



August 31st, 2026

U.S. Nuclear Regulatory Commission
11555 Rockville Pike,
Rockville, Maryland 20852

Subject: Public Comment Period for Modernizing Reactor Licensing, Safety Oversight, and Siting Practices Rulemaking (Docket ID NRC-2025-0975; RIN 3150-AL44)

Dear NRC Staff,

The Nuclear Innovation Alliance (NIA) is an independent, non-profit, non-partisan “think-and-do” tank whose mission is to help create the conditions for success for new nuclear energy so it can play a major role as an energy security and climate solution. Through policy analysis, research, outreach, and education, NIA is catalyzing the next era of nuclear energy. We focus on regulatory modernization, federal and state policy, and enabling private investment to support new reactor commercialization while meeting national environmental and energy security goals.

NIA appreciates the opportunity to comment on the proposed rule, Modernizing Reactor Licensing, Safety Oversight, and Siting Practices, published on July 16, 2026. NIA commends the NRC staff for proposing an ambitious package that covers licensing, oversight, and siting. Many parts of the rule will provide increased flexibility and efficiency. NIA has comments on several topic areas and addresses some of the staff’s specific questions. Additionally, this rulemaking overlaps with several other proposed rules, and NIA encourages NRC to be diligent in ensuring that there are no contradictions across regulations. Finally, while enhancing effectiveness and efficiency, NRC must ensure that guardrails remain to achieve adequate protection of health and the environment.

Summary of key points

- NIA urges NRC to coordinate between this rulemaking and the Modernizing Materials Licensing rulemaking, and to align Part 50 and 70 on the definition of construction.
- For determinate and data-backed thresholds for reactor safety assessments, NIA recommends removal of defined quantitative thresholds from the definitions, establishing a definition that recognizes the differing contexts in which the term may be used, and establishing clear guidance that reflects the different available regulatory pathways.

- NRC should implement a transition period during which NRC continues to review individual model or method changes in parallel with its initial approvals of early verification, validation, and uncertainty quantification (VVUQ), before shifting fully to reliance on approved programs alone. NIA also recommends NRC retain explicit inspection or audit authority over approved VVUQ programs to confirm continued adequacy over time.
- For decommissioning funding assurance for non-large light-water reactors, NIA encourages NRC to update the guidance as applicants and licensees use this new process. NRC should reevaluate the decommissioning framework once several applicants or licensees have applied it.
- NIA strongly endorses the incorporation of the proposed streamlined quality assurance criteria approach and observes that it supports a key aspect of innovation as it enables the use of qualified suppliers without imposing a single standard that may not be in common use among suppliers that licensees want to use. These efficiencies should be extended to serial deployment and available for nth-of-a-kind (NOAK) applicants
- NIA supports the NRC's effort to establish a generic technical basis that helps streamline EPZ determinations, but believes the 300 MWt should only be in the Statement of Considerations and not in the rule itself. If the threshold remains in the rule, NIA recommends additional clarification of how it is used in establishing the adequacy of a site boundary EPZ, and how the conclusion was reached that this power level is an appropriate deterministic threshold below which no evaluation is required.
- For the proposed optional submittal of operational programs, NIA recommends as straightforward and predictable change control process (like 50.59) as possible. While the requirements of 10 CFR 52.157 would not necessarily apply, the use of 10 CFR 50.59 criteria for evaluating changes to the operational programs is also a logical framework for establishing these change control processes.
- NIA recommends further clear guidance with examples of what would fall into the category of unique license renewal issues and uncertainties and how applicants would be required to explain the issues. NIA also recommends the staff complete a more thorough review of a 40-year renewal for both the existing fleet and any new reactor.
- NIA recommends that in addition to reevaluating the reactor oversight program, that the staff also perform an analysis of the aging management programs and whether they were adequately monitored by inspection.
- NIA recommends that DG-4036 be modified to allow alternative approaches to the evaluation of external hazards, if justified by the applicant.
- NIA does not support the proposed societal benefits comparison. Any siting decision should be made based on the risk to the public health and safety, and consistency with the common defense and security.

Expedited Construction of Certain Structures, Systems, and Components and General Licenses

NIA previously commented on the Modernizing Materials Licensing proposed rule, wherein the NRC staff sought input on the definition of construction in Part 70. **We previously recommended that both Part 50 and Part 70 have aligned definitions to create better clarity and efficient licensing. NIA urges coordination between both rulemakings.**

The Expedited Construction of Certain Structures, Systems and Components section of the proposed rule does not mention the *DG-1460 Applications for Nuclear Power Plants Proposed Revision 2 to Regulatory Guide 1.206*. Other sections in the rule point directly to guidance. NIA recommends pointing to this guidance in the preamble because it includes examples that clarify the delineation of preconstruction and construction activities among other useful details that are not described in the rule language.

NIA previously commented on the proposed Part 57 in support of use of general licenses for partial reactor construction. The comment encouraged the use of general licenses for Part 53. The proposed Modernizing Licensing, Oversight, and Siting, includes language adding new 10 CFR 50.10(h) and 53.1130(e) “which issues a general license for beginning construction upon docketing an application for a license that would authorize construction of a nuclear plant, subject to conditions that ensure safety, security, and appropriate environmental review.” NIA supports this risk-informed approach. (See our response to Questions 1 and 3 in the table below.)

