



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**
- ① **R&D Program list**
- ① **Versatile test reactor**
- ① **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



- ④ 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