



## **NUCLEAR REGULATORY COMMISSION**

**10 CFR Parts 50 and 53**

**[NRC-2025-1503]**

**RIN 3150-AL60**

### **NRC Reviews of Reactor Designs Previously Authorized by U.S. Department of Energy or Department of War**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Proposed rule; public meeting; and request for comment.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC) is proposing to revise its regulations to facilitate direct leveraging of prior U.S. Department of Energy or Department of War authorizations of demonstration reactors into the NRC's licensing reviews of commercial reactor facility applications that reference those designs. This rulemaking would improve NRC licensing review efficiency, where applicable, by explicitly establishing by regulation an additional means for reactor applicants to demonstrate the safety functions of their reactor designs, and thus, would contribute to the safe and secure use and deployment of civilian nuclear energy technologies.

**DATES:** Submit comments by **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**.

**ADDRESSES:** Submit your comments, identified by Docket ID NRC-2025-1503, at <https://www.regulations.gov>. If your material cannot be submitted using

<https://www.regulations.gov>, call or email the individuals listed in the FOR FURTHER INFORMATION CONTACT section of this document for alternate instructions.

Do not include any personally identifiable information (such as name, address, or other contact information) or confidential business information that you do not want publicly disclosed. All comments are public records; they are publicly displayed exactly as received and will not be deleted, modified, or redacted. Comments may be submitted anonymously.

Follow the search instructions on <https://www.regulations.gov> to view public comments.

You can read a plain language description of this proposed rule at <https://www.regulations.gov/docket/NRC-2025-1503>. For additional direction on obtaining information and submitting comments, see “Obtaining Information and Submitting Comments” in the SUPPLEMENTARY INFORMATION section of this document.

**FOR FURTHER INFORMATION CONTACT:** Aaron Kwok, Office of Nuclear Material Safety and Safeguards, telephone: 301-415-1371, email: [Aaron.Kwok@nrc.gov](mailto:Aaron.Kwok@nrc.gov) and James Kinsey, Office of Nuclear Reactor Regulation, telephone: 301-415-0754, email: [James.Kinsey@nrc.gov](mailto:James.Kinsey@nrc.gov). Both are staff of the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

**SUPPLEMENTARY INFORMATION:**

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## **I. Obtaining Information and Submitting Comments**

### **A. Obtaining Information**

Please refer to Docket ID NRC-2025-1503 when contacting the NRC about the availability of information for this action. You may obtain publicly available information related to this action by any of the following methods:

- **Federal Rulemaking Website:** Go to <https://www.regulations.gov> and search for Docket ID NRC-2025-1503.
- **NRC's Agencywide Documents Access and Management System (ADAMS):** You may obtain publicly available documents online in the ADAMS Public Documents collection at <https://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "Begin ADAMS Public Search." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, at 301-415-4737, or by email to [PDR.Resource@nrc.gov](mailto:PDR.Resource@nrc.gov). For the convenience of the reader, instructions about obtaining materials referenced in this document are provided in the "Availability of Documents" section.
- **NRC's PDR:** The PDR, where you may examine and order copies of publicly available documents, is open by appointment. To make an appointment to visit the PDR, please send an email to [PDR.Resource@nrc.gov](mailto:PDR.Resource@nrc.gov) or call 1-800-397-4209 or 301-415-4737, between 8 a.m. and 4 p.m. eastern time, Monday through Friday, except Federal holidays.

- **Public Meeting:** The NRC may conduct a public meeting to describe the proposed amendments and answer questions from the public on the proposed rule. If the NRC determines it will hold a public meeting, NRC will publish a notice of the location, time, and agenda of the meeting on the NRC’s public meeting website within 10 calendar days of the meeting. Stakeholders should monitor the NRC’s public meeting website for information about the public meeting at: <https://www.nrc.gov/public-involve/public-meetings/index.cfm>.

