



NRIC

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

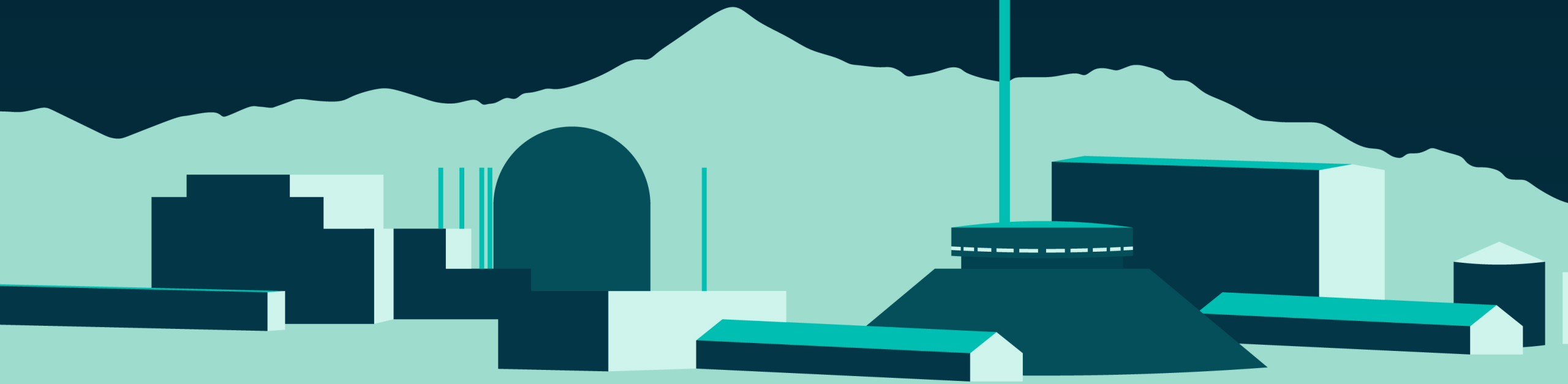
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## *NRIC Accelerates Nuclear Reactor Demonstrations*

- 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



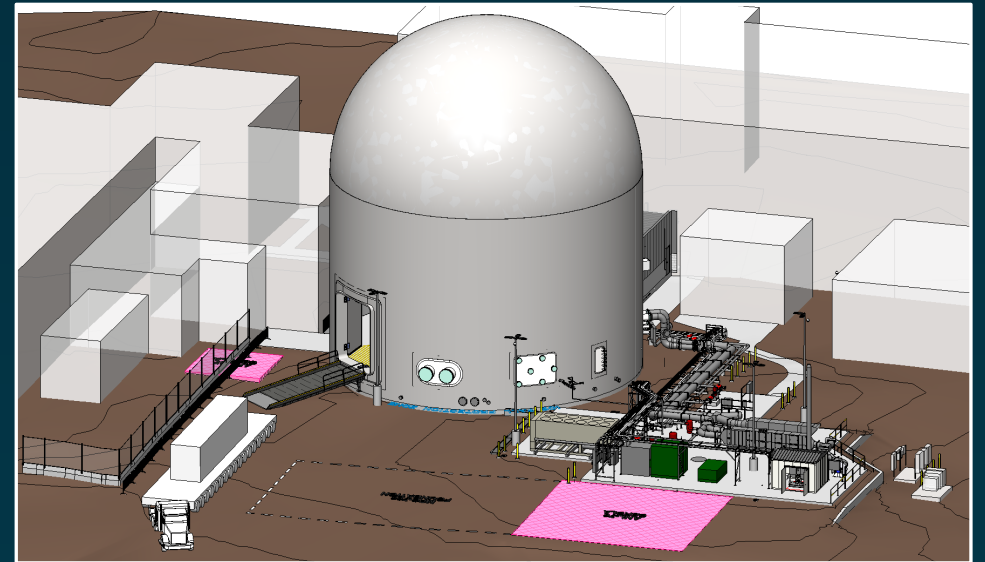
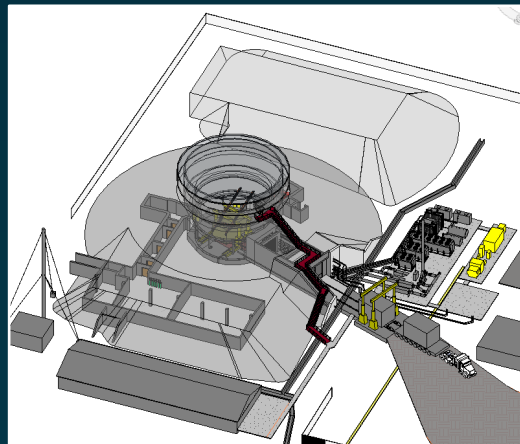
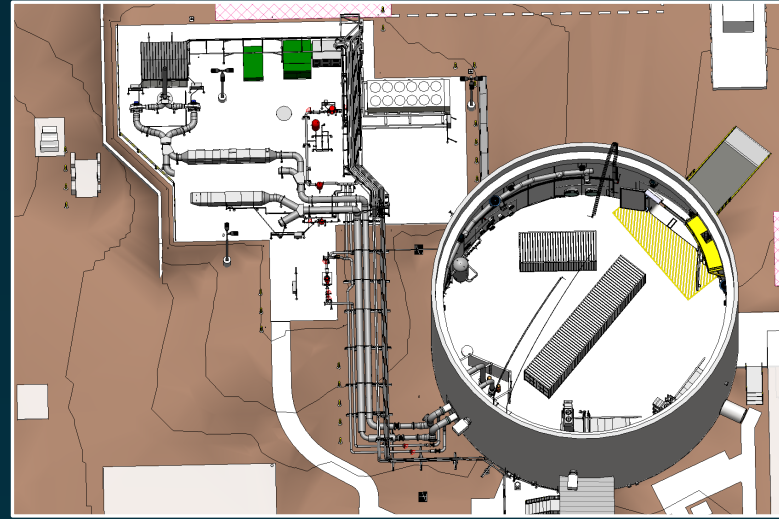
# Empowering Innovators



