



NRIC

National  
Reactor  
Innovation  
Center

# NRIC and Demonstration Update

LINE Commission Meeting

May 12, 2021

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[nric.inl.gov](http://nric.inl.gov)



# NRIC Vision



Commercial Advanced Nuclear by 2030

inspire

empower

deliver



mission



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Dr. Ashley Finan  
Director



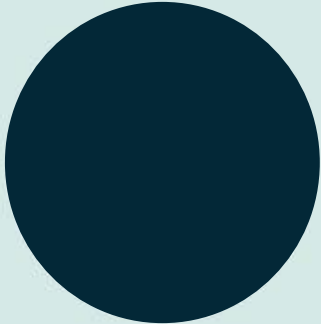
Nicholas Smith  
Deputy Director



Brad Tomer  
Chief Operating Officer



Cheyenne Odenthal  
Administrative Assistant



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Greg Core  
Technical Lead



Dr. Jon Webb  
Senior Engineer



Stacie Strain  
Risk Coordinator

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Donna Spangler  
Senior Communications Strategist



Brian Spears  
Technical Program Manager



Stephen Grabinski  
Project Manager



Emily Gallegos  
Project Coordinator




Christine Williams  
Project Manager



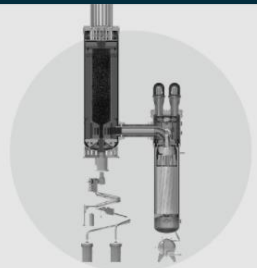
Phil Schoonover  
Sr. Program Manager

# Risk Reduction

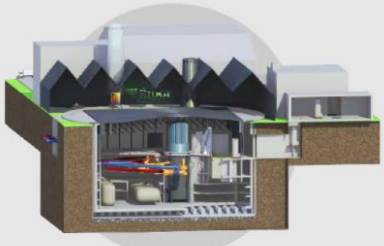
## Demonstration



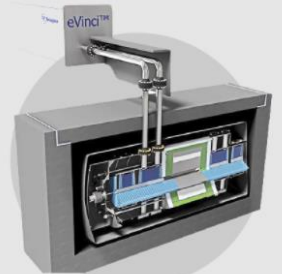
**Natrium Reactor**  
Sodium-cooled fast reactor + molten salt energy storage system  
TERRAPOWER



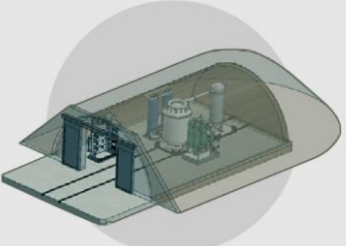
**Xe-100**  
High-temperature gas reactor  
X-ENERGY



**KP-FHR**  
Fluoride salt-cooled high-temperature reactor  
KAIROS POWER



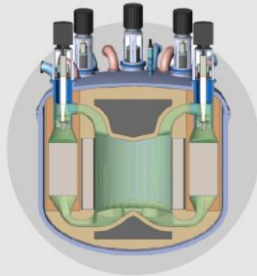
**eVinci**  
Heat pipe-cooled microreactor  
WESTINGHOUSE NUCLEAR