#### B. Submitting Comments

The NRC encourages electronic comment submission through the Federal rulemaking website (<https://www.regulations.gov>). Please include Docket ID NRC-2025-1503 in your comment submission.

The NRC cautions you not to include identifying or contact information that you do not want to be publicly disclosed in your comment submission. The NRC will post all comment submissions at <https://www.regulations.gov> as well as enter the comment submissions into ADAMS. The NRC does not routinely edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons not to include identifying or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that the NRC does not routinely edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment into ADAMS.

## **II. Executive Order 14300: Ordering the Reform of the Nuclear Regulatory Commission**

On May 23, 2025, President Donald J. Trump signed Executive Order (E.O.) 14300, “Ordering the Reform of the Nuclear Regulatory Commission.” Section 5, “Reforming and Modernizing the NRC’s Regulations,” requires the NRC to undertake a

review and wholesale revision of its regulations and guidance documents as guided by the policies set forth in section 2 of E.O. 14300. This rulemaking addresses section 5(d), which requires the NRC to establish an expedited pathway to approve reactor designs that the U.S. Department of Energy (DOE) or the Department of War (DOW) have tested and that have demonstrated the ability to function safely.<sup>1</sup> E.O. 14300 further states that NRC review of such designs shall focus solely on risks that may arise from new applications permitted by NRC licensure, rather than revisiting risks that have already been addressed in the DOE or DOW processes.

### **III. Discussion**

The NRC is proposing to amend title 10 of the *Code of Federal Regulations* (10 CFR) section 50.43, “Additional standards and provisions affecting class 103 licenses and certifications for commercial power,” and section 53.440, “Design requirements,” to explicitly establish a pathway for streamlined reviews for licensing commercial reactor designs that have previously received DOE or DOW authorization and that have been tested and demonstrated the ability to function safely. The amendment to § 50.43 would explicitly establish such a pathway for the licensing frameworks under 10 CFR part 50, “Domestic Licensing of Production and Utilization Facilities,” and part 52, “Licenses, Certifications, and Approvals for Nuclear Power Plants,” whereas the amendment to § 53.440 would do so for the 10 CFR part 53, “Risk-Informed, Technology-Inclusive Regulatory Framework for Commercial Nuclear Plants,” licensing framework. An analogous provision will be included in a separate proposed rule, “Licensing Requirements for Microreactors and Other Reactors with Comparable Risk Profiles,” which, if finalized, would apply to the associated proposed 10 CFR part 57, “Licensing Requirements for Microreactors and Other Reactors with Comparable Risk Profiles,”

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<sup>1</sup> Consistent with E.O. 14347, “Restoring the United States Department of War,” this *Federal Register* notice refers to the “Department of War” and “Department of Defense” interchangeably. Per section 2(d) of E.O. 14347, the proposed regulatory text for this limited scope rulemaking would continue to use the title, “Department of Defense,” to avoid creating inconsistencies with or causing confusion in the NRC’s existing regulations in title 10 of the *Code of Federal Regulations*.

licensing framework. The primary intent of this rulemaking is to improve NRC licensing review efficiency, and thus capacity, for conducting licensing reviews. In turn, this would contribute to the safe and secure use and deployment of civilian nuclear energy technologies.

Section 50.43(e) currently provides two options for license applicants to demonstrate how newer reactor designs, including those that use simplified, inherent, passive, or other innovative means, accomplish their safety functions. The proposed rule would add a third option to be codified in § 50.43(e)(3). Specifically, the proposed rule would include the ability to reference a prior DOE or DOW authorization and successful testing and demonstration of the ability of the authorized design to function safely as another means for NRC license applicants to show that the design can accomplish its safety functions.

The amendment to § 50.43 would explicitly reflect the option for NRC Class 103 license applicants to directly reference a prior DOE or DOW authorization when demonstrating compliance with NRC regulatory requirements. Applicants using this option would be required to identify how aspects of the prior authorization satisfy NRC regulations. The applicant would also be required to address how any changes to the design, its functionality, associated hazards, siting information, or underlying safety assumptions from those considered in prior authorization reviews meet applicable NRC requirements.