- 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:**

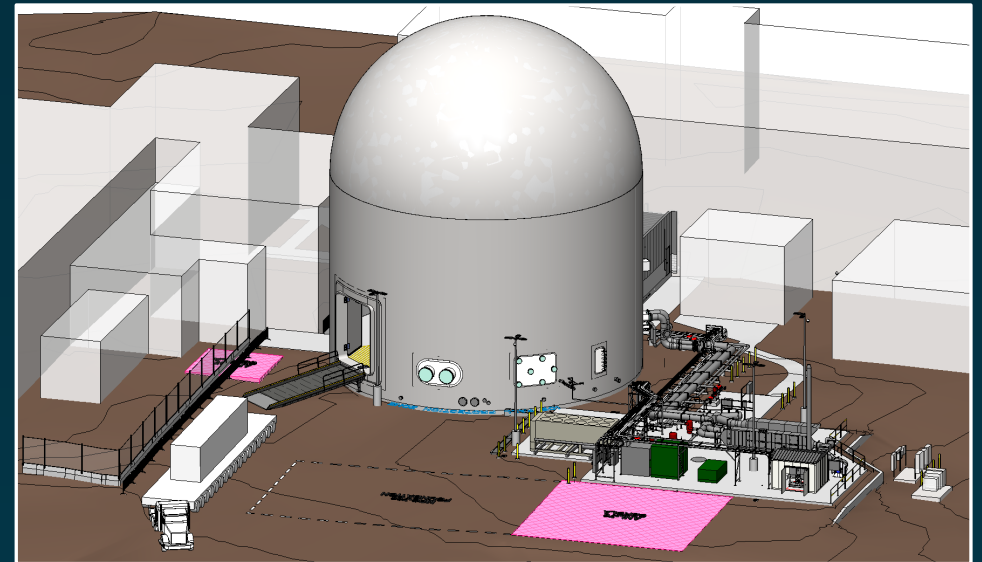
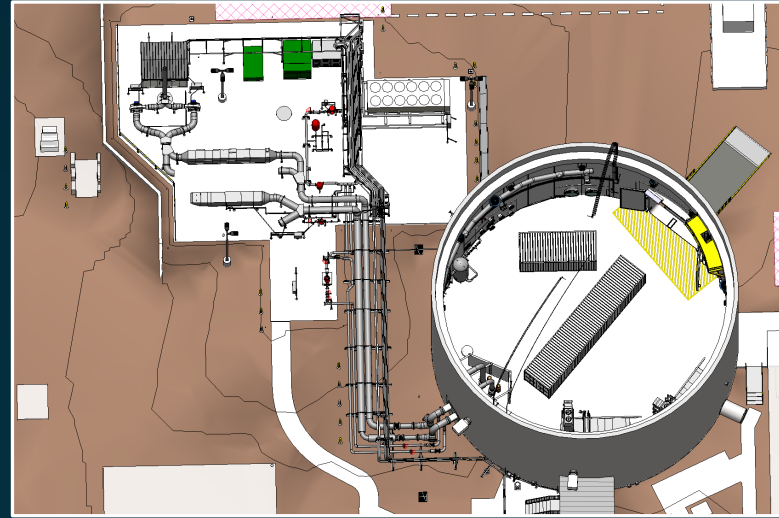
- Repurpose EBR II which operated from 1964 – 1994
- Establish a minimum viable test bed for microreactors

## **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!**

