



# Exploratory Process for Developing an Advanced Reactor GEIS

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# Exploratory Process

## Background

- On June 25, 2019, Senators Barrasso and Senator Braun sent a letter to NRC Chairman (ADAMS Accession No. ML19176A444) requesting that the NRC “initiate a process to develop a Generic Environmental Impact Statement (GEIS) for the construction and operation of advanced reactors.”
- In response, the NRC staff are initiating an exploratory process to gather information needed to develop a GEIS for the construction and operation of advanced reactors.

# Purpose for a GEIS

- A GEIS defines and assesses the scope and impact of the environmental effects of construction and operation of advanced reactors.
- Identifies and assesses impacts that are expected to be generic.
- Defines the number and scope of environmental impact issues that need to be addressed in site-specific EISs.

# Benefits of a GEIS

- Aligns with the goals of FAST-41, EO 13807, and NEIMA's advanced nuclear reactor requirements.
- Facilitates the deployment of new reactor technologies.
- Reduces administrative costs to applicants by accelerating and streamlining the environmental review process for advanced nuclear reactors.
- Avoids duplication of effort across EISs and focuses the applicants' and NRC's resources on important environmental issues.

# General Information Needs

## Siting

- Where would the reactor be located?
  - ⊕ In or near a city or rural area?
  - ⊕ Brownfield or greenfield site?
  - ⊕ In an existing structure?
  - ⊕ Co-located with existing power plant or other industrial facilities?

# General Information Needs

- What is the size/dimension/power output level of the advanced reactor?
- What type of reactor are you proposing?
  - ⊕ Will the reactor be constructed/assembled onsite or manufactured elsewhere for delivery and installation?
  - ⊕ How much land would be required to construct and operate the reactor?
  - ⊕ How many months is the construction period?
  - ⊕ How many years will the reactor be in operation?

# General Information Needs

- How many years can the reactor operate without replacement?
- How many construction and operation workers? (peak and annual average)
- How much construction and waste material? (list types of material and number of deliveries by truck, rail, and/or barge)
- What radiological and non-radiological constituents will be emitted or released from the reactor during operations? (airborne and liquid)
- How does the reactor refuel (and how often)?

# Summary Report

At the conclusion of exploratory process, NRC staff will assess the information collected, prepare a summary report by February 15, 2020, of the findings of the exploratory process and make a recommendation on whether to proceed with developing a GEIS.