Under the part 53 licensing framework, § 53.440(a) currently provides a series of design requirements. The requirements in § 53.440(a)(1) reflect an essential element of ensuring a proposed design can comply with the performance criteria in part 53, namely that the abilities of design features to fulfill their safety functions are demonstrated by a combination of analyses, test programs, prototype testing, and operating experience. This requirement closely aligns with the language in § 50.43(e) and reflects the same foundational requirement.

The amendment to § 53.440 would explicitly accommodate the option for NRC Class 103 license applicants to directly reference a prior DOE or DOW authorization for the purpose of demonstrating that the design features required by § 53.400 meet the defined functional design criteria required by §§ 53.410 and 53.420. Such a demonstration would be required to consider interdependent effects throughout the commercial nuclear plant and the range of conditions under which the design features required by § 53.400 must function throughout the plant's lifetime. Applicants using this option would be required to identify how aspects of the prior authorization satisfy applicable NRC regulations.

The proposed §§ 50.43(e) and 53.440(a)(1) pathways would be supported by new, publicly available guidance applicable to the review of applications for NRC Class 103 licenses that reference a DOE or DOW authorization. Those guidance documents are not a part of this proposed rulemaking. The NRC instead plans to provide such guidance in the future. The scope of such guidance would facilitate licensing of future commercial nuclear plants, including advanced reactor designs that may not employ light-water technology.

The NRC prepared an unofficial redline strikeout version of the proposed changes to the regulatory text that is intended to help the reader identify the proposed changes. The unofficial redline strikeout version of the proposed rule is publicly available and is listed in the "Availability of Documents" section.

#### **IV. Regulatory Flexibility Certification**

As required by the Regulatory Flexibility Act of 1980, 5 U.S.C. 605(b), the Commission certifies that this rule, if adopted, will not have a significant economic impact on a substantial number of small entities. This proposed rule affects only the licensing and operation of nuclear power plants. The companies that would own these plants are not expected to fall within the scope of the definition of "small entities" set

forth in the Regulatory Flexibility Act or the size standards established by the NRC (10 CFR 2.810).

## **V. Regulatory Analysis**

The NRC has not prepared a separate draft regulatory analysis on the proposed changes. However, the NRC performed a qualitative economic analysis of the rule impacts. As a result of this proposed rule, the NRC expects that the NRC would not need to repeat technical reviews previously performed by DOE or DOW, to the extent that those reviews cover the same scope as the related content in the NRC license application. In general, the NRC expects cost savings to both applicants in preparing an application and the NRC in reviewing that application. The NRC was not able to quantify these potential savings in a useful way at this time. These savings would depend on the applicability of the DOE/DOW reviews to NRC requirements and the ability of applicants to demonstrate that applicability, the number of applications that may reference a previous DOE/DOW authorization, as well as how any potential differences (e.g., changes to the design or site-specific factors) from the previously authorized design also meet NRC requirements.

## **VI. Backfitting and Issue Finality**

The proposed changes to 10 CFR 50.43(e) and 53.440(a)(1) would not impose new or revised requirements on existing licensees or approval holders because they include an option that would apply only to future applicants. Therefore, the proposed changes would not constitute backfitting as defined in §§ 50.109(a)(1) or 53.1590(a)(1) or affect the issue finality of an existing approval issued under 10 CFR part 52, “Licenses, Certifications, and Approvals for Nuclear Power Plants.”

## **VII. Cumulative Effects of Regulation**

The NRC seeks to minimize potential negative consequences resulting from the cumulative effects of regulation (CER). The NRC believes that any de-regulatory impacts of this rulemaking activity would be unlikely to cause implementation challenges for stakeholders. In addition, during the pendency of this rulemaking, the NRC is deprioritizing issuance of regulatory actions (e.g., orders, generic communications, license amendment requests, and inspection findings of a generic nature) that might influence the implementation date for the new rule, should the proposed rule be finalized.

