Preparation for Advanced Reactors Environmental Reviews, Including Integration of NEPA Processes

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 Agenda

• What is the NRC doing to prepare for advanced reactor environmental reviews?
• What can industry and applicants do to help the NRC prepare?
• Advanced reactor differences that may affect environmental reviews
• Resource areas
• Purpose and Need for an EIS
• Pre-application
• Suggestions for improving NRC’s environmental process
What is the NRC Doing to Prepare for Advanced Reactor Environmental Reviews?

- Engaging with potential applicants
- Identifying issues for non-light water reactors
- Planning to develop interim staff guidance for micro-reactors
- Implementing lessons learned from previous environmental reviews
- Guidance on integrating other environmental laws into NEPA process
- Impacts of FAST-41/Executive Order 13807 on environmental review processes
What Can the Industry and Applicants do to Help the NRC Prepare?

• Pre-application discussions with NRC and other Federal and State Agencies (as per FAST-41/Executive Order 13807)
• Continue to engage the NRC on advanced reactor issues
• Nuclear Energy Institute (NEI) guidance on pre-application NEI 10-7
• Provide suggestions to NRC on ways to improve the environmental review process
Different Types, Sizes, and Uses for Advanced Reactors Affect Environmental Review

• Different types of reactor designs and sizes will affect the radiological sections of the review (e.g., postulated accidents, fuel cycle impacts)
• Size - Guidance currently exists for large light water (LLWR) and small modular reactors
• Staff will be developing guidance for micro-reactors
• Micro-reactors use less resources
  – If a specific resource is not used, then there is no need to evaluate impact(s) to that resource
  – Evaluations should be appropriately scaled to the significance of the impacts
Resource Areas Evaluated in EIS
Evaluate Resources Based on Significance

• 10 CFR 51.45 (b)(1) “Impacts shall be discussed in proportion to their significance.”

• If resource shown on previous slide is not used then no need to evaluate that resource

• For example, if no wetlands impacted then no need to evaluate impacts to wetlands
Purpose and Need for Large Reactor:
Could be different for an advanced reactor with different alternatives
Pre-application is Important!

• Each project and site will be different – pre-application interactions with NRC can facilitate mutual understanding of these differences and potential impacts on EIS development
• EO 13807 requires coordination between the applicant and all federal agencies issuing permits
• Pre-application interactions will need to include these other agencies
Questions or Suggestions For Improving the NRC’s Environmental Review Processes?

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