

1201 F Street NW • Suite 1100 Washington, DC 20004 nei.org

February 28, 2025

Mr. Michael King Special Assistant for ADVANCE Act Implementation Office of the Executive Director for Operations U.S. Nuclear Regulatory Commission Washington, DC 20555-000

Subject: NEI Input on Improvements to Combined License Review Procedure

Project Number: 689

Dear Mr. King,

As you know, the need for carbon-free, reliable energy in the United States and worldwide has skyrocketed. The recently passed bipartisan legislation known as the ADVANCE Act¹ will help nuclear energy play a key role in the Nation's effort to achieve its climate and energy security goals. Provisions of the ADVANCE Act will bolster U.S. international competitiveness, accelerate the domestic deployment of innovative advanced nuclear technologies, promote greater efficiency and timeliness in the U.S. Nuclear Regulatory Commission's (NRC) processes, and modernize the oversight and licensing of the operating fleet of reactors. We appreciate that the NRC is actively taking steps to respond to the requirements of the ADVANCE Act, including having formed internal teams to address provisions of the ADVANCE Act, establishing a web page to communicate with stakeholders², and having public meetings to engage external stakeholders.

To assist the NRC in obtaining feedback from the industry, the Nuclear Energy Institute (NEI)³ has worked with our members to develop recommendations for the NRC's consideration with respect to Section 207 of the ADVANCE Act related to the Combined License Review Procedure. The NRC's regulatory processes will need to be efficient and timely to meet the ADVANCE Act's mandates and to accommodate the significant increase in the NRC's licensing-related workload expected based on the results of NEI's recent The Future of Nuclear Power – 2024 Update Survey (October 2024).⁴ As discussed in the survey, there is

¹ The "Accelerating Deployment Of Versatile, Advanced Nuclear For Clean Energy Act Of 2024", (ADVANCE Act), full text available at https://www.epw.senate.gov/public/_cache/files/5/0/5053d4be-a56e-446d-8341-53ad78c3e82f/82728233c96dc75092f9436066fab212.bills-118s870eah.pdf

² https://www.nrc.gov/about-nrc/governing-laws/advance-act.html

³ The Nuclear Energy Institute (NEI) is responsible for establishing unified policy on behalf of its members relating to matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include entities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect and engineering firms, fuel cycle facilities, nuclear materials licensees, and other organizations involved in the nuclear energy industry.

⁴ https://www.nei.org/resources/reports-briefs/the-future-of-nuclear-power-2024-survey. NEI's updated 2024 "Futures" survey included member companies that operate the nation's 94 operating reactors and one company that is recommissioning a shutdown reactor, for a total of 95 units.

reported interest in pursuing approximately 23 early site permits, 18-19 construction permits and 8 combined licenses over the next 10 years.

Overarching recommendations for achieving expedited review processes are summarized below.

Key Overarching Recommendations

1) Qualifications

Section 207(b) of the ADVANCE Act defines the "qualifications" or criteria for utilizing the expedited procedure. The underlying premise for the expedited procedure is that the NRC has reviewed and approved the design (or a substantially similar design) and site (or a directly adjacent site with substantially similar site characteristics), such that the scope and content of site-specific combined license application requiring NRC review will be greatly reduced. As identified below, the NRC has several other tools for approving designs and sites, in addition to the Design Certification and Site License referenced in the ADVANCE Act. Since these other NRC approvals would achieve a similar reduction in the scope of the site-specific license review, we believe their use would be consistent with the overall purpose of the ADVANCE Act. Indeed, in response to Section 501 of the ADVANCE Act, the NRC has modified its mission statement to include "enabling the safe and secure use and deployment of civilian nuclear energy technologies and radioactive materials through efficient and reliable licensing, oversight, and regulation for the benefit of society and the environment." Moreover, when the NRC amended Part 52 in 2007 to include the various licensing tools listed below, it sought "to enhance the NRC's regulatory effectiveness and efficiency in implementing its licensing and approval processes."⁵ Thus, we recommend that the NRC use these other approval types in implementing Section 207(b) to optimize its ability enable the safe, secure, and efficient licensing and deployment of new reactors.

a) Design Approvals

NEI believes that an application for a new nuclear reactor that references any of the following design approvals for which the Commission has issued an approval should qualify for the expedited procedure, subject to changes in circumstance (i.e., industrial codes updates, changes in laws or regulations, etc.). As such, the NRC should include the following NRC design approvals as qualifying for the expedited procedure:

- i) Standard Design Certifications (10 CFR Part 52, Subpart B)
- ii) Standard Design Approvals (10 CFR Part 52, Subpart E)
- iii) Manufacturing Licenses (10 CFR Part 52, Subpart F)
- iv) Standardized Plants (10 CFR Part 50, Appendix N)
- v) Any Design Substantially Similar to that Approved in a previous Site-Specific License (e.g., Operating License [10 CFR 50.57], Combined License [10 CFR Part 52, Subpart C])

⁵ Licenses, Certifications, and Approvals for Nuclear Power Plants; Final Rule, 72 Fed. Reg. 49,352 (Aug. 28, 2007).