Determinate and data-backed thresholds for reactor safety assessments

In 10 CFR 50.2, the NRC proposes to add definitions of Design Basis Event (DBE) and Beyond Design Basis Event (BDBE). NRC states that these new definitions would meet an objective of E.O. 14300 to provide “determinate and data-backed thresholds” to focus safety analyses “on credible, realistic risks.” NIA agrees with this objective but is concerned the proposed definitions may not accomplish this goal and could inadvertently create new barriers to increased deployment of new nuclear reactor technologies.

The challenges arise in part from the varied use of the same terms in different contexts, the differences in approach to frequency, and the need to maintain non-quantitative thresholds:

- Currently, “design basis event” has different meanings within different contexts. As used in the existing 10 CFR 50.49(b)(1), the term is used as an umbrella encompassing normal operation, anticipated operational occurrences (AOOs), design basis accidents, external events, and natural phenomena. In RG-1.233 and NEI 18-04, DBE has a defined frequency distinct from AOOs, evaluated with realistic assumptions and then narrowed to design basis accidents (DBAs) using traditionally conservative analyses. For the proposed Part 57 (and for non-power production or utilization facilities (NPUFs) under Part 50), DBEs are similar to DBEs under NEI 18-04 but without the use of a strict

quantitative threshold, and typically used to substantiate the adequate conservatism of a maximum hypothetical accident (MHA). Given these different implementations of similar concepts, a single definition is very unlikely to serve its intended purpose of making such a threshold determinate and data-backed. While it would ultimately be preferable to adopt a broadly applicable definition, NIA recognizes that is a challenging undertaking that extends beyond this rulemaking.

- DBEs (and BDBEs) are defined in RG-1.233 and NEI 18-04 (and consistently implemented in Part 53) based on frequencies applied to event *sequences*, not initiating events. The proposed definitions in this rule change are applied to initiating events, presuming that everything downstream of the initiating event is treated deterministically – which is not risk-informed.
- Critically, many new designs with minimal operating history need to maintain the capability to perform their safety analysis using a combination of probabilistic, deterministic, and qualitative risk evaluations.

For all the reasons discussed above, forcing a single definition of DBE (and BDBE) is ill-advised and would not accomplish the stated goal of focusing on credible, realistic risks because it limits applicants' flexibility in defining those risks. Ultimately, it would be more effective to use different terms, but not at this time. EO 14300 directed the NRC to “adopt revised and, where feasible, determinate and data-backed thresholds to ensure that reactor safety assessments focus on credible, realistic risks.” EO 14300 expressly directs the NRC to establish determinate and data-backed thresholds “where feasible,” and given the complexity of this topic, a single, quantitative set of thresholds is not feasible.

To accomplish the EO's goal of adopting revised thresholds to ensure that reactor safety assessments focus on credible, realistic risks, **NIA recommends removal of defined quantitative thresholds from the definitions, establishing a definition that recognizes the differing contexts in which the term may be used, and establishing clear guidance that reflects the different pathways discussed above.**

Specifically, NIA recommends replacing:

Design basis event means an initiating event with a frequency greater than or equal to a determinate, data-backed threshold that provides an appropriate level of safety and is deemed acceptable by the NRC.

and

Beyond design basis event means an initiating event with a frequency below the threshold for a design basis event, but greater than or equal to a threshold for credibility that provides an appropriate level of safety and is deemed acceptable by the NRC, or an event (other than a design basis event) that is specifically required by regulation to be considered in the licensing basis.

With the following, respectively:

Design basis event means an event sequence with a frequency established for the applicable regulatory framework that provides an appropriate level of safety and is deemed acceptable by the NRC.

and

Beyond design basis event means an event sequence less likely than a design basis event, but deemed credible based on a threshold that provides an appropriate level of safety and is deemed acceptable by the NRC, or an event (other than a design basis event) that is specifically required by regulation to be considered in the licensing basis.

DG-1454 should establish clear guidance reflecting the issues discussed above – and could include determinate thresholds where appropriate to the applicable regulatory framework.

Proposed Risk-informed changes under 10 CFR 50.59 and flexibility for methods of evaluation

NIA has been a proponent of risk-informed decision making throughout NRC regulation and directionally supports allowing licensees to adopt improved analytical methods more efficiently. NIA observes, however, that the introduction of structured verification, validation, and uncertainty quantification (VVUQ) programs, while very promising, could benefit from a transition period to ensure implementation both achieves the desired efficiency improvements and ensures adequate rigor and regulatory oversight.

As proposed by NRC, a licensee-or applicant-proposed method change would only bypass prior NRC approval if the licensee's VVUQ program has itself been approved by NRC for the method in question, and the new method meets that program's credibility criteria. NIA supports this process in principle, but the rigor of that safeguard depends entirely on how specific and enforceable NRC makes the approval criteria for VVUQ programs under proposed §50.221, and on how NRC maintains oversight of those programs once approved.

NIA recommends that NRC implement a transition period during which NRC continues to review individual model or method changes in parallel with its initial approvals of VVUQ programs, before shifting fully to reliance on approved programs alone. NIA also recommends NRC retain explicit inspection or audit authority over approved VVUQ programs to confirm continued adequacy over time.

