

## **NuScale Power, LLC Comments on the August 22, 2018 ACRS SC EP Rulemaking Meeting**

NuScale Power fully supports the NRC proposed rulemaking on small modular reactor (SMR) and other nuclear technology (ONT) Emergency Planning (EP). This proposed rule, along with draft regulatory guide DG-1350, was developed in response to a series of Commission-approved documents (i.e., SECYs and SECY-SRMs) that were issued since 2005, as well as to extensive nuclear industry input. It is based on evaluation of the technical basis for current emergency planning regulations for large light water reactors (LLWRs) and application of this identical basis to SMRs and ONT. New rulemaking for SMR and ONT EP is in alignment with revisions of many other LLWR regulations, which have been updated to reflect the enhanced safety, simplicity and smaller radionuclide source terms of SMR and ONT designs.

The NuScale SMR was designed to: eliminate many safety issues; greatly reduce the likelihood and consequence of applicable accidents; simplify operations; and expand reliance on passive systems and natural processes resulting in unparalleled resiliency. All these features greatly reduce risks to public health and safety. This proposed EP rulemaking is in alignment with the NuScale plume exposure EPZ methodology topical report that is currently under review by the NRC. Both the proposed EP rulemaking and the NuScale EPZ topical report describe a performance-based, risk informed, consequence-oriented approach.

Public perception of nuclear power plant risk is closely tied to EP because signs, sirens, and emergency drills associated with the current 10-mile plume exposure emergency planning zone (EPZ) are a tangible and visible manifestation of potential danger to individuals. The NRC has determined that many licensed nuclear facilities including: low electric power commercial nuclear plants; research and test reactors; decommissioned nuclear power plants; orphan (i.e., with no collocated nuclear power plant) independent spent fuel storage installations (ISFSIs); and medical or industrial radioisotope users have an inherently low public health risk. This low risk results in a reduced EPZ by setting it at a smaller distance, the site boundary, or replacing the EP with existing facility all hazard plans. This proposed rulemaking uses the identical regulatory basis and technical justification to allow SMRs and ONTs the same opportunity to have an appropriately sized EPZ. An appropriately sized EP for an SMR or ONT will afford the same protection to the public as the current 10-mile plume exposure EPZ at operating LLWRs.

Since its inception in 1980, the underlying goal of EP has always been to protect the public. The proposed rulemaking provides the identical level of protection while recognizing that 21<sup>st</sup> century nuclear power plant technology has and will offer game changing advances in safety. Crediting the new paradigm in SMR and ONT safety by an appropriately sized EPZ accurately informs the public on the relative risk of new nuclear power plants. Imposing unnecessary public EP responses (e.g. evacuation) to low risk nuclear facility events has been shown to increase risks to public health and safety, which is antithetical to the basic tenet of EP.