using agile project management tools for adaptive workload planning.

2. Texas is leading the charge in deploying cutting-edge nuclear technologies. X-energy, a recipient of the Department of Energy's Advanced Reactor Demonstration Program award, has partnered with Dow Chemical to supply heat for one of their facilities on the Texas Gulf Coast in my district. Dow has said they don't want this to be a one-off project, and that they plan to deploy more of these reactors. But to potentially license dozens of reactors at the same time will require the Nuclear Regulatory Commission to be efficient and timely. The ADVANCE Act is a major step toward that goal.

a. Is the NRC currently capable of licensing dozens of new reactors at the same time? If not, what is your plan to get to that capacity?

RESPONSE:
Yes, the NRC is currently well positioned to review multiple reactor applications at the same time. The NRC has taken specific steps in recent years to enhance its capacity to perform efficient, concurrent reviews of multiple reactor license applications. For example:

- The NRC staff has gained efficiencies through enhancements to work processes, such as using core teams that develop expertise in the designs under review, which can be applied to subsequent reviews.
- The NRC staff has encouraged potential applicants to engage in pre-application discussions with the staff. While voluntary, pre-application discussions provide many benefits, including enhancing the efficiency of application reviews. In April 2024, the NRC issued Interim Staff Guidance, "Review of Risk-Informed, Technology-Inclusive Advanced Reactor Applications—Roadmap," providing guidance on the benefits and options for pre-application engagement for advanced reactor developers.
- The NRC issued Regulatory Guide 1.206, "Applications for Nuclear Power Plants," in which the NRC encourages the standardization of applications to enhance the safety and reliability of nuclear power plants and facilitates a predictable and consistent method for application review. Standardized designs can play a key role in facilitating efficiencies in the review process. Standardization allows the NRC staff to perform a single technical review for design standard information and make one consistent and justifiable finding. The reviews of subsequent license applications referencing the same design would then focus only on site-specific aspects, including the environmental review. The staff can also use knowledge from initial reviews to enhance the NRC's ability to review subsequent license applications referencing the same design.

The NRC is taking additional specific steps to enhance the agency's capacity to conduct efficient, concurrent reactor license application reviews. For example, the NRC is engaging in significant recruitment and hiring efforts to onboard qualified, skilled new employees to strengthen the NRC's workforce to support the anticipated workload and is investing in training employees to ensure that they are prepared to perform timely and effective reviews. Further, the NRC staff is exploring additional options, which include repositioning other qualified, skilled NRC staff throughout the agency to further augment advanced reactor staffing and using contractors. The staff is continuing to enhance its work processes, such as developing templates for safety evaluations and instituting parallel reviews of documents, where possible, to accelerate review timelines. In addition, the NRC staff is undertaking an array of activities to address provisions of the ADVANCE Act that will further enhance the NRC's ability to efficiently review multiple reactor license applications.

b. Specifically, how will these provisions aid the NRC to facilitate and accelerate projects like the X-energy and Dow Chemical partnership in Lone Star State?

RESPONSE:
There are several provisions in the ADVANCE Act aimed at enhancing efficiency in the licensing process for new reactors and strengthening the NRC's workforce. Specifically, these include:

- Requiring the NRC to establish a new combined license application review procedure to allow the NRC to expedite the review process for qualifying applicants.
- Requiring the NRC to develop risk-informed, performance-based strategies and guidance for the licensing and regulation of microreactors.
- Providing the NRC with additional hiring and compensation authorities to

strengthen the NRC's workforce.

- Requiring the NRC to update its mission statement to specify that the licensing and regulation of radioactive materials and nuclear energy for civilian purposes be "conducted in a manner that is efficient and does not unnecessarily limit— (1) the civilian use of radioactive materials and deployment of nuclear energy; or (2) the benefits of civilian use of radioactive materials and nuclear energy technology to society."
- Requiring the NRC, while reviewing certain applications involving a nuclear facility located at the site of a facility previously licensed by the NRC, to leverage information that was part of the licensing basis of the previously licensed facility to the extent practicable.
- Requiring the NRC to establish techniques and guidance to support efficient, timely, and predictable reviews of nuclear reactor license applications.
- Requiring the NRC to evaluate potential changes to its regulations, guidance, or policies to promote efficient, timely, and predictable license application reviews for nuclear facilities at brownfield sites and retired fossil fuel sites.

