WE’VE DONE THIS BEFORE
Strategy

**Inspire**

*With Action, Urgency, and Results*
- Outreach/Showcase/Events
- Convening space
- Practical aesthetic design
- Visualization, augmented reality, etc.
- Test and demonstrate groundbreaking and cost-cutting techniques

**Empower**

*With Preparation, Teamwork, and Leadership*
- Provide access to government resources, facilities, sites, materials, & expertise
- Support permitting/regulatory needs
- Facilitate contracting and local engagement
- Collaborate with and support existing projects

**Deliver**

*With Follow-Through and an Intense Focus on Outcomes*
- Prepare sites
- Create demonstration pathways
- Provide navigation support from start to finish
- Core team for rapid demonstration excellence
- Understand private sector needs and meet them
Addressing Critical Path Issues

- Demonstration Reactor Infrastructure
  - Gap Assessment
  - Demonstration Reactor Sites
  - Fuel Production

- Regulatory and Economic Risk Reduction
  - NEPA Coverage
  - Safety Analysis
  - DOE Authorization and NRC Licensing Processes
  - Coordination with NRC
  - Digital Engineering
  - Advanced Construction Technology
  - Transportation and Disposition
  - Safeguards and Security
Nuclear Cost Drivers Identified in Recent Reports

• **Dominant cost categories:**
  – Civil construction
  – Site preparations and site-specific activities
  – Installation
  – Indirect costs

• **Key cost drivers:**
  – Standardization
  – Speed of construction/installation
  – Design stability
  – Quality control
  – Regulatory approach
  – Governance, contracting, organization, risk management

References:
• *The Future of Nuclear Energy in a Carbon-Constrained World*, Massachusetts Institute of Technology 2018
• *ETI Nuclear Cost Drivers Project: Summary Report*, Energy Technologies Institute (ETI), 2018
• *Advanced Nuclear Technology: Economic-Based Research and Development Roadmap for Nuclear Power Plant Construction*, Electric Power Research Institute (EPRI), 2019
Advanced Construction Technology EOI Request

- [https://beta.sam.gov/opp/dd45e829b2b8416fa4af633a2eb32caa/view](https://beta.sam.gov/opp/dd45e829b2b8416fa4af633a2eb32caa/view)
- Points of Contact: Steven.Gihring@inl.gov; George.Wood@inl.gov
- Published: April 13, 2020
- Responses Due: May 16, 2020 5:00 pm MDT
- Purpose: Information capture and planning
- Topic area: development and/or demonstration of advanced construction technologies and processes that would be transformative in nuclear energy system project economics and schedule success.
- Objective: Support reductions in nuclear energy construction and deployment costs. Increase confidence in the capability of nuclear energy systems to be delivered on schedule and on budget.
Responses should address

- Scope, structure, cost-sharing, teaming
- Benefits
- Projected cost-reduction impact on future nuclear energy construction or manufacturing
- Pathway to demonstrating technology in a nuclear project
- Potential locations or types of locations
- Approach to cost and schedule risk mitigation
- Experience and credibility
- Strategies to develop regulator experience and review of the technology
- Redundancy
FAQs
Other Questions?