Minimum decommissioning funding assurance for non-large light-water reactors

NIA is pleased with NRC's proposed shift towards a more technology-inclusive decommissioning framework that would allow a more appropriate scale of required funds. NIA

encourages NRC to update the guidance as applicants and licensees use this new process. Scaling decommissioning funds to better match expected decommissioning costs has not been done before and will likely result in unanticipated bottlenecks. **NRC should reevaluate the decommissioning framework once several applicants or licensees have applied it.**

Incorporation of Streamlined Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants

The proposed new Appendix T to Part 50 would give applicants the option to establish a quality assurance program based on ASME NQA-1 or “another appropriate industry standard.” **NIA strongly endorses this approach because it encourages a key aspect of innovation by enabling the use of qualified suppliers without imposing a single standard that may not be in common use among suppliers that licensees want to use.** Establishing criteria that can be demonstrated through selection and implementation of multiple standards for quality assurance programs is an important aspect of “meeting suppliers where they are” while ensuring the application of adequate controls on goods, services, and processes.

However, this proposed essential change incorporates a restriction that is likely to significantly limit its use by new reactor applicants. As with the general license for construction under proposed §50.10(h)/§53.1130(e), the streamlined quality assurance alternative in proposed Appendix T is structured to benefit only nth-of-a-kind (NOAK) deployments referencing a design that has already been constructed (and, in the case of the general license, placed into operation). As proposed, neither mechanism would be available to a first-of-a-kind (FOAK) applicant.

For Appendix T, eligibility would require that the application be for a NOAK plant that "identifies the first-of-a-kind reference plant" and shows no departures affecting structures, systems, and components (SSCs) classification, design, or method of manufacture, construction, or operation. This provision appears to presuppose that a FOAK plant has already been built under Part 50 Appendix B before any relief becomes available to a later applicant.

For fleet deployment, where multiple applications are envisioned for a standardized design, this approach may not be viable because the applicant would be required to stand up two separate QA programs – one for the FOAK deployment and another for all subsequent reactors. Furthermore, the supplier base will have to be qualified under an Appendix B program (meaning in many cases having to establish such a program from scratch because of its limited use outside the nuclear industry), only then to pivot to a different program after the FOAK deployment. This is a highly unlikely scenario; rather, if the time and resources are committed to stand up an Appendix B program, it is much more likely that program would be used for subsequent deployments as well, thereby negating the entire concept of Appendix T.

This eligibility condition excludes the very applicants Appendix T could most benefit: FOAK designs that can benefit from supply chain flexibility. Nor is the selection of an appropriate

quality standard particularly relevant to the technical aspects of SSC safety. Quality programs are focused on processes (e.g., management, design control, training, inspection and testing processes), not the selection of technical design criteria or quality of the design itself. Presuming the exercising of Appendix B processes somehow is necessary to be eligible for use of Appendix T misapprehends the role of quality in the design and execution process. The expectation that a given applicant will switch programs in mid-execution is much more likely to cause disruption to quality than improvement.

NIA supports extending these efficiencies to serial deployment and strongly encourages their availability for NOAK applicants.

Alternative risk-informed and performance-based acceptance criteria for 10 CFR Parts 50 and 52

NIA understands the benefit of alternative risk-informed and performance-based acceptance criteria but has some concerns about implementation. Many other sections of this rulemaking create specific risk-informed and performance-based solutions. NIA would like to better understand what types of regulatory changes are needed that were not already addressed in rulemaking. If this approach is implemented, NIA recommends NRC take a step back and evaluate the implications of this provision across the entire set of rulemakings.

Revision of the Emergency Preparedness Regulations for Nuclear Power Reactors

There have been emergency preparedness (EP) efforts since 2006 with a final rule published in 2023, *Emergency preparedness for small modular reactors, non-light-water reactors, and non-power production or utilization facilities*. The 2023 rule did not include large LWRs. Part 53, which was finalized in March 2026, was another opportunity for emergency preparedness performance-based regulations.

The proposed change would remove the provision in the current rule limiting § 50.160 on emergency preparedness to only SMRs, non-LWRs, and NPUFs. It also provides a flexible approach for power reactors that choose to comply with the standards in § 50.47(b). NRC states that basic emergency planning functions are similar across NRC licensed facilities and that there is no technology-specific language used in the planning standards that limit application to a particular technology. NRC notes that generic guidelines could be developed and endorsed by NRC to support rapid deployment of similar reactor types, but they do not expand upon what would be needed to do so.

The proposed rule would also “(1) establish the bounds of an emergency planning zone (EPZ) to generally be about 2 to 10 miles (3.2 km to 16 km) in radius; (2) provide certainty for a site-boundary EPZ for facilities with an authorized power level less than 300 MWt; and (3) allow for case-by-case determinations for all facilities.” NIA has concerns about the characterization of a

power level less than 300 MWt. While the NRC’s discussion indicates this power level denotes a threshold below which sufficient evidence exists to support a site boundary EPZ, citing 300 MWt could leave an impression that it is an important metric in and of itself (whereas power level is not a metric specifically related to safety characteristics of the facility and is not always reflective of the offsite consequence). **NIA supports the NRC’s effort to establish a generic technical basis that helps streamline EPZ determinations, but believes the 300 MWt should only be in the Statement of Considerations and not in the rule itself.** This would preserve the value of technical work without creating a new regulatory requirement. The analyses NRC has completed instead could be used to strengthen the rulemaking record and document the technical judgement underlying the final EP framework. **If the threshold remains in the rule, NIA recommends additional clarification of how it is used in establishing the adequacy of a site boundary EPZ, and how the conclusion was reached that this power level is an appropriate deterministic threshold below which no evaluation is required.**