For designs that are considered "substantially similar," NEI believes that the NRC can establish a clear metric for when a design is considered such by utilizing criteria established under 50.59 or otherwise that is technology inclusive and not restrictive but establishes a performance-based determination for how to establish comparability.

b) Site Approvals

The NRC should expand the scope for qualification for the expedited procedure to apply to any applicant that proposes to construct a new nuclear reactor on a site on which a site approval from the NRC has been previously received:

- i) Early Site Permit (10 CFR Part 52, Subpart A)
- ii) Construction Permit (10 CFR 50.35)
- iii) Operating License (10 CFR 50.57)
- iv) Combined License (10 CFR Part 52, Subpart C)

For example, with an ESP being valid for 10 to 20 years from the date of issuance, a COL can reference an ESP by "tiering into", "incorporating by reference from", or "adopting" the analyses and conclusions for resolved safety and environmental issues. Further, there may be sites that previously received NRC approvals at which plant construction was not completed, or where applicants never acted on the original NRC approvals. These sites also should qualify for expedited combined license review procedures to maximize the applicability and benefits of Section 207 of the ADVANCE Act.

For those applications referencing previous EISs, where NRC concludes no new and significant changes have been identified, NRC should consider what rules, or regulatory changes would be required to support the use of an EA rather than an EIS.⁶ This may be especially useful and appropriate for applications that are filed shortly after the NRC issues an ESP based upon a referenced design and within the duration of the issued permit.

c) Applications

The NRC should expand the scope of the expedited procedure to apply to any of the following applications that meet the above conditions for prior NRC design and site approvals:

- i) Construction Permit (10 CFR 50.35)
- ii) Operating License (10 CFR 50.57)

⁶ We note that in SECY-24-0046, the NRC staff has recommended initiating a rulemaking to revise 10 CFR 51.20 and 51.21 to reflect the new language in NEPA Section 106, as added by the Fiscal Responsibility Act of 2023. As noted in SECY-24-0046, this would allow for greater flexibility and would eliminate the need for exemptions to allow the preparation of EAs where an EIS is currently required by NRC regulations. NEI supports the staff's recommended approach, which also aligns with Section 506 of the ADVANCE Act. We also support the staff's proposal to consider, in the interim, exemptions from 10 CFR 51.20(b) where a proposed action listed in 51.20(b) does not have a reasonably foreseeable significant effect on the quality of the human environment.

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iii) Combined License (10 CFR Part 52, Subpart C)

In a related vein, we encourage both applicants and the NRC to consider whether, in appropriate circumstances, the procedures set forth in Appendix N to 10 CFR Part 52 could be used to expedite licensing reviews for new reactors referencing an identical or common design. The regulations in those appendices apply in two situations: (1) where the same applicant seeks combined licenses at different sites utilizing the identical reactor design; and (2) where two or more different applicants each seek combined licenses at different sites utilizing the identical reactor design; and (2) where two or more different applicants each seek combined licenses at different sites utilizing the identical reactor design. (Note that Appendix N to Part 50 includes similar provisions, and section 53.1470 of proposed 10 CFR Part 53 contains procedures that are equivalent to those in Appendix N to Part 52. In its comments on the proposed Part 53 rule, NEI has recommended that 10 CFR 53.1470 be modified to expressly allow for the possibility of sequential or staggered license applications.)

2) Expedited Procedure

The NRC's expedited procedure should establish the required timelines in ADVANCE Act Section 207(c) as maximum durations that the NRC must meet absent a "detailed explanation accounting for the delay" under Section 207(d). To the maximum extent practicable, the NRC should endeavor to achieve more expeditious timelines based on the degree to which the design and site issues have been resolved through the earlier referenced NRC approvals in the site-specific application. In pursuing an expedited procedure, the NRC should seek to implement a Rapid Efficient Licensing (ReLic) Process described by NEI in its July 31, 2024, proposal paper on Rapid High-Volume Deployable Reactors (RHDRA) (ML24213A337). That paper identifies the changes in NRC requirements, guidance, policies and staff positions that are necessary to enable RHDRA deployments in 6 months or less and which can be applied in a graded manner to all advanced reactors. The ReLic process is introduced in Section 2.2 of the main body and discussed in detail in numerous appendices on topical areas that form the ReLic process.

3) Cross-Cutting Improvements

In addition to the specific actions identified above, there are a number of other regulatory improvements that we believe are needed to enable an expedited combined license procedure and which would apply to all NRC new nuclear licensing activities. These regulatory process enhancements are detailed in the references listed below, with some of the more salient examples presented again in this letter:

- a) Enhancements to Part 50 and 52 based on Industry Lessons Learned
 - Delays in issuance of combined licenses due to errors in certified design The industry has put significant effort into developing options to address this issue. There have been several public meetings and several rounds of industry-NRC correspondence aimed at identifying viable solutions to this issue to prevent its recurrence in future combined license proceedings. Accordingly, NEI reiterates its request that the NRC staff elevate this issue to the Commission for consideration as a generic policy issue.

