

**U.S. NUCLEAR REGULATORY COMMISSION SUMMARY OF THE MARCH 19, 2025,
PREAPPLICATION PUBLIC MEETING WITH SMR, LLC (A HOLTEC INTERNATIONAL
COMPANY) TO DISCUSS THE PROPOSED EXEMPTION REQUEST TO UTILIZE 10 CFR 50.160
EMERGENCY PREPAREDNESS RULE FOR SMR-300**

The U.S. Nuclear Regulatory Commission (NRC) held an observation public meeting on March 19, 2025, with SMR, LLC (SMR), a Holtec International Company (Holtec), to discuss an upcoming SMR(Holtec) exemption request to utilize the regulations in Title 10 of the *Code of Federal Regulations* (10 CFR) 50.160, “Emergency preparedness for small modular reactors, non-light water reactors, and non-power production or utilization facilities.”¹ An exemption is necessary because the SMR-300 exceeds the maximum heat energy limit of a small modular reactor (SMR) per the 10 CFR 50.2, “Definitions,” of an SMR. SMR (Holtec) provided presentation slides to support their discussions during the meeting.²

For background, SMR (Holtec) noted that the regulations in 10 CFR 50.47, “Emergency Plans,” and Appendix E, “Emergency Planning and Preparedness for Production and Utilization Facilities,” to 10 CFR Part 50, provide a deterministic regulatory framework for emergency planning (EP), while 10 CFR 50.160 provides an alternative performance-based EP framework for SMRs. One of the characteristics of SMRs, as defined in 10 CFR 50.2, is “produce heat energy up to 1,000 megawatts thermal (MWt) per module”. Because the SMR-300 reactor is designed to produce 1,050 MWt, it is not considered an SMR for the purposes of emergency preparedness (EP).

SMR (Holtec) presented potential exemption request pathways and sought to ensure NRC understanding of the forthcoming exemption request and address any initial questions.

SMR (Holtec) is considering the following three options:

1. Request an exemption from the 10 CFR 50.2 definition of an SMR.
2. Request exemptions from certain requirements in 10 CFR 50.33, “Contents of applications; general information,” 10 CFR 50.34, “Contents of applications; technical information,” and 10 CFR 50.54, “Conditions of licenses.”
3. Request exemptions from specific aspects of 10 CFR 50.47” and Appendix E to 10 CFR Part 50.

SMR (Holtec) indicated that it prefers Option 1, if the NRC staff determines that this approach is viable. SMR (Holtec) stated that it would submit the exemption request in accordance with the requirements in 10 CFR 50.12(b), “Specific exemptions,” prior to filing the construction permit application to the NRC and independent of a topical report. SMR (Holtec) clarified that it is not seeking an exemption to the definition of SMR in 10 CFR 171.5, “Definitions,” which is used to determine the annual fee structure in 10 CFR Part 171, “Annual Fees for Reactor Licenses and Fuel Cycle Licenses and Material Licenses, Including Holders of Certificates of Compliance,

¹ Letter from A. Brenner, “SMR, LLC Preapplication Meeting Materials for March 19, 2025 (Project No. 99902049),” dated February 28, 2025, Agencywide Documents Access and Management System (ADAMS) Accession No. ML25059A170 part of ML25059A0169.

² SMR, LLC, Enclosure 1: “SMR, LLC, Exemption Request to Utilize 50.160 EP Rule,” dated March 19, 2025, ML25059A171, part of ML25059A0169.

Registrations, and Quality Assurance Program Approvals and Government Agencies Licensed by the NRC.”

SMR (Holtec) described how its SMR-300 design is consistent with the six underlying objectives of 10 CFR 50.160 as identified in SECY-18-0103, “Proposed Rule: Emergency Preparedness for Small Modular Reactors and other New Technologies (RIN 3150-AJ68; NRC-2015-0225).” These objectives include recognizing technological advancements embedded in SMR design features, crediting safety enhancements in evolutionary and passive systems, and crediting smaller-sized reactors' potential benefits associated with postulated accidents, including slower transient response times, and relatively small and slow release of fission products.

SMR (Holtec) stated that SMR-300 should not be considered a large light-water reactor (LLWR) because it has a reduced risk profile compared to the current fleet of LLWRs due to its smaller size and passive safety features.

At the conclusion of the presentation and discussion, members of the public were invited to provide comments or ask questions of the NRC staff. One commentor stated that they did not think a vendor could seek an exemption prior to submitting an application because circumstances could change when the application is received and that there may be inconsistencies between the granted exemption and the related position taken in the application. This could result in putting pressure on the NRC to accept what was granted in the exemption even if it were inconsistent with application. Another commenter expressed concern that SMR (Holtec) has never operated a nuclear reactor. The commenter also expressed concern that the emergency planning zone boundary (EPZ) could be significantly decreased with a high population density within a few miles of the proposed site but outside of the EPZ.