Optional Submittal of Operational Programs

NIA agrees with NRC’s proposed conforming changes to 10 CFR parts 52 and 53 in this rulemaking to allow microreactor and other developers the option to submit essentially complete programmatic controls, operational programs, or operational requirements with an ML application under 10 CFR part 52 or 53. The NRC would establish the appropriate change control process for the optionally submitted operational program information as part of issuing the ML. This proposed change would enhance regulatory certainty and expedite review timelines for CP/OL and COL applicants wishing to reference operational programs approved with an ML but would still allow flexibility for these applicants to submit their own programs. The proposed rule package acknowledges that certain of these operational programs (e.g., quality assurance, security, and emergency plans) are already subject to specific change mechanisms. Establishing change control provisions for other operational programs in the manufacturing license (ML), where needed, is a logical approach. However, given the level of detail typical in most operational program descriptions in an application, the programmatic nature of these operational programs, and the low likelihood of most operational programs having a significant impact on the safety basis, **NIA recommends optional submittals have as straightforward and predictable change control process as possible. While the requirements of 10 CFR 52.157 would not necessarily apply (i.e., to non-FSAR information submitted under 10 CFR 52.158), the use of 10 CFR 50.59 criteria for evaluating changes to the operational programs is also a logical framework for establishing these change control processes.**

License Renewal

NRC is proposing several changes to license renewal. NIA is supportive of the change from “supersession” to “tack-on” licenses to ensure that the length of the license is appropriate between renewals. However, NIA has concerns about the increase to 40-year renewals for new reactors. NRC states that there is a large amount of operating experience to inform their renewal

reviews and acknowledges this is only for the current fleet. The proposed rule would allow newer designs to request a renewal license early in plant life, but the NRC review guidance might not fully apply, requiring applicants to explain how they will address any unique issues or uncertainties. NRC has already published guidance in LR-ISG-2026-01, which is a useful start for guidance on the changes. **NIA recommends further clear guidance with examples of what would fall into the category of unique issues and uncertainties and how applicants would be required to explain the issues.**

NIA also recommends the staff complete a more thorough review of a 40-year renewal for both the existing fleet and any new reactor. The LR-ISG-2026-01 guidance says, “If an applicant’s approach aligns with NRC SLR guidance (including AMP enhancements), the application no longer needs to present it in detail. Nor does the staff need to evaluate the NRC-approved aging management approach in its licensing review.” The guidance further notes that “NRC regulatory oversight activities during AMP [aging management program] implementation will confirm that licensees are managing aging in accordance with approved programs.” NIA is concerned that the oversight activities will not be immediately adequate as the Commission transitions to reduced oversight by nearly 40%.¹ Additionally, certain aging management programs would not be adequately evaluated through inspections. Most inspections view a sample of corrective actions or incidents over a period. Some conditions such as recurring internal corrosion will not be apparent from a random sampling of incidents. “Recurring internal corrosion” is just one example of an aging management program that the technical reviewer should be fully evaluating. In the public meeting on August 6th, NRC staff noted that the reactor oversight program would be reevaluated to ensure the program areas still provide adequate coverage. **NIA recommends that in addition to reevaluating the reactor oversight program, that the staff also perform an analysis of the aging management programs and whether they were adequately monitored by inspection.**

Additionally, current regulation 10 CFR 54.17(c) states that a licensee cannot apply for renewal more than 20 years before its current license expires. NRC is proposing to remove this prohibition and instead to allow licensees to apply for a renewed license anytime within their current operating period. If implemented, the NRC should require licensees to submit a notice of intent for when they plan to apply for renewal. This would help improve NRC efficiency and allocate the necessary resources for a review. The NRC public website lists the future expected license renewals with anticipated dates. Removing the 20-year requirement without any sort of notification of intent could create unpredictability and therefore insufficient NRC resources to complete reviews.

¹ <https://www.nrc.gov/docs/ML2609/ML26098A031.pdf>

Enhancing Flexibility of Reactor Site Criteria

The proposed guidance document draft regulatory guide DG-4036 *Graded Approach To Site Characterization For New Reactor Applications* retains the language from the proposed Part 57 guidance NUREG-2271. NIA reiterates our comments on the NUREG-2271 with respect to reactor site criteria. With respect to DG-4036, nuclear siting category (NSC)-1 through NSC-5 dose thresholds and seismic design category (SDC) mappings appear only in the DG, not in binding rule text. Therefore, it appears that NRC's intention is not to require a strict mapping between NSC and SDC. However, the guidance mapping indicates that the NSC and SDC are locked together as a one-to-one relationship. NSC is a screening tool and should not automatically become the seismic design requirement without allowing an applicant to show how the risk of the facility informs the SDC. For example, risk-informed reactor designs and safety features could justify a lower SDC without a detailed seismic study. Seismic studies to justify the SDC have no regulatory basis for most low-risk facilities. A risk-informed, performance-based pathway should be available for low-consequence reactors. Therefore, **NIA recommends that DG-4036 be modified to allow alternative approaches to the evaluation of external hazards, if justified by the applicant.**

The proposed rule replaces the existing population-distance restriction to instead allow a site that does not meet the prescribed population center to be found acceptable through a societal risk and benefits comparison. A comparison between risks and benefits is not a safety finding. The Atomic Energy Act directs siting considerations to focus on avoiding undue risk to the public health and safety, and consistency with the common defense and security.