**BWXT Advanced Nuclear Reactor (BANR)**  
High-temperature gas-cooled microreactor  
BWXT TECHNOLOGIES

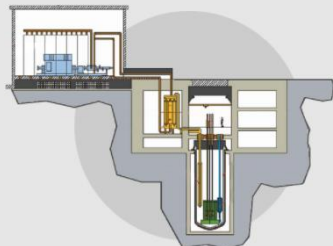


**SMR-160**  
Advanced light-water small modular reactor  
HOLTEC INTERNATIONAL




**Molten Chloride Fast Reactor**  
SOUTHERN COMPANY

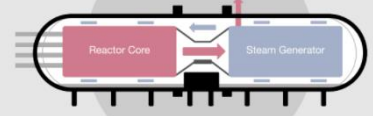
## Concept Development



**Advanced Sodium-Cooled Reactor Facility**  
ADVANCED REACTOR CONCEPTS



**Fast Modular Reactor**  
GENERAL ATOMICS



**Horizontal Compact High-Temperature Gas Reactor**  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

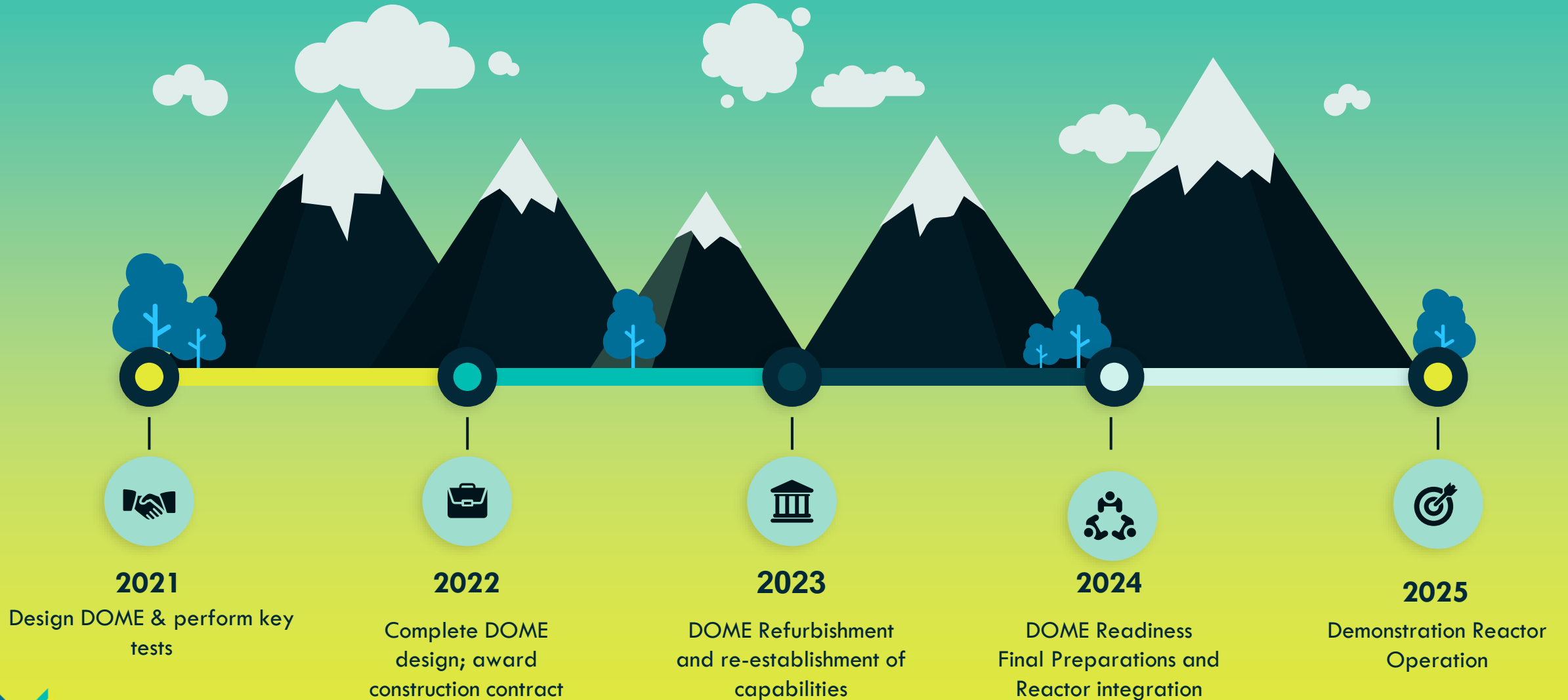
Slide content courtesy of U.S. DOE-NE

# Additional Projects with NRIC Support

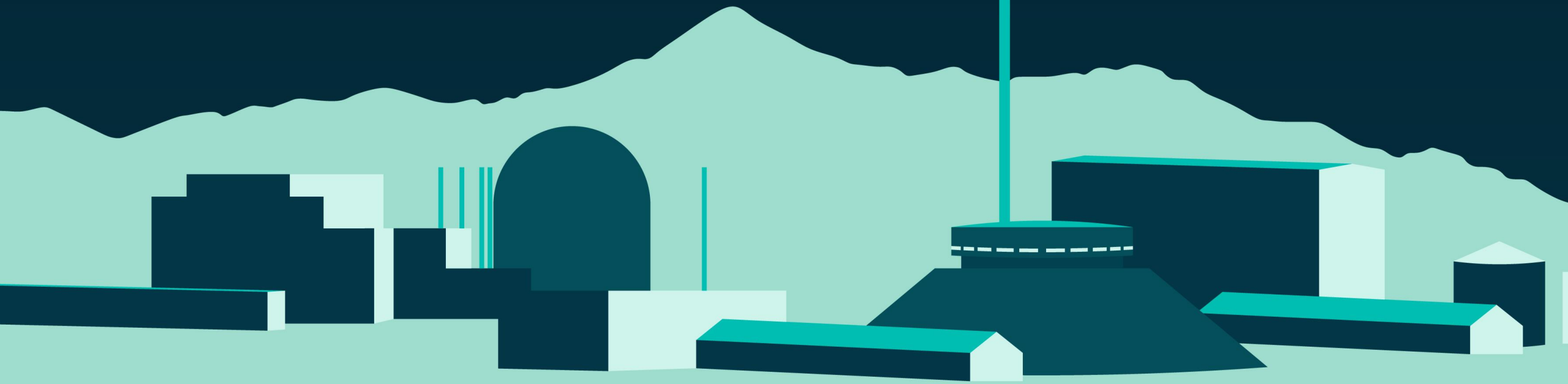
- Oklo
- Micronuclear
- Radiant
- DOD SCO Pele
- MARVEL



# NRIC Timeline for Demonstration in DOME Test Bed (representative)



# Empowering Innovators



- **Demonstration Resource Network**

(<https://nricmapping.inl.gov/>)

