



National
Reactor
Innovation
Center



National Reactor Innovation Center Demonstration Test Beds

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NRC Regulatory Information Conference
W15: Empowering Advanced Nuclear Deployment with
Non-Power Reactors

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NRIC is a DOE-NE program, launched in FY2020

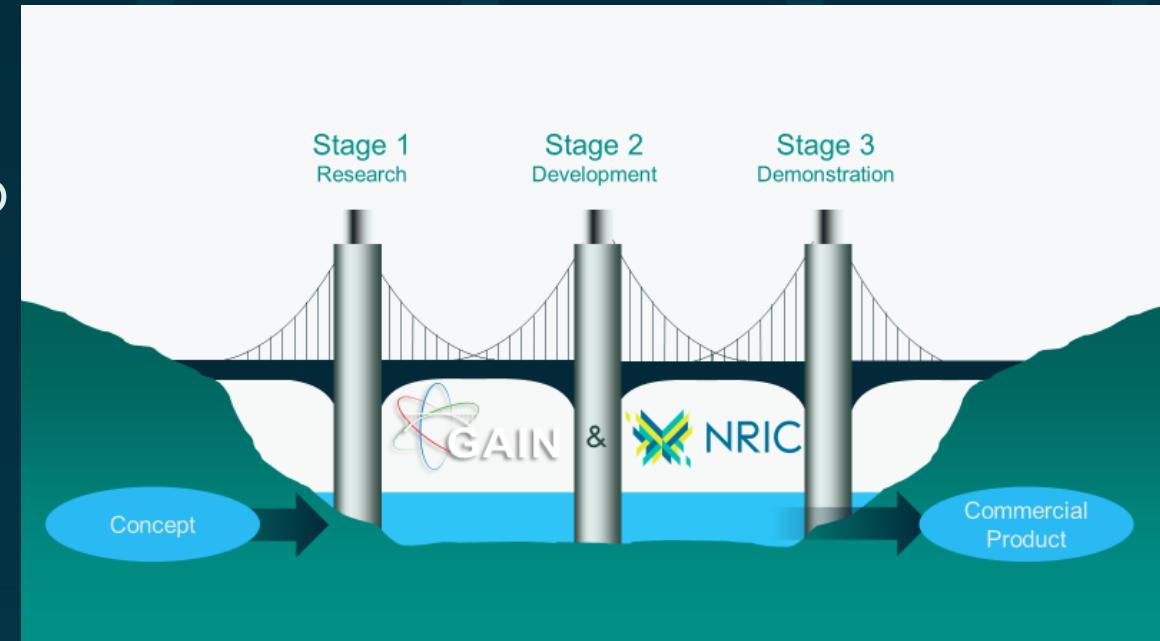


NRIC

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NRIC Accelerates Nuclear Reactor Demonstrations

- Authorized by the Nuclear Energy Innovation Capabilities Act (NEICA)
- Partner with industry to bridge the gap between research and commercial deployment
- Leverage national lab expertise and infrastructure
- Manage demonstrations to success