The NRC is currently working on implementing these provisions and will continue to enhance its licensing processes through these activities along with additional actions beyond those required by the ADVANCE Act.

The Honorable Rick W. Allen

1. At your Senate confirmation hearing in April, you stated: "If confirmed by the Senate, I pledge to continue leading the agency and tackling the challenges ahead for both the existing fleet of reactors and next-generation nuclear technologies, while upholding the agency's critical safety and security mission."

    a. Wouldn't you agree this issue falls into the category of "low hanging fruit" and is NOT counter to the agency's safety and security mission?

RESPONSE:
Yes. I did not intend to imply that these duties conflict. Tackling challenges for the existing fleet of reactors and next-generation nuclear technologies is part and parcel of the NRC's mission. The NRC is tackling these and other new challenges consistent with its critical safety and security mission, as the agency has done with challenges in the past.

2. The recently approved ADVANCE Act of 2024 requires the Nuclear Regulatory Commission to update its mission statement to conduct regulation in a manner that "is efficient" and does not unnecessarily limit "the benefits of nuclear energy technology to society." The NRC's proposed rule, SECY-22-0052, has been with the Commission for vote since 2022. In part, it would eliminate the 15-year design certification (DC) expiration dates and prevent DCs from expiring. The NRC staff has called this rule change "transformational". NRC staff stated in its regulatory basis for this rule change that the current design certification renewal regulation introduces "unnecessary regulatory burden on design vendors," and the proposed

rulemaking would "reduce unnecessary regulatory burden on applicants and the NRC" with "no impacts on public health, safety, and security".

a. Does the Commission agree with the NRC staff's assessment of the current design certification regulation as being an "unnecessary burden" with "no impact on public health and safety"?

RESPONSE:
The Commission recently approved a separate proposal to extend the 15-year duration for design certifications. On November 14, 2024, in the Staff Requirements Memorandum associated with COMDAW-24-0001, "Revising the Duration of Design Certifications," (ML24319A209) the Commission directed the staff to issue a direct final rule and companion proposed rule to update 10 CFR Part 52 to replace the current 15-year duration for design certifications with a 40-year duration period. Upon completion of the rulemaking process, this 40-year duration would be applicable to design certifications currently in effect as well as future design certification applications.

On November 20, 2024, in the Staff Requirements Memorandum associated with SECY-22-0052 (ML24326A003), the Commission approved publication of a revised proposed rule that would include items in SECY-22-0052, "Proposed Rule: Alignment of Licensing Processes and Lessons Learned from New Reactor Licensing."

b. Would a rule change to remove the unnecessary limits on approved design certifications be consistent with the revised mission in the ADVANCE Act?

RESPONSE:
In response to the recent Commission direction, the NRC will be issuing a direct final rule and companion proposed rule to update its regulations to replace the current 15-year duration for design certifications with a 40-year duration period for design certifications. Upon completion of the rulemaking process, this 40-year duration would be applicable to design certifications currently in effect as well as future design certification applications (ML24319A209).

With respect to the ADVANCE Act, in October 2024 the Office of the General Counsel provided to the Commission for its consideration recommendations and options for the mission statement update in, "Mission Statement Update Options Pursuant to Subsection 501(a) of the ADVANCE Act of 2024" (ML24281A190). Guidance to the staff to ensure effective performance of the NRC's mission will be developed to implement the Commission's direction on the updated mission statement.

c. Does the NRC intend to act on this portion of the proposed rule change in "an efficient" manner consistent with the ADVANCE Act?

RESPONSE:
Yes. The NRC staff will proceed in an efficient manner with the rule change approved by the Commission.

d. Are any design certifications expiration dates being challenged by the lengthy Commission deliberation?

RESPONSE:
No. The Commission directed the staff to ensure that the final rule approved in its recent direction takes effect no later than December 31, 2025 (ML24319A209). The currently valid design certifications are presently set to expire in 2026 (AP1000), 2029 (Economic Simplified Boiling Water Reactor), 2034 (APR1400), 2036 (U.S. Advanced Boiling Water Reactor), and 2038 (NuScale design).

e. How will the Commission efficiently address the design certification set to expire while this rule change is being deliberated and will those actions be consistent with the updated NRC mission in the ADVANCE Act?

RESPONSE:
No design certifications are set to expire before December 31, 2025. As discussed above, the Commission has directed the staff to ensure that the final rule approved in its recent direction takes effect no later than December 31, 2025 (ML24319A209).