This issue warrants consideration by the Commission for reasons explained by NEI in its letters to NRC dated September 30, 2015 (ML15279A408) and August 4, 2017 (ML17236A489).

Additionally, the 2019 Nuclear Energy Innovation and Modernization Act (NEIMA) directs the NRC to conduct "predictable, efficient, and timely reviews."

- b) Enhancements to the NRC Process based on Application Experience (ML21160A246)
 - i) <u>Clarify the Role of the ACRS</u> The role of the ACRS should be clarified to enable more effective and efficient reviews.⁷ The ACRS was established to independently review and report on those portions of the application which concern safety. As such, the ACRS expertise is most valuable when applied to reviewing specific matters that are novel or may have a significant impact on the determination of reasonable assurance of adequate protection of the public health and safety. The ACRS's independent review of the NRC Staff's work need not duplicate the staff's review scope and depth, nor should the ACRS intervene in the staff's day-to-day performance of their review. The NRC staff should look for ways to implement comparable provisions to Appendix N of Part 52 to minimize ACRS involvement in reviews involving substantially similar designs.
 - ii) Implementation of an escalation process for issues encountered during new reactor application reviews Related recommendations are identified in our April 2018 paper, *Recommendations for Enhancing the Safety Focus of New Reactor Regulatory Reviews.*⁸ An escalation process would enable more timely resolution of key policy and technical issues that arise during the review (e.g., issues that applicants believe they have already adequately addressed, or otherwise are not required by the regulations to address). The lack of such an appeal process has led to numerous staff-applicant impasses that have required excessive time and resource expenditures to resolve. It is recommended that a notice of decision be made to the licensee in writing within 30 days of the date of the notice of escalation
- c) In finalizing the implementation plan of Section 207 of the ADVANCE Act, the NRC should acknowledge the role that the other sections of the Act and the President's recent Executive Orders, and NEI's related inputs to the NRC in public meetings and other correspondences, may play in implementing Section 207 of the ADVANCE Act and the EO's:
 - NEI's presentation during the NRC Public Meeting, dated November 21, 2024, to discuss considerations related to licensing nuclear facilities at brownfield and retired fossil fuel sites and support the NRC's response to Congressional direction in Section 206, "Regulatory issues for nuclear facilities at brownfield sites,"
 - ii) Industry Comments to Inform the NRC's White Paper on "Nth-of-a-Kind Micro-Reactor Licensing and Deployment Considerations," dated December 20, 2024, to support the NRC's

https://nuclearinnovationalliance.org/sites/default/files/2023-03/NIA%20Final%20Report%20on%20ACRS%20-%20March%202023.pdf. ⁸ "Recommendations for Enhancing the Safety Focus of New Reactor Regulatory Reviews" (ML18116A053), April 25, 2018, Recommendations 6.3 and 6.4.

⁷ "Lessons-Learned from the Design Certification Review of the NuScale Power, LLC Small Modular Reactor" (ML21050A431), February 19, 2021, at 3.5. See also Idaho National Laboratory, *Recommendations to Improve the Nuclear Regulatory Commission Reactor Licensing and Approval Process* (INL/RPT-23-72206 Revision 0), April 2023, at section 2.2.2, <u>https://inldigitallibrary.inl.gov/sites/sti/sti/Sort_65730.pdf</u>; *Nuclear Innovation Alliance, Improving the Effectiveness and Efficiency of the Advisory Committee on Reactor Safeguards*, April 2023,

response to Congressional direction in Section 208, "Regulatory requirements for microreactors,"

- iii) NEI Input on Improvements to Licensing and Oversight Programs, dated October 28, 2024, to support the NRC's response to Congressional direction in Section 505, "Nuclear licensing efficiency,"
- iv) NEI Input on Efforts to Modernize and Optimize NRC Environmental Reviews, dated September 6, 2024, to support the NRC's response to Congressional direction in Section 506, "Modernization of nuclear reactor environmental reviews."
- v) NEI Input on Recent Executive Orders, dated February 10, 2025, to support the NRC's response to Presidential Executive Order's on "Declaring a National Energy Emergency" and "Unleashing American Energy."

NEI appreciates the NRC's consideration of the industry's input as part of the agency's efforts to address the ADVANCE Act and encourage your consideration of all stakeholder comments prior to finalizing any reports to the Commission. We are happy to discuss our initial recommendations further and answer any questions you have concerning our input. The industry will look for opportunities to provide additional input as the agency's efforts progress. No written response to this letter is necessary.

Sincerely,

Spencer P. Klein Sr. Project Manager, New Nuclear

C: Laura Dudes, NRC/Acting Director, Office of Nuclear Reactor Regulation (NRR) Greg Bowman, NRC/Deputy Director, NRR, New Reactors Michele Sampson, NRC/Division Director, NRR, Division of New and Renewed Licenses Michelle Hayes, NRC/Chief, NRR, Division of New and Renewed Licenses