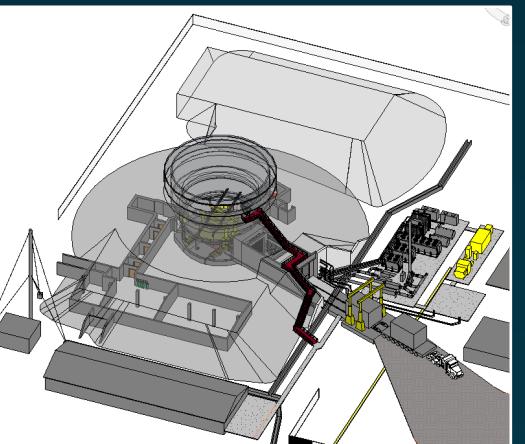
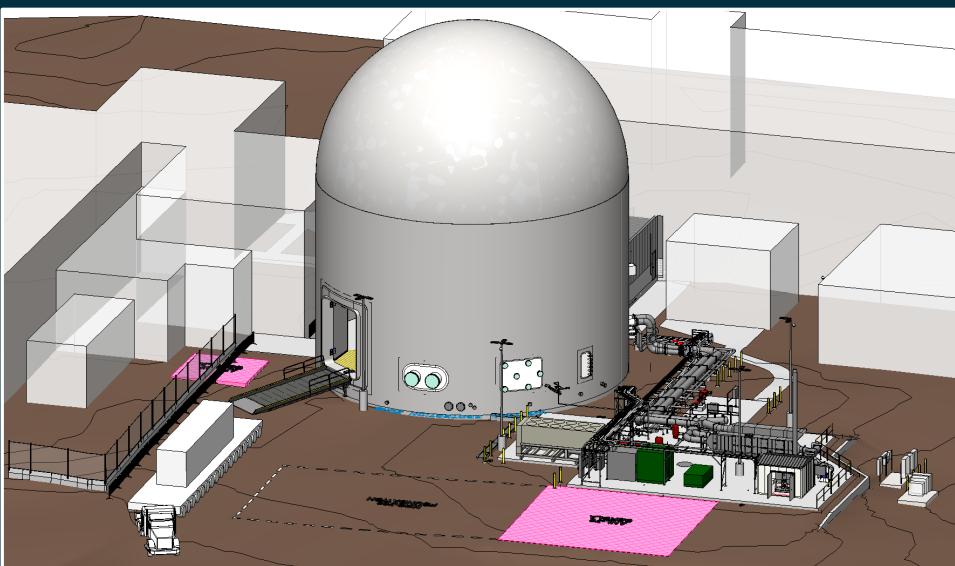
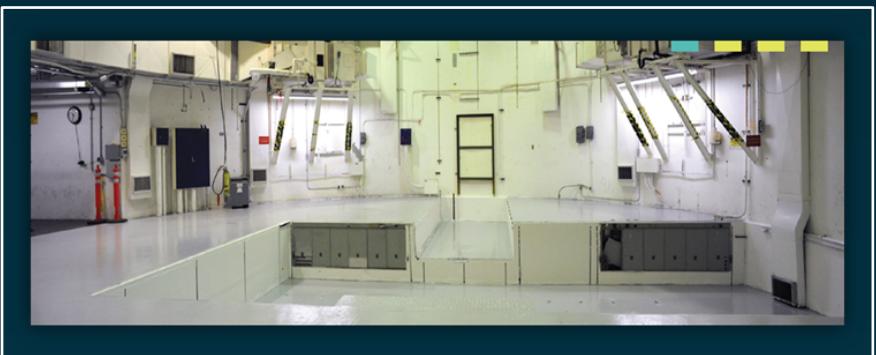
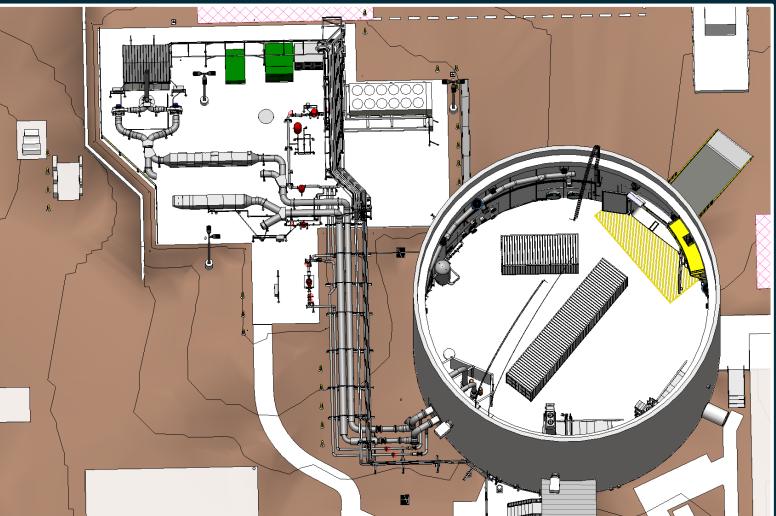
Empowering Innovators