3. There are a number of advanced reactor designs in various stages of review that, if approved, would result in a design certification. However, if a utility wanted to pursue construction of a new reactor in the near term my understanding is that there is only one certified design that has a proven construction and operating record -- the Westinghouse AP1000 design, the design for Plant Vogtle. I understand that NRC design certifications are for 15 years and the current AP1000 design certification expires in February 2026. I also understand that two years ago the staff recommended removing the expiration date for designs that have been certified but needs the Commission's approval before implementing that recommendation. This seems like a no-brainer, but it hasn't happened yet.

   a. I asked at the hearing, but want elaboration for the record: Where does the Commission stand on a decision to remove the expiration date for design certifications as the NRC staff has proposed, and when can we expect a final decision?

RESPONSE:
On November 14, 2024, the Commission approved "Revising the Duration of Design Certifications" (ML24319A209), and directed the staff to update 10 CFR Part 52 via the direct final rule process to replace the current 15-year duration for design certifications with a 40-year duration period. Upon completion of the rulemaking process, this 40-year duration would be applicable to design certifications currently in effect as well as future design certification applications. The Commission directed the staff to ensure the final rule takes effect no later than December 31, 2025.

The Honorable Frank Pallone, Jr.

1. NRC's Inspector General issued a report identifying conflicts of interest affecting ACMUI. The IG report states that professional societies lobbying NRC and Congress on medical event reporting of extravasations are also advising NRC through their members who are on the ACMUI. Meanwhile, NRC's draft rule on this issue would create a unique reporting requirement based on the subjective judgment of physicians who are actively lobbying the NRC not to make extravasations reportable.

    a. Why wouldn't NRC use the same objective, dose-based criterion that it uses for all other aspects of radiation safety to determine whether an extravasation is subject to medical event reporting?

RESPONSE:
The staff assessed that a dose-based criterion could be effective but would create an unnecessary regulatory burden related to the monitoring of every intravascular injection for purposes of regulatory reporting. The NRC's rulemaking effort regarding the reporting of nuclear medicine extravasations has been informed by a wide range of views, including those of a petitioner for rulemaking, the ACMUI, Agreement States, published peer-reviewed literature, patient advocacy groups, and the medical community.

The NRC staff has prepared a draft proposed rule that is currently pending before the Commission (SECY-24-0067). As explained in the draft proposed rule, extravasation is a known risk in all medical injections because a vessel is being punctured and fluid may inadvertently leak from the puncture site. The NRC staff has proposed a criterion for reporting an extravasation of a radiopharmaceutical that is different from the other medical event reporting criteria because there is no method to assess whether the extravasation resulted from an error or from other factors outside the licensee's control. The unintentional presence of a radiopharmaceutical in the tissue surrounding a blood vessel may be observed even when the radiopharmaceutical was injected without incident. Because an extravasation can occur during almost any radiopharmaceutical intravascular injection and given the rarity of an extravasation leading to patient harm, imposing a dose-based criterion would require monitoring to detect an extravasation for millions of injections per year, creating significant regulatory burden for medical licensees for only a marginal increase in radiation safety. The staff's proposal, after considering several approaches based on the risks involved in extravasations and potential burden to medical licensees, is to create a reporting requirement based on patient harm. If approved by the Commission, the NRC staff plans to publish the proposed rule in the *Federal Register* for a 90-day public comment period and hold a public meeting to promote full understanding of this proposed rule and to facilitate the development of public comments. The NRC will consider all comments received to prepare the final rule, which, if approved, is anticipated to be published in September 2026.

    b. NRC has previously rejected a subjective reporting criterion. What has changed that makes the Commission believe that allowing the individuals ultimately responsible for the medical event to decide to report or not is preferable to a risk-informed, objective criterion? And if something has changed, why not make all safety event reporting subjective?

RESPONSE:
The Commission is currently considering a draft proposed rule from the NRC staff that would create a reporting requirement for extravasations that result or have the potential to result in a radiation injury, as determined by a physician, rather than a dose-based threshold. The NRC considers the proposed reporting requirement to be risk informed. It balances the radiation-safety-risk of extravasations (i.e., lower risk associated with diagnostic administrations and higher risk associated with therapeutic administrations) and the difficulty in some cases in preventing extravasations, with the regulatory burden and costs associated with monitoring for and reporting extravasations. While the proposed reporting criterion is different from the dose-based and error criteria applied to most medical events, it does comport with the approach the NRC has taken for certain other reportable medical events that are also not based on an error or a dose threshold.

