



**FRWG**  
Fast Reactor Working Group

**NRC-DOE Workshop on Advanced Reactors**

**April 26, 2017**

# Fast Reactor Working Group



- Multiple developers working on multiple technologies

**ARC**

**Westinghouse**

**Southern**

**GE**

**Columbia Basin**

**Exelon**

**TerraPower**

**Elysium Industries**

**Duke**

**Oklo**

**General Atomics**

**EPRI**

- Spans variety of fast reactor technologies in development:

**Sodium, lead, salt, and gas**

# Overview



- ① **Modeling and simulation**
- ② **R&D Program list**
- ③ **Versatile test reactor**
- ④ **Fuels**

# Modeling and Simulation Workshops

- ◎ M&S workshops in December and January
- ◎ High degree of maturity for SFRs
  - > Enhanced use of high performance computing to advance designs
  - > Opportunities to accelerate development and design with advanced tools
- ◎ Need to improve how these codes are used and accessed

# R&D Program List

- ◎ Developed a list of programs to support fast reactor commercialization and advancement
  - > Fuels
  - > Materials
  - > Modeling and simulation
  - > Fast test reactor

# Versatile Test Reactor

- ⦿ Support NEAC's recommendations
- ⦿ Emphasize the need for urgency in order to maximize benefit
- ⦿ Clarifying industry need
- ⦿ Opportunity to support fuel supply chain

# Fuels



- ⦿ Working on relevant issues for fast reactor fuels
  - > Legacy fuel data
  - > Continue to improve AT access procedures
  - > Modeling and simulation
- ⦿ High assay LEU supply