



NRIC

National Reactor  
Innovation Center



# NRIC Maritime Overview

Sanjay Mukhi – NRIC Collaboration Manager

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MIS-25-83659



# Accomplishments Over the Past Year

Published ABS Task 1 *“Road Map for the Development of Commercial Maritime Applications of Advanced Nuclear Technology”*.

Completed DOE Review of ABS Task 2-1, 2-2, and 3 and the MNAG Regulatory Landscape Paper.

- *“Configurations of Commercial Advanced Nuclear-Maritime Applications”*
- *“Report on Potential Challenges and Impacts of Advanced Nuclear-Maritime Applications in the U.S.”*
- *“Readiness Report for DOE Support of Maritime-related Demonstration Projects of Advanced Nuclear Technology”*
- *“Introductory Review of the Maritime Nuclear Regulatory Landscape”*

Conducted 4 MNAG Quarterlies, 11 Working Group Meetings, 1 Maritime/O&G Joint Industry Project Workshop, and supported 1 IAEA Symposium on FNPP’s.

# Scoping

- Fixed/non-propulsion or mobile/propulsion (i.e. where a nuclear reactor is used to directly propel a vessel).
- Fixed (intended for a fixed location), transportable (can be moved, used onsite), or mobile (can be used on the go).
- Depending on the context and purpose, other taxonomies may also apply.

## Maritime Nuclear Applications



### LAND-BASED APPLICATIONS

#### Reactor Onshore

##### Applications:

- Microreactor or SMR sited at port producing electricity, heat, or synthetic fuels



### OFFSHORE FIXED OR FLOATING APPLICATIONS

#### Reactor Offshore: Offshore Power Consumption

##### Applications:

- Small floating power station for offshore industry
- Floating datacenter
- Small floating power station for offshore eFuels production
- Floating desalination plant

#### Reactor Offshore: Onshore Power Consumption

##### Applications:

- Small floating power station for coastal industry



### MOBILE APPLICATIONS

#### Reactor Offshore: Nuclear Powered Vessels (International Transport)

##### Applications:

- Nuclear power container ship
- Nuclear electric dry cargo ship
- Nuclear electric gas carrier
- Nuclear electric car carrier with electric vehicle charging and power to shore
- Nuclear electric passenger ship
- Nuclear deep sea tug
- Nuclear electric ice breaker with reverse cold ironing facility
- Nuclear electric tanker

#### Reactor Offshore: Nuclear Powered Vessels (Domestic Transport)

##### Applications:

- Nuclear electric river towboat
- Nuclear electric offshore support vessel
- Nuclear electric tanker
- Nuclear drill ship
- Nuclear electric dredging vessel
- Nuclear power container ship
- Nuclear electric dry cargo ship
- Nuclear electric gas carrier
- Nuclear electric car carrier with electric vehicle charging and power to shore
- Nuclear electric passenger ship

Portion of an Example Taxonomy from American Bureau of Shipping work  
funded by DOE-NE iFOA

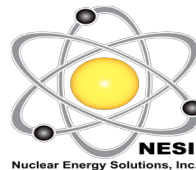
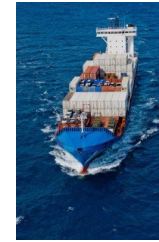
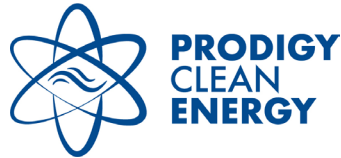
# Maritime Nuclear Application Group (MNAG)

Opportunities for presentations and discussions on a wide crosscut of topics.

NRIC	ABS	MPR Associates	Social/Environmental WG	Gard
<ul style="list-style-type: none"> <li>Activities for Education &amp; Public Awareness &amp; Engagement Strategies</li> <li>ABS Task 3 Update– Readiness Report for DOE Support of Maritime-related Demonstration Projects of Advanced Nuclear Technology</li> <li>MNAG Report - Introductory Review of the Maritime Nuclear Regulatory Landscape</li> <li>Report Intro - Ship Motion Test Facility – Engineering Requirements / Cost Estimate</li> <li>MNAG Report – Intro - Economic, Environmental, and Social Considerations of Maritime Applications of Nuclear Technology</li> <li>Report Results - Ship Motion Test Facility – Engineering Requirements / Cost Estimate</li> <li>MNAG Report – Results – Economic and Public Acceptance of Maritime Applications of Nuclear Technology</li> </ul>	<ul style="list-style-type: none"> <li>DOE Hydrogen Earthshot RFI</li> <li>ABS Global Forum and House Nuclear Caucus Recap</li> <li>ABS Task 3 Update– Readiness Report for DOE Support of Maritime-related Demonstration Projects of Advanced Nuclear Technology</li> <li>ABS Task 4 Update – Develop Guidance for Addressing Key Technical, Regulatory, Safety/Security, and Policy Issues for Maritime Demonstration Projects</li> <li>Public Perception of Nuclear Energy</li> <li>DOE Award to ABS &amp; NRIC: Advanced Nuclear Maritime Demonstration Projects Summary of Research</li> </ul>	<ul style="list-style-type: none"> <li>Report Intro - Ship Motion Test Facility – Engineering Requirements / Cost Estimate</li> <li>MNAG Report – Intro - Economic, Environmental, and Social Considerations of Maritime Applications of Nuclear Technology</li> <li>Report Results - Ship Motion Test Facility – Engineering Requirements / Cost Estimate</li> <li>MNAG Report – Results – Economic and Public Acceptance of Maritime Applications of Nuclear Technology</li> </ul>	<ul style="list-style-type: none"> <li>Major announcements/ news from COP 2021</li> </ul>	<ul style="list-style-type: none"> <li>Overview of Marine Liability Insurance</li> </ul>
			<b>Zeno Power</b>	<b>Department of State on the Directorate of Defense Trade Controls (DDTC)</b>
			<ul style="list-style-type: none"> <li>Liability Issues for Maritime Nuclear</li> </ul>	<ul style="list-style-type: none"> <li>International Traffic in Arms Regulations</li> </ul>
			<b>INL</b>	
			<ul style="list-style-type: none"> <li>Offshore O&amp;G Nuclear Workshop – Joint Industry Project</li> </ul>	
			<b>DOE-EERE</b>	
			<ul style="list-style-type: none"> <li>Interagency Maritime Decarbonization R&amp;D Working Group</li> </ul>	
		<b>Edmund</b>		
		<ul style="list-style-type: none"> <li>Green Corridors / Clydebank Declaration</li> </ul>		
	<b>Core Power</b>	<b>ORNL</b>		
	<ul style="list-style-type: none"> <li>DOE Hydrogen Earthshot RFI</li> <li>UK Regulatory Update: Consultation on the draft merchant/nuclear ships regulations 2021</li> <li>UK Regulatory Developments</li> <li>Core Powe Update – Emergency Planning Zones in Maritime Applications</li> </ul>	<ul style="list-style-type: none"> <li>Regulatory Framework for Nuclear and Maritime Security.</li> </ul>		
<b>SNL</b>		<b>NRC</b>		
<ul style="list-style-type: none"> <li>DOE Award to ABS &amp; NRIC: Advanced Nuclear Maritime Demonstration Projects Summary of Research (ABS).</li> <li>Security for FNPPs</li> </ul>		<ul style="list-style-type: none"> <li>Regulatory Considerations for Maritime Nuclear</li> </ul>	<b>Morgan Lewis</b>	
			<ul style="list-style-type: none"> <li>Commercial Maritime Applications for Advanced Reactors – Onshore vs. Commercial maritime domestic/international</li> <li>Nuclear Liability for FNPPs in U.S. Waters</li> </ul>	

