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NRC Seeks Comment on Proposed Rule for Emergency Preparedness for Small Modular Reactors and Other New Technologies

The Nuclear Regulatory Commission is seeking comments on a proposed rule and associated draft regulatory guide on risk-informed, performance-based emergency preparedness requirements for small modular reactors and other new technologies. These technologies include non-light-water reactors and certain non-power facilities.

The NRC's existing emergency preparedness program for nuclear power plants is focused on large, light-water cooled reactors. The [proposed rule](#) and related [guidance](#) address advances in facility designs and safety research and their application to future operation of small modular reactors and other new technologies. Comments will be accepted until July 27, through the federal rulemaking website Regulations.gov by using Docket ID NRC-2015-0225.

The NRC is proposing to amend its regulations to create an alternative emergency preparedness framework for SMRs and other new technologies. The alternative requirements and implementing guidance would adopt a risk-informed, performance-based, technology-inclusive, and consequence-oriented approach. The alternative requirements would include a scalable approach for determining the size of the plume exposure pathway emergency planning zone around each facility. The NRC is interested in addressing specific emergency preparedness policy issues such as:

- What planning activities should apply to the performance-based approach?
- How should hazard analysis be applied to the performance-based approach?
- What specific factors or technical considerations are needed when applying the scalable emergency planning zone approach?

This proposed rule and guidance could affect any existing SMR and non-light-water reactor licensees, as well as relevant facilities licensed after the final rule becomes effective. These applicants and licensees could develop a performance-based emergency preparedness program as an alternative to the existing requirements in 10 CFR Part 50. This proposed rule does not cover large light-water reactors, fuel cycle facilities, or currently operating non-power reactors.

The NRC first considered a possible performance-based approach to emergency preparedness several years ago, when SMRs and other new technologies were first being considered for potential licensing. The Commission approved a rulemaking plan for this proposed rule in June 2016. The NRC staff published a draft regulatory basis for public comment in April 2017, and considered the comments in finalizing the [regulatory basis](#), which was issued in November 2017.