Further, proposed § 100.21(h) retains the preference for sites away from very densely populated centers and for areas of low population density. The requirements for accident consequences, emergency planning, evacuation feasibility, and other safety considerations should be addressed by NRC through other emergency planning requirements and thus not depend on a preference of location. NIA questions the appropriateness and the need for the societal benefit test. Adequate protection should ensure that regardless of location, the public is protected. Interestingly, many existing reactor sites now have population densities nearby that would make them ineligible to site a new reactor. Furthermore, sites with existing transmission or retiring coal facilities may not meet this requirement even though the site may already satisfy applicable safety standards. The proposed rule does not establish how much benefit would be sufficient, how benefits should be compared with societal risk, or how economic, environmental, and safety considerations should be weighed when comparing sites at varying distances from population centers. **NIA does not support the proposed societal benefits comparison. Any siting decision should be made based on the risk to the public health and safety, and consistency with the common defense and security.**

NRC questions:

The table below provides NIA's responses to some of the NRC's specific requests for comment. NIA focused on addressing NRC questions in areas that could benefit the most from NIA expertise, so not every question is addressed. The questions are condensed for readability while preserving their substance.

No.	NRC question (condensed)	NIA response
1	Should the NRC consider granting one or more general licenses to begin construction activities as part of an existing or future standard design certification rule? If the NRC were to issue such a general license, should the NRC require that the general license holder reference another plant that has completed construction (resulting in the general license excluding first of a kind applicants)? If not, what conditions should the NRC include in the general license to ensure that the construction activities authorized by the general license can be completed safely? Please provide a basis for your response	NIA supports the concept of a general license for construction activities tied to an approved or future standard design certification, consistent with our prior support for general licenses for partial reactor construction under Part 53. However, NIA recommends the general license not be conditioned on referencing a plant that has already completed construction. That condition would inherently exclude first-of-a-kind applicants from a mechanism that could be most useful to them. If NRC retains a completed-reference-plant condition, there are appropriate alternatives to requiring reference to a previously constructed design. These alternatives could include defined hold points for NRC inspection during construction, a bounded scope of authorized construction activities, and/or a requirement that the applicant demonstrate the activities are reasonably severable from later design changes.
3	Does the proposed regulatory change achieve its intended objective of allowing applicants to	Generally, conditions that enable applicants to make commitments of resources at their own risk are an appropriate way to balance regulatory and cost/schedule risk, and the proposed change is a meaningful step toward that objective. Its value depends heavily on the conditions (if any) NRC

	make business decisions on the appropriate balance between expedited construction and the regulatory risk that changes will be necessary to address safety issues? Are there other approaches that can both provide the needed flexibility while better allowing applicants to structure the degree of regulatory risk they take on through interactions with the NRC staff (e.g., hold-points during construction for NRC inspection)?	ultimately attaches to the general license under Question 1. A general license paired with defined hold points for NRC inspection during construction, rather than a complete exclusion of eligibility to first-of-a-kind applicants, would better let applicants structure their own risk tolerance while preserving NRC's ability to weigh in before irreversible safety-significant work (recognizing that there is no actual safety impact to execution of work prior to startup). NIA recommends NRC pair the general license with clear, published criteria for when a hold point is triggered, so applicants can plan schedules with confidence rather than negotiating case by case.
5	Are there any additional requirements in 10 CFR 50.34 that the NRC should consider changing to be more technology-inclusive or provide additional clarity? Should conforming changes to 10 CFR 50.67 be made to be consistent with 10 CFR 50.34 wording updates? Please provide a basis for your response.	NIA found several areas that could be improved or clarified. First, NIA is supportive of tying preliminary safety analysis report (PSAR) details to the findings needed for a construction permit. Additionally, it would be helpful to have guidance include a clear matrix distinguishing information needed before construction authorization from information needed only before the operating-license stage. NRC should continue to remove LWR-specific assumptions (coolant-system configuration, conventional containment, loss-of-coolant accident (LOCA) sequences) and instead use a technology-inclusive, function-based requirement where possible. For example, the requirement to address the General Design Criteria of App. A to Part 50 in 50.34(a)(3)(i); the direction of analyzing emergency core cooling in 50.34(a)(4); and the water-cooled-specific summary of accident progression in footnote 1 of 50.67 could be made more technology inclusive. NIA notes one technical correction: the dates in 50.34(a)(4) and (5) are overtaken by events and can be deleted.