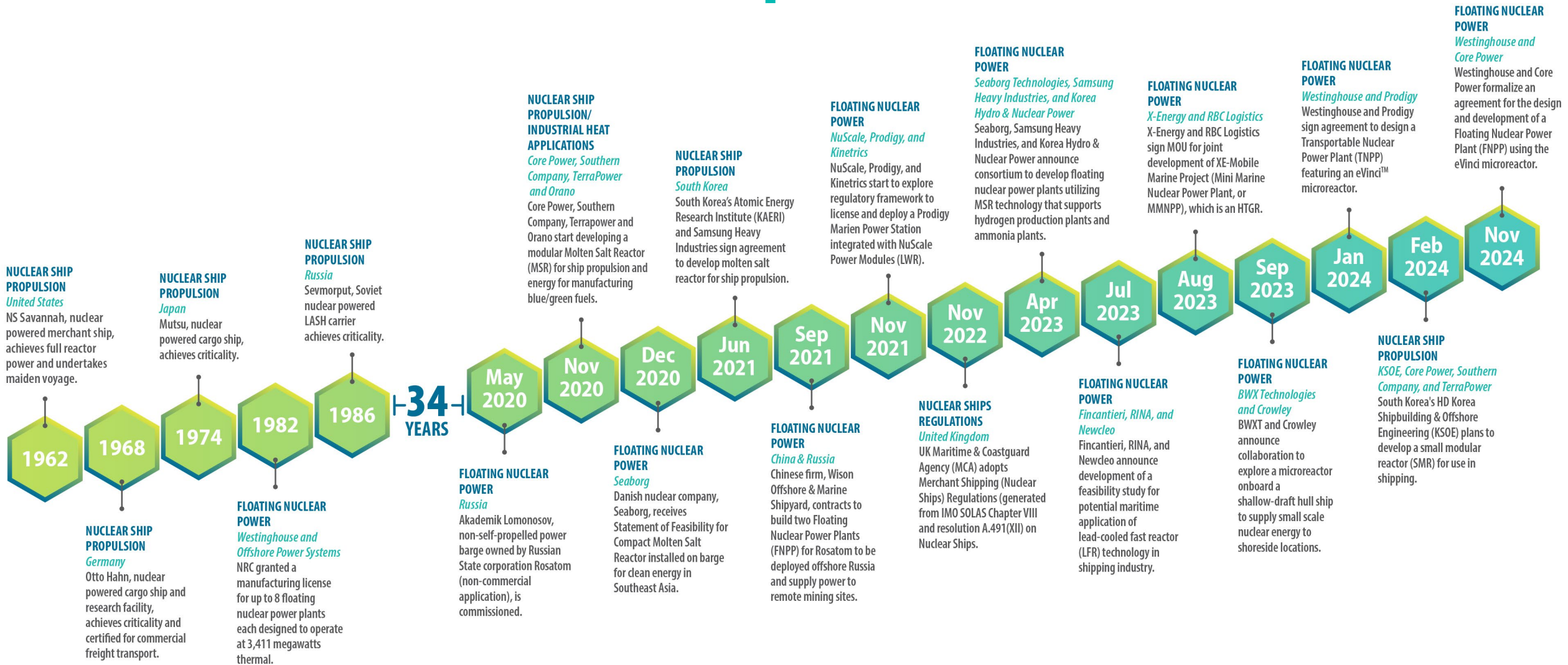


# Rapidly Expanding Landscape – MNAG Participants





# Civilian Efforts up to 2024





# Economic Impacts

Table 1 Revenue Differences for a Nuclear Ship compared to Baseline Fossil Fueled Ship<sup>1</sup>

Difference	% Change in Revenue
Speed of Ship at Sea	+8.2%
Cargo Capacity in Weight	+0.3%
Outage Time for Refueling	-4.6%
Overall Effect	3.5%

1. These conclusions are specifically tied to the assumptions made in Appendices 8.1.2 and 8.1.3, and the specific scenario examined, which are meant to reflect one potential use case of nuclear shipping. Different ships, outage scenarios, and routes, and cargo would lead to varying conclusions.

# Economic Impacts

## Synthetic Fuel Production

Required Breakeven Maritime  
Nuclear Reactor OCC (\$/kWe)



Figure 1 Breakeven nuclear plant OCC diagram for synthetic maritime fuel production



# Economic Impacts

## Electricity Generation in Remote Community

Required Breakeven Maritime  
Nuclear Reactor OCC (\$/kWe)