To fully understand any potential CER implications that could result from this rulemaking, the NRC is asking the following questions. Response to these questions is voluntary and any input would be considered during development of the final rule.

1. Are there unintended consequences related to this rulemaking and how should they be addressed? Please provide a rationale for your response.

2. Please comment on the NRC's cost and benefit analysis in the regulatory analysis that supports this proposed rule.

### **VIII. Plain Writing**

The Plain Writing Act of 2010 (Pub. L. 111-274) requires Federal agencies to write documents in a clear, concise, and well-organized manner. The NRC has written this document to be consistent with the Plain Writing Act as well as the Presidential Memorandum, "Plain Language in Government Writing," published June 10, 1998 (63 FR 31885). The NRC requests comment on this document with respect to the clarity and effectiveness of the language used.

### **IX. National Environmental Policy Act**

The NRC has determined that this proposed rule is the type of action eligible for categorical exclusion because it meets the criterion described in 10 CFR 51.22(c)(3). This provision includes amendments to parts 50 and 53 related to procedures for filing

and reviewing applications for licenses or construction permits or early site permits or other forms of permission or for amendments to or renewals of licenses or construction permits or early site permits or other forms of permission. The action belongs to a category of actions which the Commission, by rule or regulation, has declared to be a categorical exclusion, after first finding that the category of actions does not individually or cumulatively have a significant effect on the human environment. Therefore, neither an environmental impact statement nor environmental assessment has been prepared for this proposed rule. For any particular licensing action that would use the pathways proposed by this rule, the NRC will comply with its obligations under the National Environmental Policy Act, including by developing or using an environmental impact statement, environmental assessment, or categorical exclusion, as applicable.

#### **X. Paperwork Reduction Act**

This proposed rule does not contain any new or amended collections of information subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing collections of information were approved by the Office of Management and Budget (OMB), approval number 3150-0011.

#### **Public Protection Notification**

The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the document requesting or requiring the collection displays a currently valid OMB control number.

#### **XI. Executive Orders**

The following are Executive Orders that are related to this proposed rule:

A. Executive Order 12866: Regulatory Planning and Review (as amended by Executive Order 14215, Ensuring Accountability for All Agencies)

The Office of Information and Regulatory Affairs (OIRA) has determined that this proposed rule is a significant regulatory action. Accordingly, the NRC submitted this

proposed rule to OIRA for review. The NRC is required to conduct an economic analysis in accordance with section 6(a)(3)(B) of E.O. 12866. More can be found in Section V of this document, “Regulatory Analysis.”

#### B. Executive Order 14154: Unleashing American Energy

The NRC has examined this proposed rule and has determined that it is consistent with the policies and directives outlined in E.O. 14154.

#### C. Executive Order 14192: Unleashing Prosperity Through Deregulation

This action is tentatively determined to be a deregulatory action as defined by E.O. 14192. Details on the estimated costs of this proposed rule can be found in Section V of this document, “Regulatory Analysis.”

#### D. Executive Order 14270: Zero-Based Regulatory Budgeting to Unleash American Energy

E.O. 14270, “Zero-Based Regulatory Budgeting to Unleash American Energy,” requires the NRC to insert a conditional sunset date into all new or amended NRC regulations provided the regulations are (1) promulgated under the Atomic Energy Act of 1954, as amended (AEA), the Energy Reorganization Act of 1974, as amended (ERA), or the Nuclear Waste Policy Act of 1982, as amended (NWPA); (2) not statutorily required; and (3) not part of the NRC’s permitting regime. The NRC determined that the regulatory changes proposed in this rule are part of the NRC’s regulatory permitting scheme authorized by the AEA, ERA, or NWPA. Therefore, the NRC views this rulemaking to be outside the scope of E.O. 14270 and did not insert conditional sunset dates for the regulatory changes in this proposed rule.