7	The proposed revisions to the definitions in each of the appendices in 10 CFR part 52 identify the specific sections in the generic DCD that contain the various categories of Tier 1 information. The proposed revisions to section VIII in each of the appendices in 10 CFR part 52 describe the change control process associated with each category of Tier 1 information. Will there be adequate regulatory clarity regarding the category of Tier 1 information in the generic DCD such that the change control process can be readily identified? Please provide a basis for your response	NIA recommends NRC add to guidance that future DCDs include explicit identification of Tier 1 items, their associated category, and applicable change process. Definitions and section references alone may not eliminate ambiguity.
9	Paragraph (b) of 10 CFR 53.1535 differs from provisions in 10 CFR part 52 by adopting requirements that explicitly support a change process described in RG 1.237. Should the provisions in 10 CFR part 52 be revised to also explicitly support this change process? Please provide a basis for your response	NIA supports an explicit Part 52 pathway for a licensee to proceed with installation and testing of a change before receiving NRC approval at the licensee's own financial risk, consistent with the Part 53 approach

10	The proposed revisions to 10 CFR 52.98 and 53.1550 allow holders of an operating license (OL) or combined license (COL) that reference a manufacturing license (ML) to make changes to the final safety analysis report (FSAR) without obtaining a license amendment if the changes are identical to changes approved by the Commission by amendment to the ML for the manufactured reactor and upon determining that implementation of the changes will be consistent with the basis for the Commission's approval of the amendment to the ML and not involve any additional changes that would require an amendment to its OL or COL. Should this flexibility be provided to COLs that reference a design certification? Please provide a basis for your response.	NIA is supportive of allowing COL holders to adopt an NRC-approved design-certification change without a duplicative amendment, consistent with the ML-related provisions.
11	Should the proposed rule changes to 10 CFR 50.59 described in section XII of this document also be applied to the 10 CFR 50.59-like	An equivalent process to similarly risk-inform the 50.59-like process would be logical. The opportunity to use risk insights in decision-making and significance screening processes should be made available to both processes.

	process in the appendices of 10 CFR part 52? Please provide a basis for your response.	
12	What are the potential benefits and challenges of a change to the conduct of exercises to applicants and licensees and offsite response organizations? Please provide a basis for your response.	As noted in the proposed rule, “Licensees conduct drills and exercises to develop and maintain key skills such as timely and accurate classification and notification of events; assessment of radiological releases and development of protective actions; planning, analysis, and implementation of mitigative actions; worker protection during emergency conditions; and coordination with offsite response organizations to include dissemination of information to the public through media channels.” Changes made to the conduct of exercises should be made with careful analysis of licensee performance. Both exercises and the use of audits help identify both areas of success and room for improvement, and are beneficial for creating a performance-based program. NIA recommends NRC shift to a performance-based framework (using, for example, the emergency planning indications in the reactor oversight process (ROP)).
13	What specific criteria related to maintaining onsite emergency response organization (ERO) proficiency should be considered in evaluating whether a biennial, triennial, or quadrennial exercise is appropriate? Please provide a basis for your response.	NIA believes staff turnover to be an important factor to evaluate in considering longer lengths between exercises. Factors such as projected continuity of personnel, how long key personnel have maintained ERO proficiency in the assigned roles, and performance in training or drills should be considered in establishing what exercise frequency is appropriate.
14	How would a potential change impact the conduct of exercises of the offsite plans required under paragraph IV.F.2.c of appendix E to	A change to frequency for exercises that involve offsite stakeholders will have direct impact on those stakeholders. A reduction in frequency would reduce resource commitments on the part of offsite stakeholders but could also make those stakeholders feel less involved and integrated. Changes could limit understanding of these stakeholders’ performance and contribution to the

	10 CFR part 50? Please provide a basis for your response.	licensee's emergency preparedness posture. Any change should be made in conjunction with the offsite stakeholders' consultation.
15	If there was a change to the exercise frequency, should the exercise cycle be changed or otherwise be revised to ensure there is adequate opportunity for the ERO to demonstrate adequate performance under paragraph IV.F.2.j of appendix E to 10 CFR part 50? Please provide a basis for your response.	The current eight-year cycle under IV.F.2.j requires the ERO to demonstrate adequate performance across areas such as management and coordination of emergency response, accident assessment, event classification, notification of offsite authorities, assessment of the onsite and offsite impact of radiological releases, protective action recommendation development, protective action decision making, plant system repair and mitigative action implementation. In an effort to become more risk-informed and technology-inclusive, NRC could create guidance specifying thresholds that would allow for a site to have a different exercise frequency.
16	Are there additional design factors or analyses that should be considered to provide certainty on EPZ determinations? Please address within the comment the technical basis for consideration and how they relate to EPZ determinations and, specifically, the criteria of 10 CFR 50.33(g)(2).	NIA believes that EPZ determinations should consider design and consequence characteristics that are directly tied to whether a prompt protective measure would be needed. NRC should determine whether unique or novel design attributes such as unevaluated fuel forms or other significant plant configurations could challenge the staff's conclusions that 300-MWt is a meaningful threshold below which no license applicant analysis is needed to support a site boundary EPZ. While thermal power is relevant, it should not replace the comprehensive assessment under 50.33(g)(2). Thus, NIA recommends moving the 300-MWt threshold to the Statement of Consideration. If the threshold remains in the rule, NIA recommends additional clarification of how the 300-MWt used in establishing the adequacy of a site boundary EPZ, and how the conclusion was reached that this power level is an appropriate deterministic threshold below which no evaluation is required.
17	Should design features, other than power level, or site attributes be	As discussed above, power level may not be a meaningful surrogate for plant risk. NIA recommends that NRC consider source term, novel fuel forms or plant configurations,