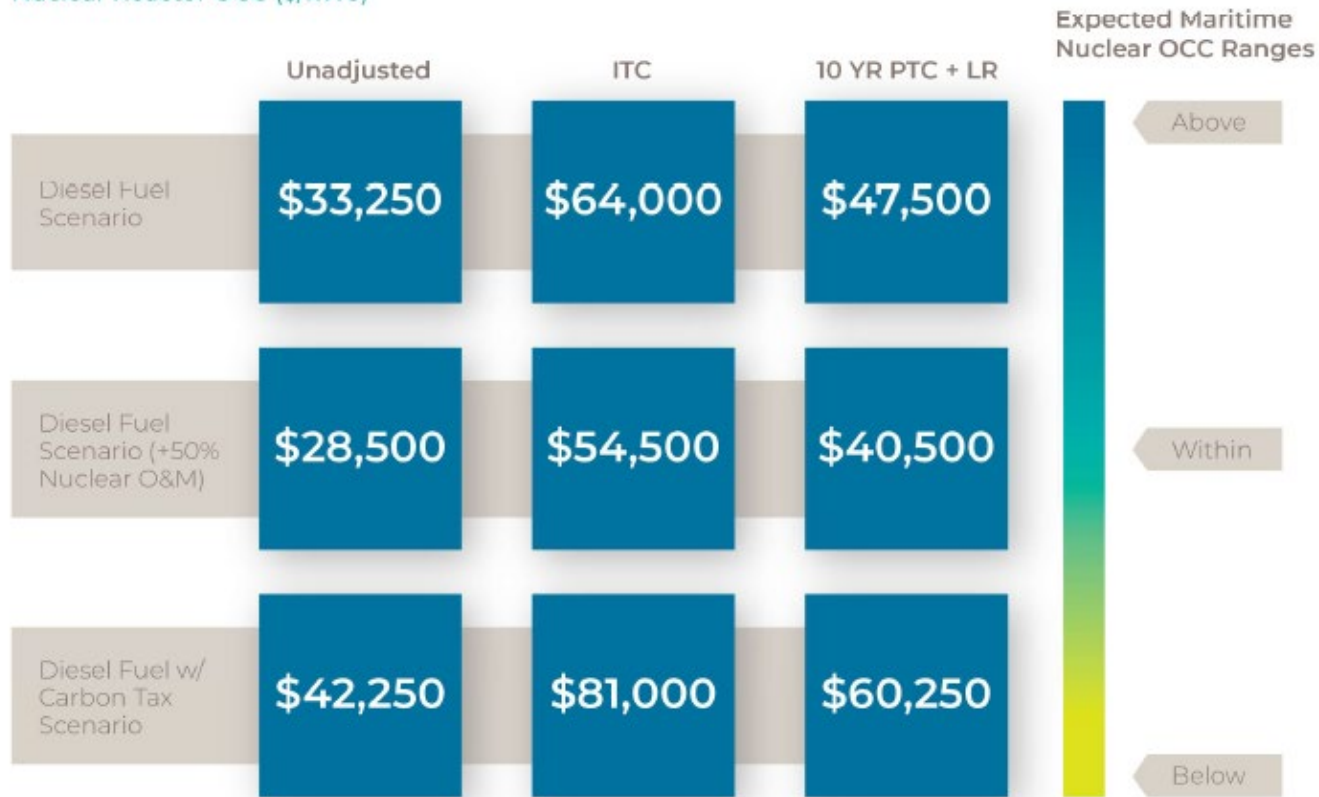


Figure 2 Breakeven nuclear plant OCC diagram for remote community electricity production

# Economic Impacts

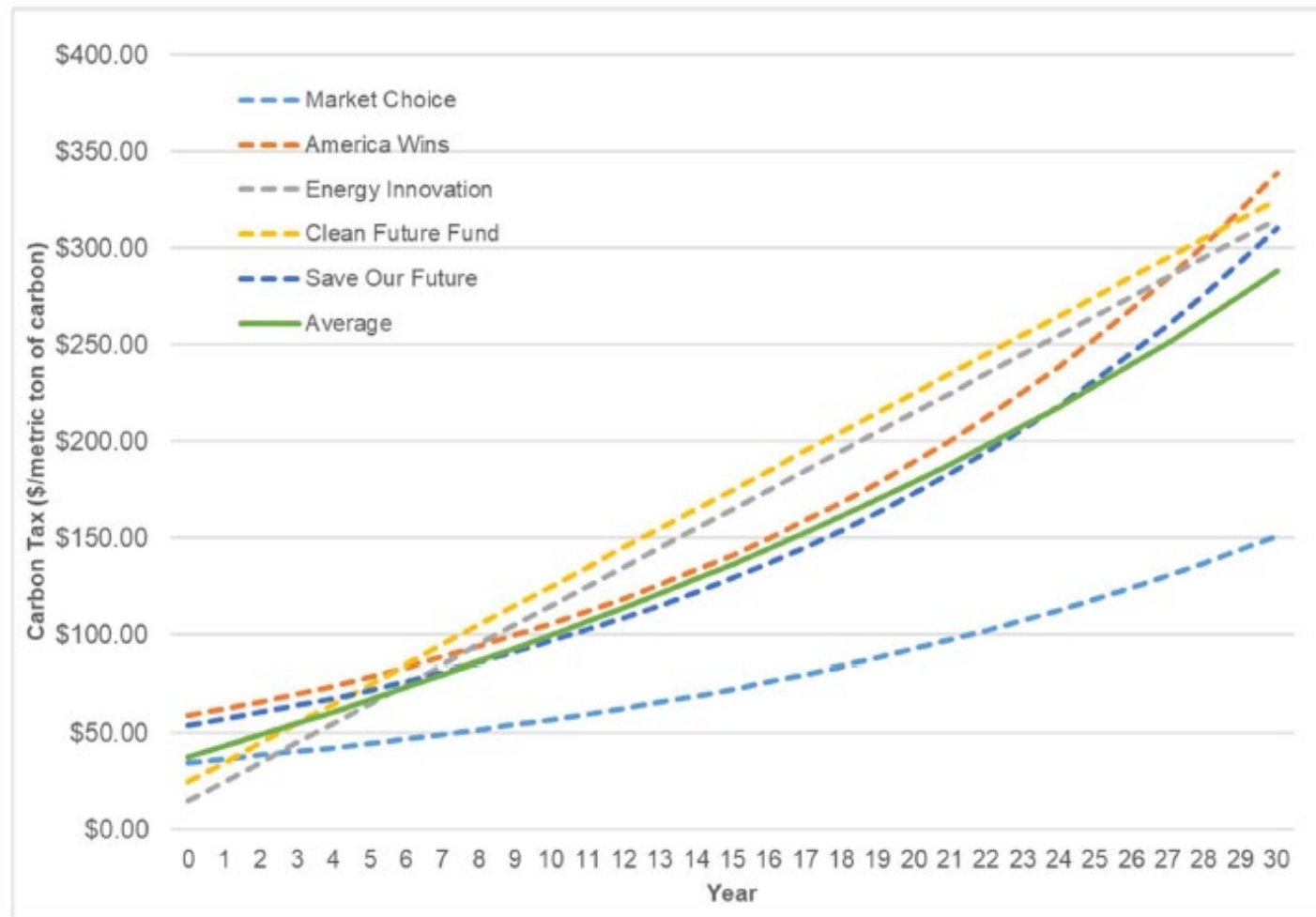


Figure 4 Proposed U.S. carbon taxes, over time



# Economic Considerations

Tax Incentives

Capital Intensive and FOAK

Modularity and Shipbuilding Practices

Flexible Deployment

Operational Differences

Nuclear Security and Perception

Revenue Difference for Nuclear Ships

Breakeven OCC's

# Environmental Impacts and Public Perception



REVERSE COLD  
IRONING



POLLUTION AND  
RADIATION RISKS  
DURING OPERATION



DECOMMISSIONING  
AND WASTE  
MANAGEMENT



COMMUNITY  
ENGAGEMENT AND  
ENVIRONMENTAL  
IMPACT



JOB CREATION



RELIABLE SOURCE OF  
ENERGY



# R&D Path Forward

What reactor technologies can best be applied to various maritime applications?

