

IN RE: EMERGENCY PREPAREDNESS FOR SMALL MODULAR REACTORS AND OTHER NEW TECHNOLOGIES PROPOSED RULE, DOCKET ID NO. NRC-2015-0225, 85 FED. REG. 28,436 (MAY. 12, 2020)

COMMENTS IN SUPPORT OF NEW ALTERNATIVE EMERGENCY PREPAREDNESS REQUIREMENTS FOR SMALL MODULAR REACTORS AND OTHER NEW TECHNOLOGIES BY THE NUCLEAR INNOVATION ALLIANCE

The Nuclear Innovation Alliance (NIA) strongly supports the Nuclear Regulatory Commission's (NRC's) proposed rule to amend regulations to include new alternative emergency preparedness requirements for advanced reactors as well as the issuance of NRC's draft Regulatory Guide DG-1350.

NIA is a non-profit organization founded by environmental organizations, academic institutions, and private sector investment and technology companies. Supported mainly by philanthropic foundations, NIA is dedicated to promoting innovation in technology and business models to increase the affordability and availability of nuclear energy as a tool for addressing critical global environmental and development needs. NIA has performed analysis, actively participated in US policy debates, and successfully advocated for domestic US policy changes to support research and development as well as risk-informed licensing and early deployment of this important technology.

Advanced reactors, including small advanced light-water reactors (LWRs), non-LWRs, and non-power reactors, feature significant innovations in reactor design, operations, fuel forms, or other safety features. Beyond lowering risks of an incident during operation, the smaller sizes of these units, including microreactors less than 30 megawatts-thermal, reduce the potential inventory of radioactive material that could be released. Further, many designs operate at reduced pressures. Together, these and other safety features enable advanced reactors to have a lower risk than conventional LWRs of an incident occurring and much lower impacts if incidents do occur.

The proposed rule will maintain high levels of protection related to public health and safety, while improving the regulatory process for advanced reactor developers and the NRC. Importantly, it continues to require the NRC to adopt EPZs that provide adequate protective measures, while allowing applicants and the Commission to use the alternative framework for a smaller emergency preparedness zone (EPZ). The new framework ensures EPZs are right sized. It will enable applicants to prove that their proposed EPZ meets the characteristics of their technology while ensuring adequate protection. This will reduce unnecessary public and private costs to meet larger-than-necessary EPZs while eliminating the need for advanced reactors to seek EP exemptions that match their design and proposed sites. The proposed rule creates a risk-informed, transparent, and uniform regulatory process that provides greater certainty for innovators and better ensures public safety than ad hoc exemption requests. The principle should be that decisions on the size of the EPZ are based on risks and benefits, not one size based on one set of circumstances that may or may not apply. The rule would also reduce costs for other

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federal, state, and city agencies as it requires performance-based planning related to well-defined safety considerations.

Beyond reducing costs and improved regulatory design, the rulemaking can bring operational benefits to electric systems. Advanced reactors could potentially be sited closer to load centers, as well as more easily sited to support remote communities and mining operations that most need emissions-free, dispatchable electricity.

The rule and guidance further the NRC's progress towards adopting technology-inclusive, performance-based, risk-informed regulatory principles, as required by recent legislation. As noted in the rulemaking and by commenters, the existing regulatory framework for emergency planning programs has existed for several decades, to deal primarily with large conventional LWRs. The existing framework is tailored to the risks of a specific size and type of existing technology. The performance-based proposed rule for advanced reactors will be a better, safer system for new technologies. It requires licensees that use the alternative approach to actually demonstrate the competencies necessary to handle emergencies with their specific technology, as opposed to simply following rules appropriate for conventional large LWRs.

Thanks for your consideration.