- Demonstration Test Beds
- Experimental Facilities
- Virtual Test Bed
- Regulatory Risk Reduction

- Addressing Cost and Markets
- Planning Tools
 - NRIC Resource Team
 - NEPA guidance
 - Demonstration Resource Network (<https://nricmapping.inl.gov/>)
 - Siting Tool for Advanced Nuclear Development

NRIC Demonstration Test Beds



NRIC-DOME Test Bed

(Demonstration of Microreactor Experiments)

Strategy:

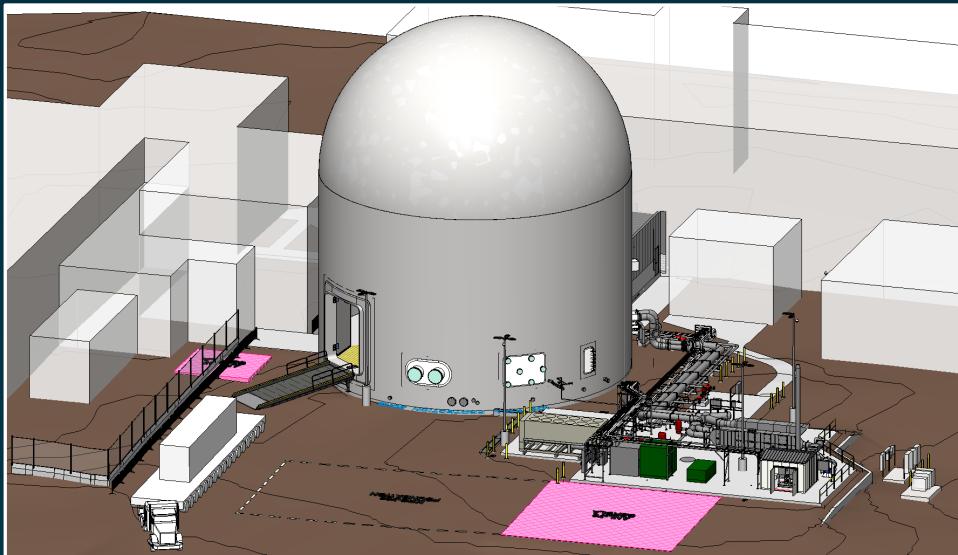
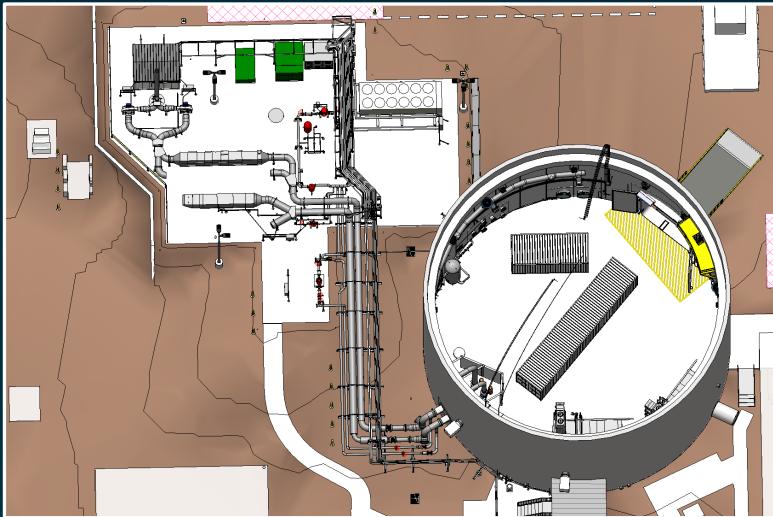
- Repurpose EBR II which operated from 1964 – 1994
- Establish a minimum viable test bed for microreactors

Capabilities:

- Microreactors up to 20MW thermal power
- High-Assay Low-Enriched Uranium (HALEU) fuels
- Safety-Significant confinement for reactors to go critical for first time

Progress:

- Final design completed September 2022
- Construction RFP released November 2022
- Long lead procurement RFPs released beginning December 2022



Thank you!