	considered for determining when additional analysis by the applicant is necessary to justify site-boundary EPZ for facilities less than 300 MWt? Please provide the basis for your response.	particularly involving potential release mechanisms, or unusual operational evolutions that might result in plant behavior outside the bounds of the NRC's analysis of the 300-MWt threshold.
18	Question 18: Should the NRC consider making similar changes to the requirements in 10 CFR 52.47, 52.63, 53.1239, and 53.1263 for design certifications? Please provide a basis for your response.	Yes, equivalent measures should be established for design certifications. Reasonably consistent approaches should be available to an applicant making use of a manufacturing license or a design certification.
19	Question 19: If the NRC were to add a provision for the optional submittal of standardized operational program information in a design certification application, please describe how change control should be accounted for as a part of certifying the design.	The proposed rule package acknowledges that certain of these operational programs (e.g., quality assurance, security, and emergency plans) are already subject to specific change mechanisms. Establishing change control provisions for other operational programs in the ML, where needed, is a logical approach. However, given the level of detail typical in most operational program descriptions in an application, the programmatic nature of these operational programs, and the low likelihood of most operational programs having a significant impact on the safety basis, NIA recommends as straightforward and predictable change control process as possible. While the requirements of 10 CFR 52.157 would not necessarily apply (i.e., to non-FSAR information submitted under 10 CFR 52.158), the use of 10 CFR 50.59 criteria for evaluating changes to the operational programs is also a logical framework for establishing these change control processes.
20	With the proposed change to remove the requirement for renewal, all changes to update the	NIA supports eliminating ESP expiration. The point of an ESP is to allow a site to be qualified until a project is ready. NRC should allow limited-scope or administrative updates with a simple issue-by-issue schedule showing what was refreshed and when the ESP's new finality period

	early site permit (ESP) must be made by amendment. What other options could the staff consider to increase the useability of an ESP? Could the provisions in the, “Commission Policy Statement on Deferred Plants,” (52 FR 38077; October 14, 1987) be applied to ESPs? Please provide a basis for your response.	begins. NIA does not support the staff’s suggestion of importing the deferred-plants policy because it appears that doing so effectively recreates renewal through another mechanism. At a minimum NRC should clarify its intent. NRC should consider low-burden periodic notice of material changes in site use or surrounding hazards, while leaving technical updates voluntary until the ESP is to be referenced in a license or permit application.
21	For a COL application that references an ESP, the changes proposed in 10 CFR 52.39 and 53.1188 would limit finality on safety and environmental issues to 20 years following ESP issuance or approval of an update amendment. Because the proposed rule would also retain the requirement for applicants to review for new and significant information when referencing an ESP, the NRC requests input on whether limiting finality to 20 years is necessary to ensure that all relevant environmental information is considered in licensing decisions.	NIA does not think the proposed limitation of finality to 20 years is necessary. NIA finds the retention of the obligation to evaluate for “new and significant” information irrespective of ESP age makes virtually any finality limitation academic.

22	The manufacturing license term extension aligns with the recently promulgated July 2, 2025, direct final rule, “Revising the Duration of Design Certifications,” where the NRC replaced the 15-year duration for design certifications with a 40-year duration period. The Commission is interested in determining if a manufacturing license or design certification term limit is necessary. Should the NRC eliminate time limits for manufacturing licenses, design certifications, or both? Please provide a basis for your response.	NIA has no objection to eliminating the time limit for manufacturing licenses and design certifications. The opportunity to revisit a design after significant operating experience is collected is already afforded via backfit provisions if needed, and NIA is not aware of another compelling reason for design approvals to expire.
23	Should the NRC consolidate its safety guidance into one collection that is time-independent (i.e., the same guidance applying to all periods of extended operation), instead of having separate guidance for initial renewal, subsequent renewal, and the upcoming third renewal term? Is there a different approach that should be considered?	NIA recommends that NRC does not consolidate their guidance into one document. The current guidance documents NUREG-1801 and NUREG-2192, Generic Aging Lessons Learned for License Renewal and Subsequent Renewal, respectively, evaluate different aging effects/mechanisms. Aging management programs differ in the standard review plans NUREG-1800 and NUREG-2191 as well. NIA finds it important to recognize that some aging conditions will not happen in the first 40 years and that there may be new conditions that happen beyond subsequent license renewal. It is beneficial for both the applicant and the NRC staff to have specific aging management guidance for each time frame so that reviews are not duplicative or unnecessary. However, NIA recommends if the guidance is consolidated that there are clear delineations of the timeframes that apply to each aging effect/mechanism.

	Please provide a basis for your response.	
25	Should the NRC retain an option for licensees seeking shorter renewals (those that would not exceed 40 years when combined with the number of years remaining on an existing license) to apply for a “supersession” license?	Yes, the NRC should retain the option. An extended license will require further analysis of aging effects. Requiring every licensee to meet the analysis required for longer terms will place an unnecessary burden on the licensee. If they can meet the minimum shorter renewal analysis and it is more cost effective, then that should be allowed.
39	Appendix T of 10 CFR is intended to address nuclear supply chain constraints by providing a graded approach for additional QA flexibilities and aligning with international standards. The proposed rule limits the applicability of appendix T to nth-of-a-kind (NOAK) plants referencing a first-of-a-kind (FOAK) plant constructed and operated under appendix B. How can the NRC expand the applicability of appendix T to FOAK plants and existing licensees, including any guardrails or restrictions that may be desirable (e.g., vendor inspections for FOAK	NIA strongly supports that the eligibility is not limited to NOAKs. Quality programs are focused on processes (e.g., management, design control, training, inspection and testing processes), not the selection of technical design criteria; accordingly, the adequacy of a quality program is not particularly sensitive to the lack of a FOAK deployment. Further, a requirement to establish a “traditional” (e.g., NQA-1-based) program for FOAK would significantly reduce the likelihood of a later transition to a different program. NIA also would welcome endorsement of alternative standards but expects it would be most beneficial to do after taking into account lessons learned following submittal of one or more applicant programs implementing such standards.