## **XII. Voluntary Consensus Standards**

The National Technology Transfer and Advancement Act of 1995, Pub. L. 104-113, requires that Federal agencies use technical standards that are developed or adopted by voluntary consensus standards bodies unless the use of such a standard is inconsistent with applicable law or otherwise impractical. In this proposed rule, the NRC

will revise its regulations to facilitate direct leveraging of prior DOE or DOW authorizations of demonstration reactors into the NRC’s licensing reviews of commercial reactor facility applications that utilize those designs. This action does not constitute the establishment of a standard that contains generally applicable requirements.

### **XIII. Availability of Guidance**

The NRC will be issuing new guidance for the implementation of the proposed amendments in this rulemaking. The NRC will publish *Federal Register* notices announcing the availability of the new guidance documents. The documents will be available at <https://www.regulations.gov> by searching on Docket ID NRC-2025-1503.

### **XIV. Availability of Documents**

The documents identified in the following table are available to interested persons through one or more of the following methods, as indicated.

<b>DOCUMENT</b>	<b>ADAMS Accession No. / Web link / <i>Federal Register</i> Citation</b>
<b>Proposed Rule Documents</b>	
Unofficial Redline Rule Language for the Proposed Rule—NRC Reviews of Reactor Designs Previously Authorized by U.S. Department of Energy or Department of War, March 31, 2026	ML25301A002
<b>Other References</b>	
Executive Order 12866, “Regulatory Planning and Review,” October 4, 1993	58 FR 51735
Executive Order 14154, “Unleashing American Energy,” January 29, 2025	90 FR 8353
Executive Order 14192, “Unleashing Prosperity Through Deregulation,” February 6, 2025	90 FR 9065
Executive Order 14215, “Ensuring Accountability for All Agencies,” February 24, 2025	90 FR 10447
Executive Order 14270, “Zero-Based Regulatory Budgeting to Unleash American Energy,” April 15, 2025	90 FR 15643
Executive Order 14300, “Ordering the Reform of the Nuclear Regulatory Commission,” May 29, 2025	90 FR 22587
Executive Order 14347, “Restoring the United States Department of War,” September 10, 2025	90 FR 43893

NRC Size Standard for Making Determinations Required by the Regulatory Flexibility Act of 1980, December 9, 1985	50 FR 50241
Presidential Memorandum, "Plain Language in Government Writing," June 10, 1998	63 FR 31885
Final Rule—Receipts-Based NRC Size Standards, February 17, 2022	87 FR 8943

The NRC may post materials related to this document, including public comments, on the Federal rulemaking website at <https://www.regulations.gov> under Docket ID NRC-2025-1503. In addition, the Federal rulemaking website allows members of the public to receive alerts when changes or additions occur in a docket folder. To subscribe: 1) navigate to the docket folder (NRC-2025-1503); 2) click the "Subscribe" button; and 3) enter an email address and click on the "Subscribe" button.

### **List of Subjects**

#### **10 CFR Part 50**

Administrative practice and procedure, Antitrust, Backfitting, Classified information, Criminal penalties, Education, Emergency planning, Fire prevention, Fire protection, Intergovernmental relations, Nuclear power plants and reactors, Penalties, Radiation protection, Reactor siting criteria, Reporting and recordkeeping requirements, Whistleblowing.

#### **10 CFR Part 53**

Administrative practice and procedure, Antitrust, Backfitting, Construction permit, Combined license, Classified information, Criminal penalties, Early site permit, Emergency planning, Fees, Fire prevention, Fire protection, Inspection, Intergovernmental relations, Limited work authorization, Manufacturing license, Nuclear power plants and reactors, Operating license, Penalties, Prototype, Radiation protection, Reactor siting criteria, Reporting and recordkeeping requirements, Standard design, Standard design certification, Training programs.