To what extent can Modeling and Simulation (ModSim) be used to test advanced reactor designs for maritime applications?

What phenomena needs to be evaluated for maritime applications?

What physical tests need to be developed to supplement ModSim testing?

What needs to be modified for land-based reactors to be leveraged for maritime applications?





# Regulatory Path Forward

How do you define a site for maritime applications and what are the regulatory jurisdictional requirements for various waters?

How should safety, security, safeguards, and liability be applied to maritime applications?

What guidance can the NRC provide to nuclear developers seeking to develop reactor offerings for maritime applications?

What broader regulatory frameworks need to be developed to license nuclear reactors for maritime applications?

What broader regulatory frameworks need to be developed for international deployments of nuclear reactors for maritime applications?



# Finance Path Forward

How can nuclear project risks be clarified and mitigated for first-movers within the maritime industry seeking to deploy advanced reactors?

What are the opportunities for cost reductions for maritime nuclear applications?

What should be the liability coverage for maritime nuclear applications?

How can a demonstration program de-risk commercial opportunities for maritime nuclear applications?



# Public Acceptance Path Forward

What lexicon should be used in both the nuclear and maritime industry to aid in multidisciplinary development?

Are there key messages that industry partners should leverage to increase buy-in from the coastal communities, investors, interest groups, and government partners?

How should key messages be conveyed to stakeholders to achieve broad consensus for demonstrating and deploying advanced nuclear reactors for maritime applications?



# National Security Path Forward

What public safety impacts could maritime nuclear applications have in the event of a catastrophic threat and what guidance can be provide to developer to enable 3S by design?

What infrastructure needs to be modernized to support maritime nuclear applications?

How could the development of these technologies aid a country with using nuclear reactors for military applications?

What proliferation risks exist with these technologies for countries seeking to develop a nuclear weapons program?

Questions?



NRIC

National Reactor  
Innovation Center







# DOE IFOA to ABS & NRIC: Advanced Nuclear Maritime Demonstration Projects

Jorge Segovia  
04/03/2025

**Award Number: DE-NE0009226**  
Update to NRIC Program Review

# Team Members & Project Contacts

## ABS Project Team

Name	Company	Role Title
Domenic Carlucci	ABS	Principal Investigator
Jin Wang	ABS	Project Director
Mayir Mamtimin	ABS	Project Support - Nuclear SME
Jorge Segovia	ABS	Project Support
David Johnson	ABS Contractor	Consulting SME
Najla Streety	ABS	Project Management Office
Crystal Duplechin	ABS	Project Management Office
Kathryn Dodd	ABS	Project Accounting

## Gratis Support

Name	Company	Role Title
Keith Letourneau	Blank Rome LLP	Nuclear Legal SME
Alex Polonsky	Morgan, Lewis & Bockius LLP	Nuclear Legal SME

## Award Partners

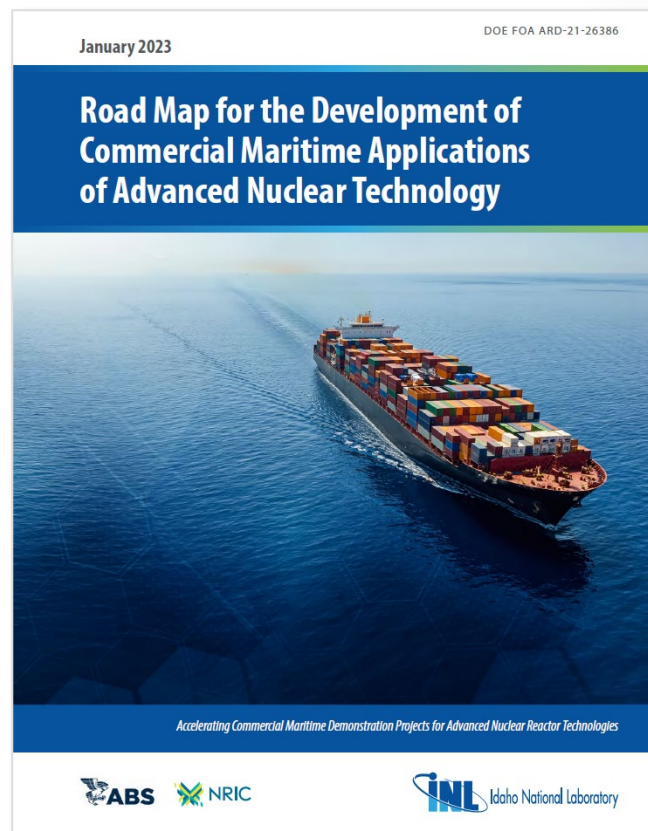
Name	Company	Role Title
Jacopo Buongiorno	MIT Contractor	Consulting SME
River Bennett	ABS Contractor	Consulting SME
Sanjay Mukhi	NRIC (INL)	NRIC Project Manager
Marvin Fielding	NRIC (INL)	NRIC/INL Program Manager
Jorge Arvelo	MPR Associates Inc	NRIC Consultant
Wesley Price	MPR Associates Inc	NRIC Consultant
Sean Robinson	MPR Associates Inc	NRIC Consultant
Abdalla Abou-Jaoude	INL	NRIC & INL SME

# Overall Project Schedule

Task/Milestone/Deliverable	Year 1												Year 2											
	Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4		
	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24
<b>Task 1: Develop Demonstration Project Pathways and Business Case</b>																								
<b>Deliverable 1-1:</b> Road Map for the Development of Commercial Maritime Applications of Advanced Nuclear Technology						D																		
<b>Task 2: Develop Models of Various Advanced Reactor Technologies Integrated with Maritime Applications</b>																								
<b>Deliverable 2-1:</b> Configurations of Commercial Advanced Nuclear-Maritime Applications										D														
<b>Deliverable 2-2:</b> Report on Potential Barriers and Impacts of Advanced Nuclear-Maritime Applications in the U.S.																D								
<b>Task 3: Assess and Enhance DOE Readiness for Demos</b>																								
<b>Deliverable 3-1:</b> Readiness Report for DOE Support of Maritime-Related Demonstration Projects of Advanced Nuclear Technology																					D			
<b>Task 4: Develop Guidance for Addressing Key Technical, Regulatory, and Policy Issue for Maritime Demonstration Projects</b>																								
<b>Deliverable 4-1:</b> Overcoming Barriers to Nuclear-Maritime Demonstrations																								D



# Task 1 Summary



# Task 1 – Key Takeaways

## Maritime Nuclear Applications



### LAND-BASED APPLICATIONS

#### Reactor Onshore

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- Nuclear electric dry cargo ship
- Nuclear electric gas carrier
- Nuclear electric car carrier with electric vehicle charging and power to shore
- Nuclear electric passenger ship



