

**NUCLEAR REGULATORY COMMISSION**

**10 CFR Part 53**

**NRC-2019-0062**

**RIN-3150-AK31**

**RISK-INFORMED, TECHNOLOGY-INCLUSIVE REGULATORY FRAMEWORK  
FOR ADVANCED REACTORS**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Availability of preliminary proposed rule language; request for comment.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC) is developing new requirements for the licensing and regulation of advanced nuclear reactors and is seeking public input. The new rulemaking would adopt technology-inclusive approaches and include the appropriate use of risk-informed and performance-based techniques, to provide the necessary flexibility for licensing and regulating a variety of advanced nuclear reactor technologies and designs. The NRC is periodically making available for comment preliminary proposed rule language for a risk-informed, technology-inclusive framework that will be added to NRC's regulations in the *Code of Federal Regulations*.

**DATES:** Submit comments by **November 5, 2021**. Comments received after this date will be considered in the development of the proposed rule if it is practical to do so, but the NRC is able to ensure consideration only for comments received before this date.

**ADDRESSES:** You may submit comments on preliminary rule language by any of the

following methods:

- **Federal Rulemaking Web Site:** Go to <https://www.regulations.gov> and search for Docket ID NRC-2019-0062. Address questions about NRC dockets to Dawn Forder; telephone: 301-415-3407; e-mail: [Dawn.Forder@nrc.gov](mailto:Dawn.Forder@nrc.gov). For technical questions contact the individuals listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **E-mail comments to:** [Rulemaking.Comments@nrc.gov](mailto:Rulemaking.Comments@nrc.gov). If you do not receive an automatic e-mail reply confirming receipt, then contact us at 301-415-1677.

**FOR FURTHER INFORMATION CONTACT:** Robert Beall, Office of Nuclear Material Safety and Safeguards, telephone: 301-415-3874; e-mail: [Robert.Beall@nrc.gov](mailto:Robert.Beall@nrc.gov); or William Reckley, Office of Nuclear Reactor Regulation, telephone: 301-415-7490; e-mail: [William.Reckley@nrc.gov](mailto:William.Reckley@nrc.gov). Both are staff of the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

## **SUPPLEMENTARY INFORMATION:**

### **I. Obtaining Information**

#### **A. Obtaining Information**

Please refer to Docket ID NRC-2019-0062 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 Web Site:** Go to <https://www.regulations.gov> and search for Docket ID NRC-2019-0062.

- **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 Web-based ADAMS Search.](#)" For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov). The ADAMS accession number for the preliminary proposed rule text is ML20289A534.

## B. Submitting Comments

Please include Docket ID NRC-2019-0062 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. Background**

On January 14, 2019, the President signed the Nuclear Energy Innovation and Modernization Act (NEIMA) into law (Public Law 115 439). NEIMA directs the NRC to develop the regulatory infrastructure to support the development and commercialization of advanced nuclear reactors. The current application and licensing requirements, developed for large light-water and non-power reactors as outlined in part 50 of title 10 of the *Code of Federal Regulations* (10 CFR), “Domestic Licensing of Production and Utilization Facilities,” and 10 CFR part 52, “Licenses, Certifications and Approvals for Nuclear Power Plants,” do not fully consider the variety of designs for advanced nuclear reactors and may require extensive use of the exemption process for regulations that include prescriptive requirements specific to light-water reactors. Through this rulemaking, the NRC is proposing to amend the regulations by creating an alternative regulatory framework for licensing advanced nuclear reactors.

## **III. Discussion**

The NRC is developing preliminary proposed rule language for the purpose of adding a new, alternative part to its regulations that will set out a risk-informed, technology-inclusive framework for the licensing and regulation of advanced nuclear reactors. This new approach would: 1) continue to provide reasonable assurance of adequate protection of public health and safety and the common defense and security, 2) promote regulatory stability, predictability, and clarity, 3) reduce requests for

exemptions from the current requirements in 10 CFR parts 50 and 52, 4) establish new requirements to address non-light-water reactor technologies, 5) recognize technological advancements in reactor design, and 6) credit the response of advanced nuclear reactors to postulated accidents, including slower transient response times and relatively small and slow release of fission products. The proposed rule would add 10 CFR part 53, "Licensing and Regulation of Advanced Nuclear Reactors."

The NRC will periodically make available portions of preliminary proposed rule language on the federal rulemaking Web site at <http://www.regulations.gov> under Docket ID NRC-2019-0062. This preliminary proposed rule language is draft and may be incomplete in one or more respects; however, the NRC welcomes diverse stakeholder feedback to inform the proposed rulemaking activity.

Various sections of the 10 CFR part 53 preliminary proposed rule language will be released to provide stakeholders during the development of the proposed rule. The public will be provided with opportunities to comment on the preliminary proposed rule language before or during public meetings and on a rolling basis throughout the 12-month public comment period. The NRC plans to hold public meetings every 4 to 6 weeks over the next 12 months. The meetings will be noticed in the NRC's Public Meeting Notice System at least 10 days in advance of the scheduled meeting. Preliminary proposed rule language is being provided to increase transparency and to facilitate discussions with stakeholders on the licensing process for advanced nuclear reactors. The NRC will post new and revised updates to the preliminary proposed rule language periodically on the Federal rulemaking Web site at [www.regulations.gov](http://www.regulations.gov) that may be of interest to stakeholders. The NRC will not issue a Federal Register notice

each time preliminary proposed rule language is added to the docket. Please monitor the docket on [www.regulations.gov](http://www.regulations.gov) and use the following information to sign up for docket alerts.

The NRC may post materials related to this rulemaking, including public comments received, on the Federal Rulemaking Web site at <https://www.regulations.gov> under Docket ID NRC-2019-0062. The Federal Rulemaking Web site allows you to receive alerts when changes or additions occur in a docket folder. To subscribe: 1) navigate to the docket folder (NRC-2019-0062); 2) click the “Sign up for E-mail Alerts” link; and 3) enter your e-mail address and select how frequently you would like to receive e-mails (daily, weekly, or monthly).

Dated: October 29, 2020.

For the Nuclear Regulatory Commission.

/RA/

John Tappert,  
Director, Division of Rulemaking, Environmental,  
and Financial Support,  
Office of Nuclear Material Safety and Safeguards