Nuclear Energy

Gateway for Accelerated Innovation in Nuclear GAIN

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Accelerating Nuclear Tech to Market

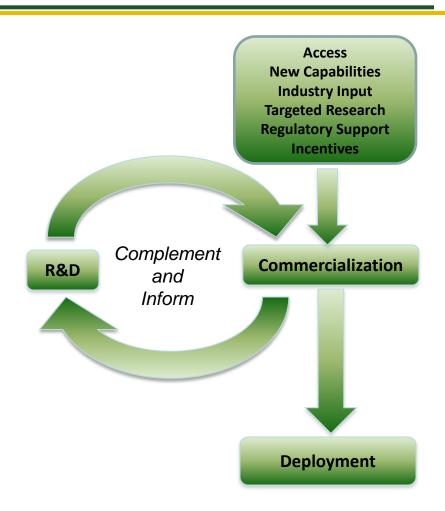
Nuclear Energy

■ Focus on technology commercialization

- Coordinate internally with OTT, GC, contracting offices and others
- Coordinate externally with utilities/other potential customers, reactor vendors, the research community, and NRC

Establish a nuclear "tech-to-market" technology accelerator program

- Align with DOE's Clean Energy Impact Investment Center to provide the nuclear energy component of a DOE wide "Single Point of Access" service
- Learn from programs with similar aims (such as the recently announced EERE Small Business Vouchers Pilot and Lab Corps programs)
- Provide industry with the technical, regulatory, and financial support to move designs toward commercialization





Nuclear Energy

Gateway for Accelerated Innovation in Nuclear (GAIN)

Virtual Design Capabilities

Nuclear Hybrid-Energy Technologies

Nuclear Cyber Design Support

Advanced instrumentation & Sensors

Advanced Manufacturing Methods

Others based on stakeholder input

NRC Interface "Gradual retirement of licensing risk"

Computational Resources and Multi-**Physics Modeling &** Simulation

> **Experimental** Facilities & **Experimental Scientists**

Knowledge & Validation Center

GAIN OFFICE

R&D Test Bed

EASY ACCESS TO STATE-OF-THE ART CAPABILITIES AND EXPERTISE WITHIN THE DOE COMPLEX

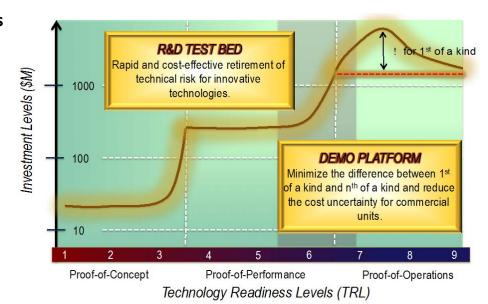


Nuclear Energy Innovation Test Bed

Nuclear Energy

- Builds on and expands the successful Nuclear Science User Facilities model
- Fosters the rapid and cost-effective maturation of technologies towards engineering-scale demonstration for innovative nuclear technologies
- Enables the use of existing capabilities at multiple institutions in an integrated and "fast and costeffective" manner
- Offers a wide range of flexible and re-configurable capabilities to address multiple technology needs
 - Irradiation, PIE, thermal-hydraulic loops, process development/testing, component fabrication/testing, etc.
- Includes predictive modeling and simulation capabilities to reduce the number of tests needed to optimize designs
- Incorporates a knowledge and validation center to provide easy and efficient access to existing data and legacy knowledge

TRL	Research Capabilities
1 - 3	Nuclear Science User Facilities
4 - 7	Nuclear Energy Innovation Test Bed



Phase II Phase III

A tailored approach to support technologies of varying TRLs