# Task 1 – Key Takeaways: Regulatory Gap Analysis

	Activity or Milestone	Description (jurisdiction, authority, etc.)	Gaps – what may need to be addressed?
<b>Nuclear Technology</b>	Experimental Reactor License	DOE	Does not allow commercial applications
	Commercial Reactor License	NRC	Reactor Design Certification, Operating License, Manufacturing License, Fueled Reactor transportation, physical protection systems
<b>Marine Technology</b>	Equipment Certification	Recognized Organization	Does not typically cover nuclear reactors
	Classification Approval	Classification Society	Missing or lacking Rules for Nuclear Vessels/Offshore Structures
	Statutory Approval	Flag State	Missing or lacking Rules for Nuclear Vessels/Offshore Structures
<b>Location-Based Regulatory Milestones:</b>	Territorial Waters & Internal Waters	National Authority, Local Authority	Issues involving or allowances of nuclear material and reactors
	EEZ Waters	National Authority	Issues involving or allowances of nuclear material and reactors
	International Waters	Enforced by member states	Missing or lacking updated rules for Nuclear Vessels/Offshore Structures (Beyond SOLAS Chapter VIII) [58]
	Transport of Nuclear Fuel	Applicable transportation authority	Covered under the Irradiated Nuclear Fuel (INF) Code of the IMO
	Transport of fueled reactor	Applicable transportation authority	Missing or lacking updated rules for transporting reactors carrying unused or partially used nuclear materials
<b>Application-Based Regulatory Milestones:</b>	Power to Nearby Offshore Installations	Specific requirements for integration	Missing or lacking Rules for Nuclear Vessels/Offshore Structures
	Power Self-Consumption Onboard (integrated with marine systems)		Missing or lacking Rules for Nuclear Vessels/Offshore Structures

*Complete Gap Analysis provided in Deliverable 1-1*

# Task 1 – Key Takeaways: 2050 Demand

Application	Potential 2050 Demand
Port Producing Electricity	+3 to 5 ports powered by advanced nuclear power
Land-Based Heat and Synthetic Fuels	+ 35 to 70 million metric tonnes of hydrogen production powered by advanced nuclear power
Floating Data Center	+ 9 to 35 advanced nuclear powered floating data centers
Floating Power for Coastal Energy	+ 1 to 2GW advanced nuclear powered floating black-start capacity
Offshore Synthetic Fuel	2.5 to 5 million metric tonnes of floating hydrogen production powered by advanced nuclear power
Floating Desalination	+2 to 6 floating advanced nuclear powered desalination plants by 2050 in U.S.
U.S. Commercial Ship Propulsion	+5 to 11 U.S. ships using advanced nuclear propulsion
Global Commercial Ship Propulsion	+328 to 820 global ships using advanced nuclear propulsion (including U.S. vessels)

## Other Information Summarized:

- History of Maritime-Nuclear Applications, Commercial and Navy
- Summary of Decarbonization Drivers
- Potential Benefits of Nuclear Power for Maritime Applications
- Introduction to Potential Barriers or Issues
- Introduction to INL Facilities and Demonstration Capabilities
- Proposed Milestones for Demonstration in Nuclear and Maritime Industries
- Key aspects of Regulatory Landscape: Social License, Location, Nuclear Use

*Complete 2050 Demand Estimate provided in Deliverable 1-1, including assumptions used*



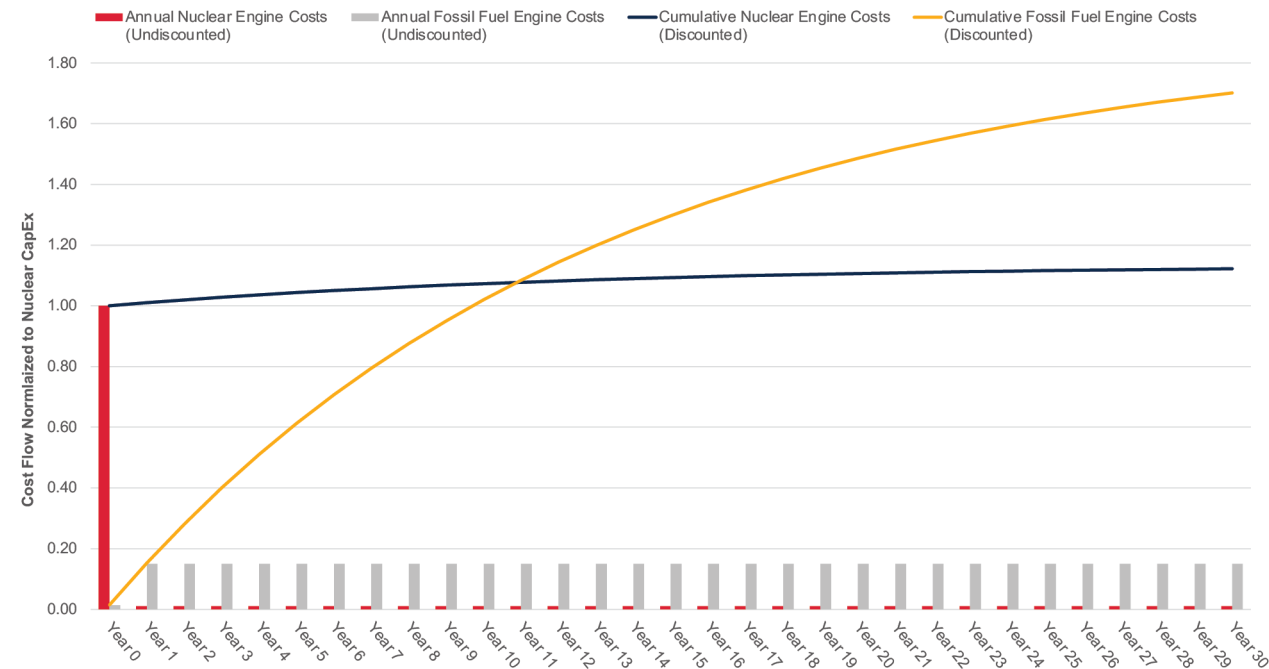
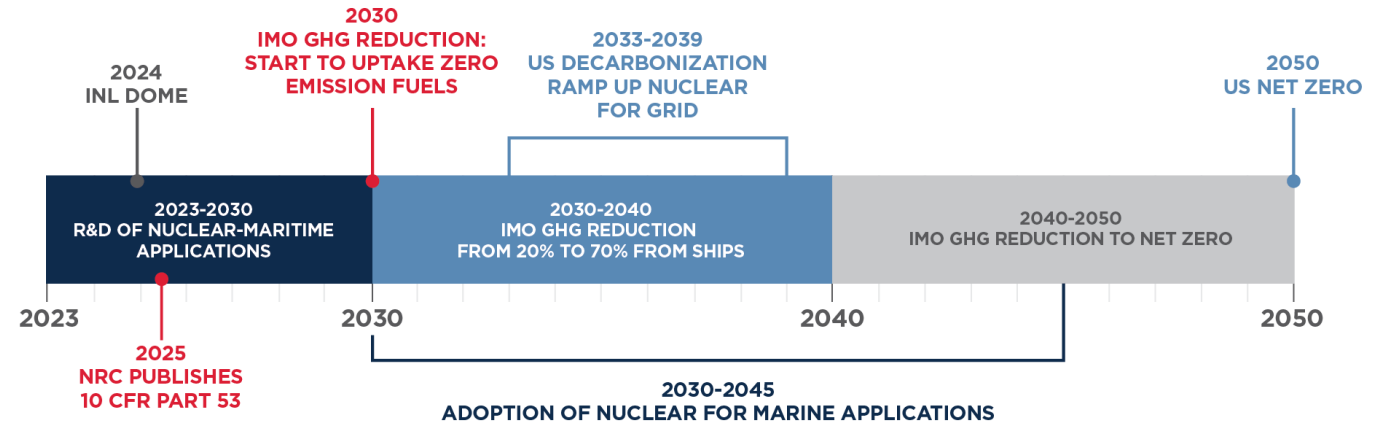
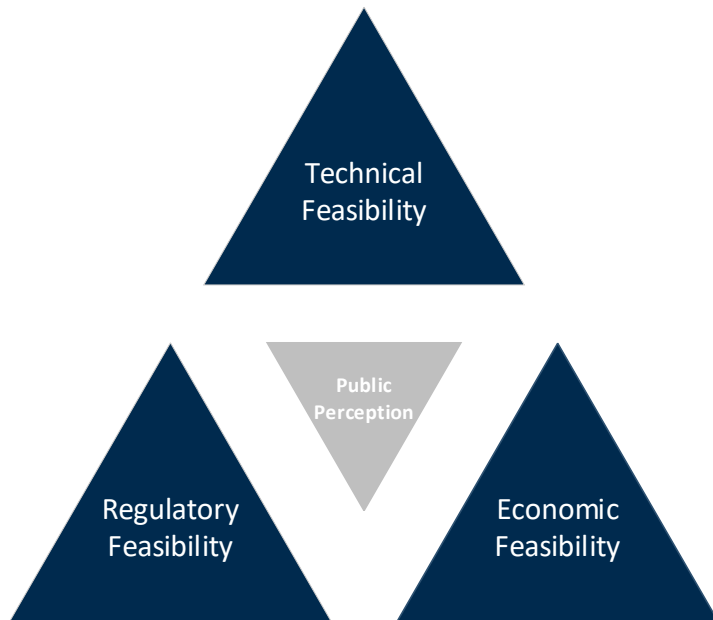
# Task 2 Summary



