



NRC Update on Small Modular Reactors (SMR)

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Developing Interest in SMRs

- Interest in the possible licensing, construction, and operation of SMR designs based upon the following factors:
 - Economic considerations
 - Wider range of users
 - Modularity
 - Potential to replace some types of fossil fuel

NRC Policy Statement on Advanced Reactors (*May 2008*)

- Expectation for enhanced margins of safety
- Minimize complexity
- Add stability & predictability
- Early identification of regulatory requirements

Emergency Preparedness for SMRs

The overall objective of EP:

to ensure that the nuclear power plant operator is capable of implementing adequate measures to protect public health and safety in the event of a radiological emergency.

Emergency Planning Zones for SMRs

- Appropriate size of the EPZ
- Extent of onsite & offsite emergency planning
- Adequate number of response staff needed
- Alert and notification requirements

Concept of “Scalable EPZ”

- Implications of a smaller source term and passive design features
- Offsite EP requirements could be scaled to be commensurate with the SMR:
 - accident source term
 - fission product release
 - associated dose characteristics

SMR Discussion Points

- Impact of smaller source term
- Passive designs-enhanced safety
- Longer reactor transient response time
- Emergency Planning Zone-Scalable approach

Planning Considerations

- Drills and Exercises requirements
- EP ITAAC (*Inspections, Tests Analyses, and Acceptance Criteria*)
- Emergency Response Facilities
- Staffing
- Offsite Planning
- Modularity
- Fukushima events
- Co-located site EP plan

Next Steps

- Continued stakeholder engagement
- Design application submittal to the NRC
- NRC Policy issue determination
- NRC Guidance development

Questions???

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