- Test Beds – DOME, LOTUS
- Demonstration Sites
- Experimental Facilities

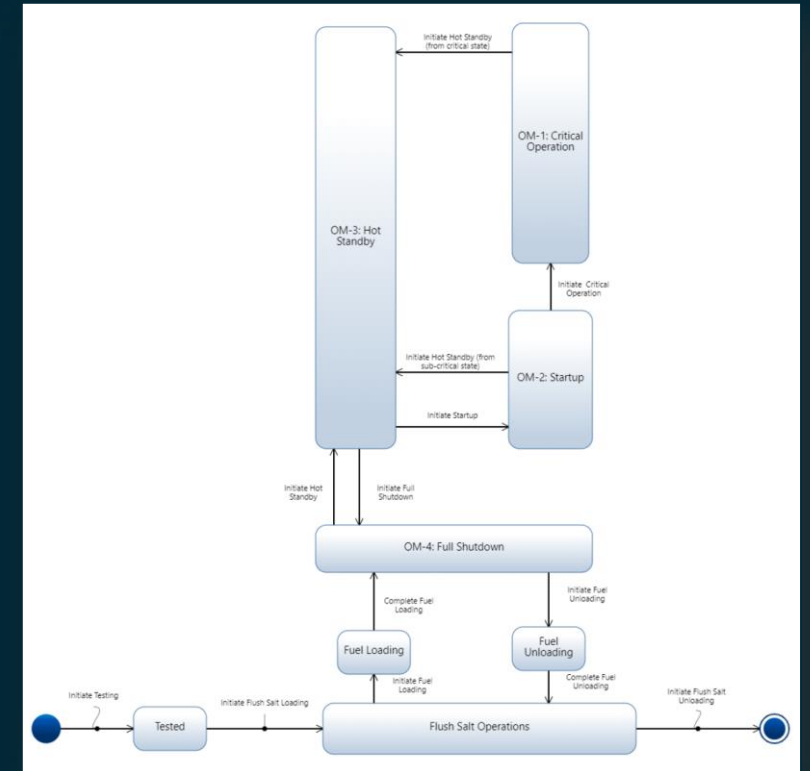
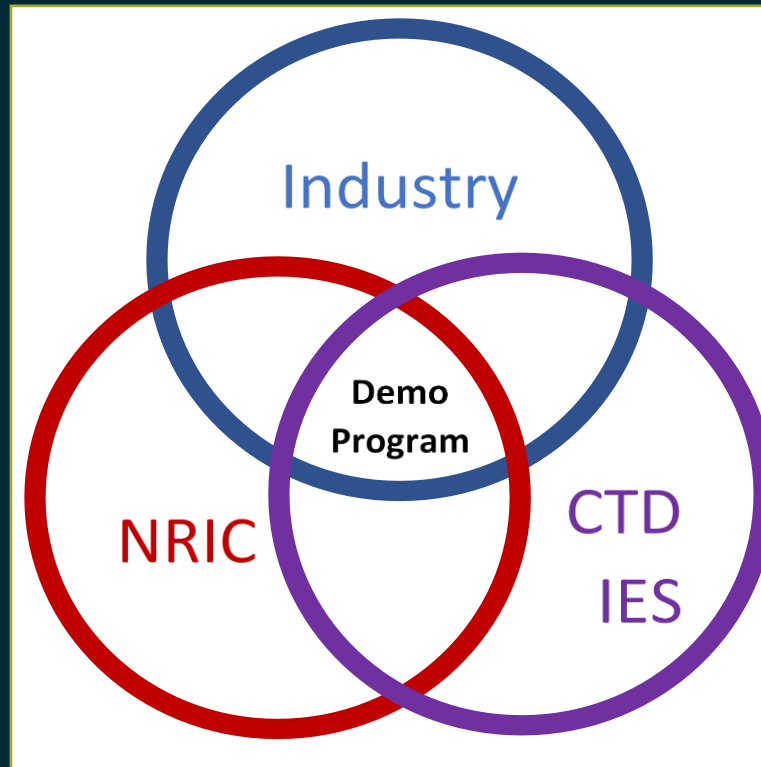
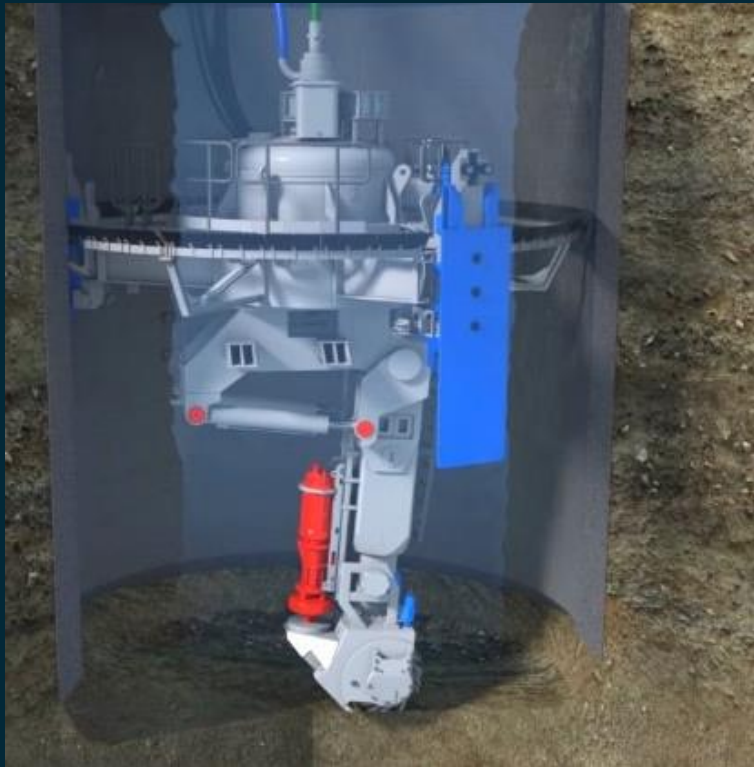
- **Regulatory Risk Reduction**

- Virtual Test Bed
- NRIC Resource Team
- Risk Management
- Coordination & Best Practices



# Addressing Cost and Markets

- Advanced Construction Technologies
- Integrated Energy Systems – EOI released April 22, 2021
- Digital Engineering
- Construction Readiness – initial scoping



**Thank you!**