	and new suppliers for NOAK)? Should the NRC consider alternative approaches to appendix T such as endorsement of ISO 19443 or changes to appendix B? Please provide the basis for your recommendations, including any unintended consequences.	
40	The change process for the Quality Management System (QMS) in proposed 10 CFR 50.54(a)(5) requires changes to the QMS be submitted to the NRC for NRC approval prior to implementation. Should the change process have a graded approach or mirror 10 CFR 50.54(a)(4) in which only changes that reduce the commitments be submitted to the NRC for prior approval? Please explain if there is a preferred method.	NIA feels strongly that an acceptable QA program should be subject to the same change mechanisms irrespective of the standards used to develop that program. Since the current change process for a QA program allows a licensee to make changes without prior NRC approval if no commitments are reduced, the same process should be allowed for the new alternative QA program. Requiring a more rigorous change process for an NRC-approved program – when the alternative-standards approach has been put forward expressly to increase efficiency and reduce burden – seems like a step backward.
41	The NRC is seeking views on increasing the flexibility provided by the proposed rule. The rule currently does not include the allowance for a licensee or applicant to adopt a previously	Based on Section XX, “Discussion—Alternative Risk-Informed and Performance-Based Acceptance Criteria for 10 CFR Parts 50 and 52,” looking forward, the NRC would maintain a record of NRC-approved alternative acceptance criteria, along with references to the associated bases for approval to enable streamlined use of approved alternative acceptance criteria by potential applicants and serve as a means of regulatory recordkeeping for the agency. The proposed changes would include revising 10 CFR part 50 Appendix A to clarify that exemptions

	approved alternative without submitting an application to the NRC, provided that the basis for the staff's approval is demonstrated and documented to be applicable to the adoptee's plant or facility. Would adding such flexibility increase or accelerate the use of the proposed rule? What are some viable approaches to resolve any conflicts of such flexibility with the requirements in 10 CFR 50.59?	are not required for deviations from the general design criteria (GDCs). Instead, such deviations could be identified and justified directly within the licensing application. While this clarification would not change the NRC's review of the justification itself, it would reduce regulatory burden for applicants proposing innovative designs in which certain GDCs are tailored to be better risk-informed. However, a mechanism besides a new or amended application is not identified. NIA supports adding a documented adoption pathway, which could be modeled on mechanisms the agency already uses successfully for generic technical bases, such as ASME Code Case incorporation under §50.55a or referencing an NRC-approved topical report. Under such a model, the original approval would establish a generic technical basis with defined bounding parameters, and an adopting licensee could demonstrate that its plant-specific characteristics fall within those bounds rather than re-litigating the underlying technical analysis. This would meaningfully reduce duplicative review burden on both applicants and NRC staff without requiring the agency to re-approve the same technical basis for every subsequent adopter.
42	The proposed rule introduces a new graded approach to siting that provides entry criteria for the less restrictive requirements in subpart A to 10 CFR part 100 (i.e., demonstrating an unmitigated consequence of less than 25 rem (0.25 Sv) TEDE at the site exclusion area boundary) as an alternative to the prescriptive siting requirements in subpart B. The associated draft guidance provides detailed information on how to	While the guidance is generally helpful, NIA recommends some changes. The proposed guidance document DG-4036 retains the language from the proposed Part 57 guidance NUREG-2271. NIA reiterates our comments on the NUREG-2271 with respect to reactor site criteria. With respect to DG-4036, NSC-1 through NSC-5 dose thresholds and seismic design category (SDC) mappings appear only in the DG, not in binding rule text. Therefore, it appears that NRC's intention is not to require a strict mapping between NSC and SDC. However, the guidance indicates that the NSC and SDC are locked together as a one-to-one relationship. NSC is a screening tool and should not automatically become the seismic design requirement without allowing an applicant to show how the risk of the facility informs the SDC. For example, risk-informed reactor designs and safety features could justify a lower SDC without a detailed seismic study. Seismic studies to justify the SDC have no regulatory basis for most low-risk facilities. Therefore, NIA recommends that DG-4036 be modified to allow alternative approaches to the evaluation of external hazards, if justified by the applicant.

evaluate this entry criteria. Given the significance of this new graded approach to siting, are there implications in terms of implementation of this new approach that should be further explored in guidance or addressed at the final rule stage?	
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Conclusion

NIA has been providing comments throughout the Executive Order 14300 rulemakings. Overall, NRC can and must ensure that all the rules create a pathway that is effective, efficient, predictable and durable, while still protecting workers, public health and safety, and the environment. For this particular rule, it is especially important that the staff ensure coordination across the agency and address any conflicts before it is finalized.

NIA thanks NRC staff, management, and the Commission for their continued efforts to develop new regulatory frameworks that will enable effective and efficient licensing. If you have any questions, please contact Miranda McGuire at mmcguire@nuclearinnovationalliance.org.

Sincerely,
 Judi Greenwald
 President & CEO
 Nuclear Innovation Alliance