

## Congressional Review Act Summary

AGENCY: U.S. Nuclear Regulatory Commission

TITLE OF ACTION: Emergency Preparedness for Small Modular Reactors and Other New Technologies

TYPE OF ACTION: Final Rule

LEVEL OF SIGNIFICANCE: Non-Major

AGENCY IDENTIFICATION: 3150

RIN AND/OR DOCKET ID: 3150-AJ68 / NRC-2015-0225

DATE OF ISSUANCE: **December 2023**

STATUTORY OR JUDICIAL DEADLINE: None

### DESCRIPTION OF ACTION:

The U.S. Nuclear Regulatory Commission (NRC) is amending its regulations to include new alternative emergency preparedness (EP) requirements for small modular reactors (SMRs) and other new technologies (ONTs). This final rule acknowledges technological advancements and other differences from large light-water reactors (LWRs) that are inherent in SMRs and ONTs. The NRC is concurrently issuing Regulatory Guide (RG) 1.242, "Performance-Based Emergency Preparedness for Small Modular Reactors, Non-Light-Water Reactors, and Non-Power Production or Utilization Facilities."

The current EP requirements and guidance, initially developed for large LWRs and for non-power reactors, also referred to as research and test reactors, as defined in Part 50 of Title 10 of the *Code of Federal Regulations* (10 CFR), "Domestic Licensing of Production and Utilization Facilities," do not consider the advances in designs and safety research and their application to the future operation of SMRs and ONTs. Through this final rule, the NRC is amending its regulations to create an alternative EP framework for SMRs and ONTs. The new alternative EP requirements and implementing guidance in RG 1.242 adopt a performance-based, technology-inclusive, risk-informed, and consequence-oriented approach. In addition, the new alternative EP requirements and guidance adopt a scalable approach to the plume exposure pathway emergency planning zone approach and address ingestion response planning. The new alternative EP requirements and guidance: (1) continue to provide reasonable assurance that adequate protective measures can and will be implemented by an SMR or ONT licensee; (2) promote regulatory stability, predictability, and clarity; (3) reduce the need for requests for exemptions from EP requirement; (4) recognize advances in design and technological advancements embedded in design features; (5) credit safety enhancements in evolutionary and passive systems; and (6) credit the potential benefits of smaller sized reactors' and non-LWRs' potential benefits associated with postulated accidents, including slower transient

response times, and relatively small and slow release of fission products. The final rule and guidance could affect existing SMR and non-LWR applicants and licensees as well as SMRs, non-LWRs, and non-power production or utilization facilities that would be licensed after the effective date of the final rule. Those applicants and licensees will have the option to develop a performance-based EP program as an alternative to using the existing, deterministic EP requirements in 10 CFR Part 50.

The final rule does not include within its scope emergency planning, preparation, or response for large LWRs, fuel cycle facilities, or currently operating non-power reactors. For the purposes of this rule, large LWRs are reactors that are licensed to produce greater than 1,000 megawatts thermal power.

#### ANALYSIS:

- **Is there an annual effect on the economy of \$100 million or more?**

No. Relative to the regulatory baseline, the final rule is projected to result in a cost-justified change based on a net averted cost (i.e., benefit) to the industry that ranges from \$5.62 million using a 7-percent discount rate to \$10.7 million using a 3-percent discount rate. The NRC would realize a net averted cost of \$2.36 million using a 7-percent discount rate and \$4.24 million using a 3-percent discount rate. In total, the final rule alternative would result in net averted costs to the industry and the NRC ranging from \$7.98 million using a 7-percent discount rate to \$14.9 million using a 3-percent discount rate.

- **Is there a major increase (typically 10% - 20%) in costs for consumers, individual industries, Federal, State, or local government agencies, or geographical regions?**

There is no major increase in costs for consumers, individual industries, Federal, State, or local government agencies, or geographical regions as a result of the approval of this final rule.

- **Is there a significant adverse effect on competition, employment, investment, productivity, innovation, or on the ability of U.S.-based enterprises to compete with foreign-based enterprises in domestic and export markets?**

There is no significant effect on competition, employment, investment, productivity, innovation, or on the ability of U.S.-based enterprises to compete with foreign-based enterprises in domestic and export markets.

SUMMARY:

The NRC believes that this final rule is not a major rule under the Congressional Review Act.

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