# Task 2 – Key Takeaways: Deliverable 2-1

- Introduction to Technical, Regulatory, and Economic Feasibility Requirements
- Proposed / Expected Timelines
- Introduction to Advanced Reactor Technology and Types of Reactors
- Techno-economic Evaluation and Example Configurations
  - Nuclear Power for Synthetic Fuel Production
  - Nuclear Propulsion for Ships
- Appendices for Additional Information
  - Details of Technical Criteria for Marine Applications
  - Introduction to Nuclear Energy
  - Additional Regulatory Information for Targeted U.S. States
  - Additional Information of U.S. Agencies
  - Details of Nuclear-Maritime Economic Evaluations

# Task 2 – Key Takeaways: Deliverable 2-1





# Task 2 – Key Takeaways: Technology Suitability

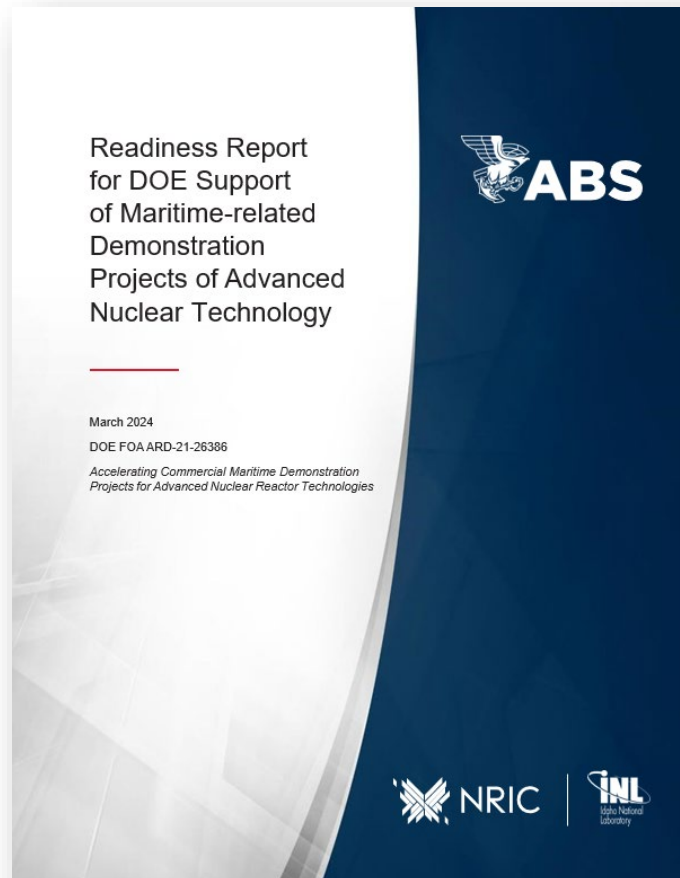
Reactor Size	Fixed Land/coast	Fixed offshore only	Fixed offshore w/ onshore grid coupling	Mobile local	Mobile international
Large (> 300 MWe)	✓			✗	✗
SMR (< 300 MWe)	✓	✓	✓	✓	✓
Micro (< 20 MWe)				✓	✓
Reactor Type					
Light Water Reactor (LWR)	✓				
Sodium Fast Reactor (SFR)	✓			✗	✗
Lead Fast Reactor (LFR)					
High-Temperature Gas Reactor (HTGR)	✓	✓	✓		
Fluoride High-Temperature Reactor (FHR)	✓	✓	✓	✓	✓
Molten Salt Reactor (MSR)	✓	✓	✓	✓	✓
Heat Pipe Reactor (HPR)	✓			✓	✓