For the reasons set out in the preamble and under the authority of the Atomic Energy Act of 1954, as amended; the Energy Reorganization Act of 1974, as amended; and 5 U.S.C. 552 and 553, the NRC is proposing to amend 10 CFR parts 50 and 53:

**PART 50—DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES**

1. The authority citation for part 50 continues to read as follows:

**Authority:** Atomic Energy Act of 1954, secs. 11, 101, 102, 103, 104, 105, 108, 122, 147, 149, 161, 181, 182, 183, 184, 185, 186, 187, 189, 223, 234 (42 U.S.C. 2014, 2131, 2132, 2133, 2134, 2135, 2138, 2152, 2167, 2169, 2201, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2239, 2273, 2282); Energy Reorganization Act of 1974, secs. 201, 202, 206, 211 (42 U.S.C. 5841, 5842, 5846, 5851); Nuclear Waste Policy Act of 1982, sec. 306 (42 U.S.C. 10226); National Environmental Policy Act of 1969 (42 U.S.C. 4332); 44 U.S.C. 3504 note.

2. In § 50.43:

a. In paragraph (e)(2) remove “during the testing period.” and add in its place “during the testing period; or”; and

b. Add paragraph (e)(3).

The additions read as follows:

**§ 50.43 Additional standards and provisions affecting class 103 licenses and certifications for commercial power.**

\* \* \* \* \*

(e) \* \* \*

(3) The application includes consideration of relevant information gathered from a design that has been previously authorized by the Department of Energy or the Department of Defense as a utilization facility and that has been tested and has demonstrated the ability to function safely. Any reference to such a design must identify how attributes of the authorization satisfy NRC regulations.

**PART 53—RISK-INFORMED, TECHNOLOGY-INCLUSIVE REGULATORY  
FRAMEWORK FOR COMMERCIAL NUCLEAR PLANTS**

3. The authority citation for part 53 continues to read as follows, as amended at 91 FR 15696 (March 30, 2026; effective April 29, 2026):

**Authority:** Atomic Energy Act of 1954, secs. 11, 101, 103, 108, 122, 147, 161, 181, 182, 183, 184, 185, 186, 187, 189, 223, 234 (42 U.S.C. 2014, 2131, 2132, 2133, 2134, 2135, 2138, 2152, 2167, 2169, 2201, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2239, 2273, 2282); Energy Reorganization Act of 1974, secs. 201, 202, 206, 211 (42 U.S.C. 5841, 5842, 5846, 5851); Nuclear Waste Policy Act of 1982, sec. 306 (42 U.S.C. 10226); National Environmental Policy Act of 1969 (42 U.S.C. 4332); 44 U.S.C. 3504 note; Pub. L. 115-439, 132 Stat. 5571.

4. In § 53.440, revise paragraph (a)(1), as amended at 91 FR 15696 (March 30, 2026; effective April 29, 2026), to read as follows:

**§ 53.440 Design requirements.**

(a)(1) Analysis, appropriate test programs, prototype testing, operating experience, or a combination thereof must demonstrate that each design feature required by § 53.400 meets the defined functional design criteria required by §§ 53.410 and 53.420. This demonstration must consider interdependent effects throughout the commercial nuclear plant and the range of conditions under which the design features required by § 53.400 must function throughout the plant's lifetime. The bases for this demonstration may include consideration of relevant information gathered from a utilization facility that has been previously authorized by the Department of Energy or the Department of Defense and which has been tested and has demonstrated the ability to function safely. Any reference to such a design must identify how attributes of the authorization satisfy NRC regulations.

\* \* \* \* \*

Dated: March 31, 2026.

For the Nuclear Regulatory Commission.

Carrie Safford,

Secretary of the Commission.

[FR Doc. 2026-06414 Filed: 4/1/2026 8:45 am; Publication Date: 4/2/2026]