The Honorable Ann M. Kuster

1. At the Seabrook plant in my state, we have had the benefit of NRC resident inspectors who go above and beyond in taking the time to talk with members of the community and explain what is happening at the plant. How can the NRC improve public engagement, including people living near existing or planned nuclear power stations?

RESPONSE:
The NRC established Strategic Goal 3 entitled, "Inspire Stakeholder Confidence in the NRC," in its Strategic Plan for Fiscal Years 2022-2026. To improve public engagement, the NRC has launched a systematic evaluation of the agency's existing public outreach efforts to accurately identify gaps and best practices, as well as to accurately capture and monitor its stakeholder engagement activities.

In addition, the NRC is enhancing its engagement by assessing the effectiveness of each public meeting. When planning public meetings, the NRC evaluates the issues to be discussed, the public interest, and other area-specific issues to ensure meaningful interactions. For example, for the Palisades restart, the NRC has coordinated over 12 public meetings, proactively expanding the use of onsite meetings to maximize local stakeholder engagement and transparency.
Most public engagement and participation activities are conducted either near existing nuclear power plants or using methods that are accessible to local stakeholders. Activities that maximize this engagement include:

- Public meetings and open houses to meet with the public and answer questions. The open houses are held at places with wide public access and at times to maximize attendance (e.g., in the evening).
- Public meetings (virtual and/or in-person) to discuss issues implicating the NRC's rules or policies.
- Making information about the NRC's regulatory activities available and easily accessible to interested stakeholders and the public through the NRC's public website and the web-based ADAMS database.
- Responding to public comments or inquiries in writing.

- Refining presentation materials to incorporate plain language to ensure that agency messages are easily understandable and accessible to everyone.
- Advertising public meetings where the local community is more likely to see them, such as in convenience stores and churches.
- Translating documents into additional languages to reach a broader audience.
- Regularly sharing information via the NRC's social media channels.

2. On May 29th, the NRC conducted its annual assessment report meeting for Seabrook Station. During this public meeting, many Granite Staters expressed their concerns regarding the impacts of climate change on the power plant's security and reliability. Specifically, they voiced concerns about rising sea levels impacting access to the power plant and its resiliency. What is the NRC doing to integrate the impacts of climate change, specifically sea-level rise, into emergency planning?

RESPONSE:
In carrying out our statutory role of ensuring adequate protection of public health and safety, the NRC has established a robust licensing and oversight process, including review of emergency preparedness plans, that contains layers of conservatism, safety margins, and defense-in-depth. Specifically, the NRC's emergency preparedness program incorporates the following measures that address impacts of climate change, including sea-level rise:

- Emergency Action Levels for promptly declaring emergencies due to climate-related events like floods and hurricanes.
- Risk-informed protection strategies that account for impediments from external climate-related hazards and measures to mitigate those risks.
- Evacuation time estimates for informing protection strategies that are updated by the licensee at least once every 10 years to account for changes in population and infrastructure, which may occur as a result of climate change.
- Prior to anticipated climate-related natural hazards that may impact a nuclear power plant site, such as hurricanes, the NRC proactively begins round-the-clock operations to establish direct lines of communication with the power plant and relevant emergency officials.
- Prompt coordination with FEMA following natural disasters that impact nuclear power plant sites and surrounding communities, including those events that could be exacerbated by climate change, to evaluate the status of offsite radiological response capabilities.

In addition, the NRC staff:

- Continues forward-looking research activities with respect to climate change issues. For example, staff is developing a project to assess methods for incorporating regional or local sea-level rise scenarios into storm surge hazard assessments.
- Incorporates historical records and, as appropriate, realistic climate change projections in the assessment of external hazards for initial licensing of new nuclear power plants, to identify a conservative licensing basis that reasonably bounds natural hazards that may occur during the licensed operational lifetime of a nuclear power plant.
- Implements the Process for the Ongoing Assessment of Natural Hazard Information (POANHI) to evaluate changing natural hazard information. The NRC staff periodically

evaluates climate change information through POANHI to determine whether regulatory action is needed to revise the licensing basis of nuclear power plants.
- Inspects nuclear power plant preparedness for adverse weather events.