# Example Potential Barriers – D2-2 Table 1 (shortened for viewing)

Key Barrier	Technical Issues	Regulatory Issues	Economic Issues
<b>Security, Non-Proliferation &amp; Export Control</b>	<ul style="list-style-type: none"> <li>Design for security and non-proliferation risks</li> <li>Direct attack or sabotage may involve potentially severe technical consequences to the unit and to future designs or applications.</li> </ul>	<ul style="list-style-type: none"> <li>ITAR, trade controls, or other restrictions may block nuclear ships, marine units, or marine nuclear materials from entering foreign ports.</li> <li>Potentially restrictive to operational areas.</li> </ul>	<ul style="list-style-type: none"> <li>Direct attack or sabotage may have severe economic repercussions on the industry beyond just the vessel or marine unit.</li> <li>Security arrangements/personnel may increase costs.</li> </ul>
<b>Nuclear Licensing</b>	<ul style="list-style-type: none"> <li>May require re-design or additional testing or demonstration efforts.</li> </ul>	<ul style="list-style-type: none"> <li>Licensing effort may be challenging and delayed for new or unique technologies or applications.</li> </ul>	<ul style="list-style-type: none"> <li>May be costly for new technology or applications</li> </ul>
<b>Demonstration and Testing</b>	<ul style="list-style-type: none"> <li>Specific maritime nuclear testing equipment and platforms may need to be developed.</li> </ul>	<ul style="list-style-type: none"> <li>New material may require code case for standardization.</li> </ul>	<ul style="list-style-type: none"> <li>May involve developing new codes or standards, increasing the overall costs of the application.</li> </ul>
<b>Business Case</b>	<ul style="list-style-type: none"> <li>High upfront (CAPEX) costs</li> <li>Development potentially restricted if engineering solutions do not show as economically feasible.</li> </ul>	<ul style="list-style-type: none"> <li>Policy or regulations may affect regional &amp; global market landscapes.</li> <li>Sustainable carbon pricing schemes/policy may not incorporate nuclear power for maritime applications.</li> </ul>	<ul style="list-style-type: none"> <li>Failure to understand or estimate economic factors appropriately may potentially involve severe consequences to owners/investors.</li> </ul>
<b>Nuclear Waste, Decommissioning &amp; Vessel Recycling</b>	<ul style="list-style-type: none"> <li>Maintenance and servicing may require specialized and complex remote handling equipment due to shutdown radiation fields.</li> </ul>	<ul style="list-style-type: none"> <li>Unclear on regional and international waste management. Potentially restrictive to implement or approve if no arrangement for transport or long-term waste disposal is available.</li> </ul>	<ul style="list-style-type: none"> <li>Arrangements for transport or disposal may be prohibitively costly to implement.</li> </ul>
<b>Supply Chain and Fuel Availability</b>	<ul style="list-style-type: none"> <li>Supply chain for other advanced materials and plant components may not be developed or available.</li> </ul>	<ul style="list-style-type: none"> <li>HALEU availability.</li> <li>Regulations related to trade may restrict supply chains and material or parts availability.</li> </ul>	<ul style="list-style-type: none"> <li>The supply chain for advanced materials may be expensive.</li> </ul>
<b>Support Infrastructure</b>	<ul style="list-style-type: none"> <li>Shipyards and ports may not be suitable to handle nuclear material.</li> </ul>	<ul style="list-style-type: none"> <li>Gaps in nuclear or maritime regulations may cause issues when technology interfaces with infrastructure and land-based support efforts.</li> </ul>	<ul style="list-style-type: none"> <li>Crew and personnel may not be trained; potential rising costs of personnel.</li> </ul>
<b>Public Policy/Public Acceptance Barriers</b>	<ul style="list-style-type: none"> <li>Negative public perception may reduce number of dedicated engineers and technicians interested in supporting the development of the technology.</li> </ul>	<ul style="list-style-type: none"> <li>Negative public perception may result in restrictive transport or trade policy or regulations regionally or globally.</li> </ul>	<ul style="list-style-type: none"> <li>Negative public perception may limit investment opportunities.</li> </ul>



# Task 3 Summary



# Task 3 – Key Takeaways: Approach

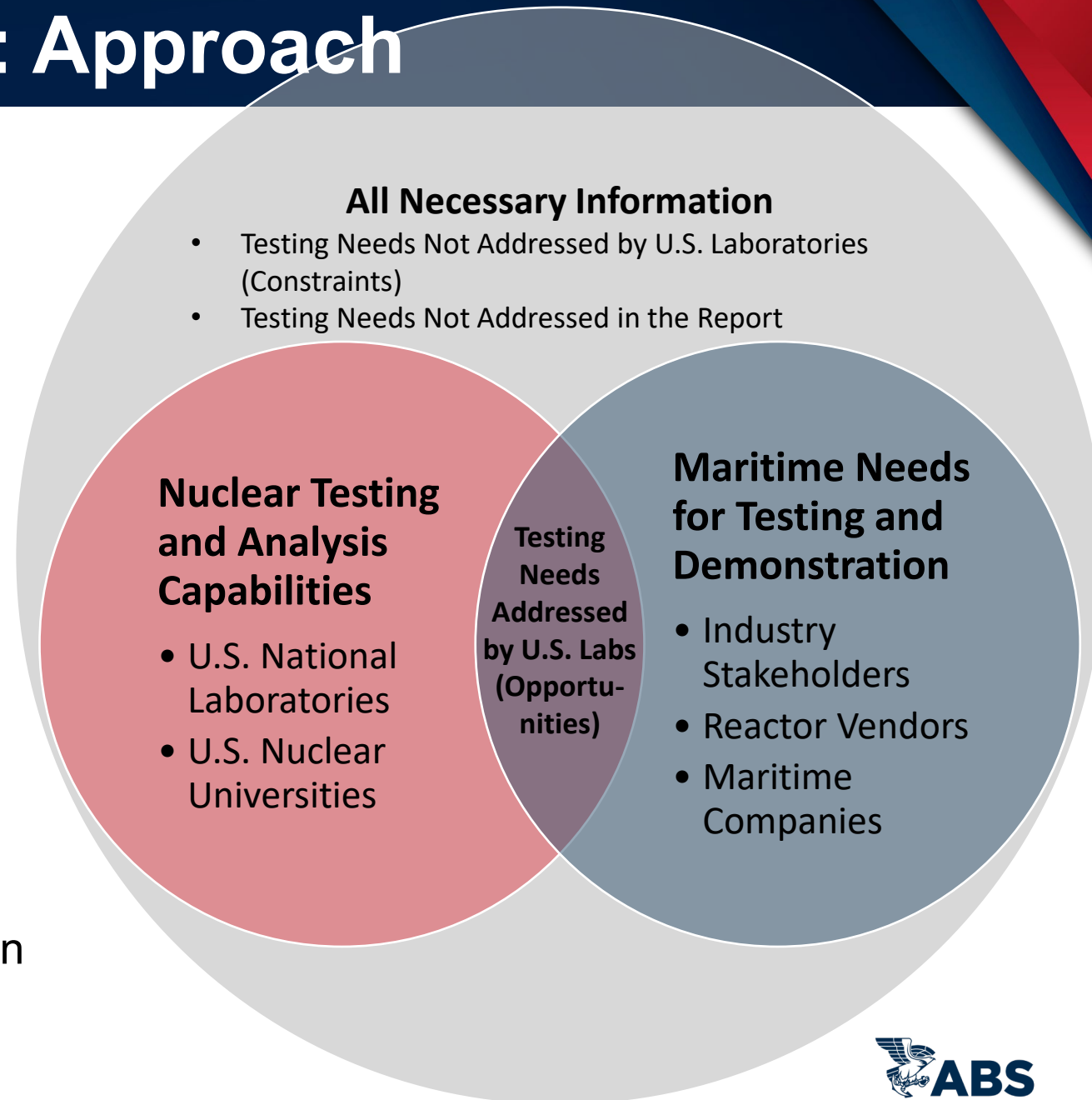
## Gathering Information:

### 1. Information Needs Request Form No. 1

- **Target:** Maritime/Offshore Industries
- **Request:** Information on what testing will be needed for maritime-nuclear applications

### 2. Information Needs Request Form No. 2

- **Target:** U.S. National Laboratories and U.S. University Nuclear Laboratory Facilities
- **Request:** Information on capabilities that could support maritime-nuclear application demonstration testing

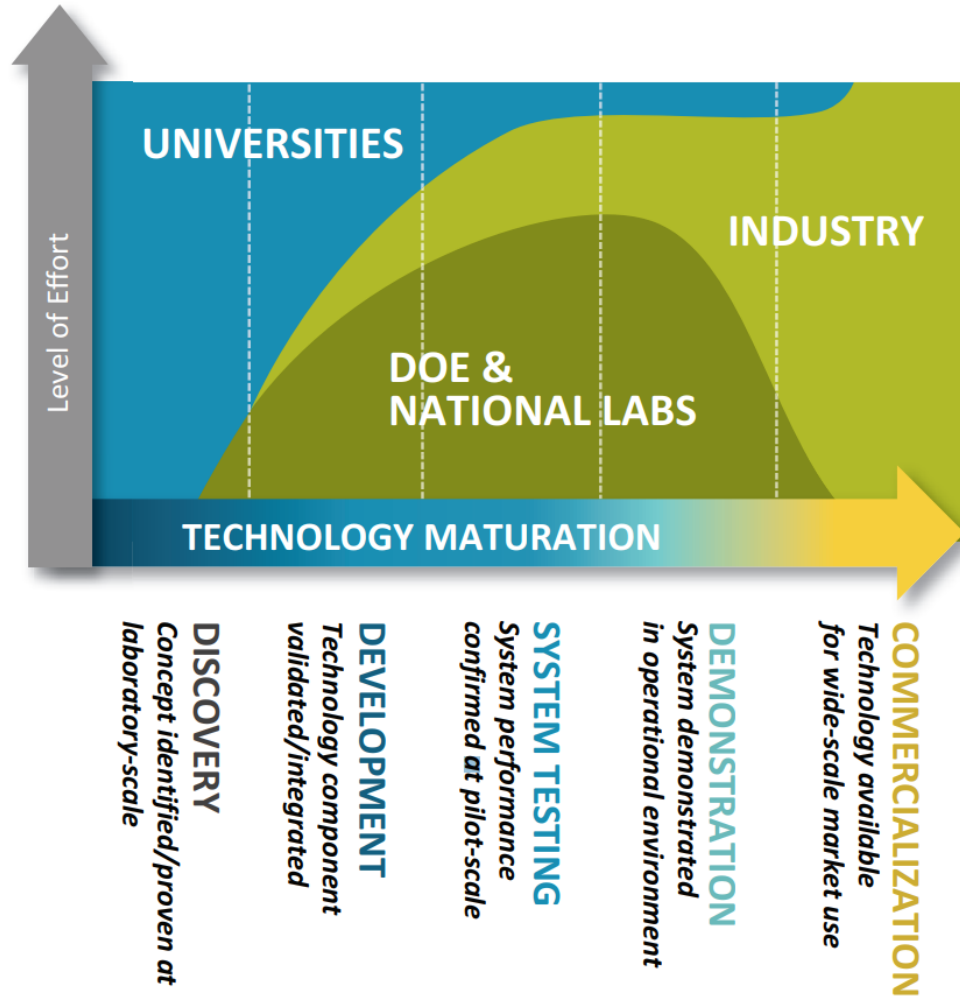


# Task 3 – Key Takeaways

## Testing Needs Addressed by U.S. Laboratories and Nuclear Universities

Review of Capabilities for:

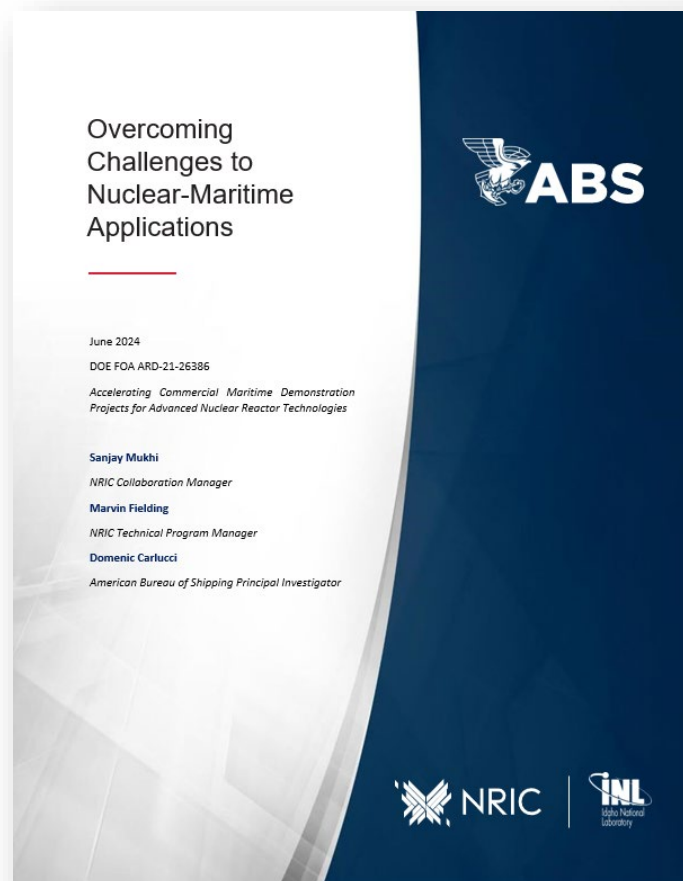
- Reactor Operations under Severe Conditions
- Alarm Systems
- Fire Safety
- Physical Scenario Analysis
- Materials and Chemical Tests
- Reactor Operations in Marine Environment
- Non-Destructive Examination (NDE)
- Security
- General Research (Other)





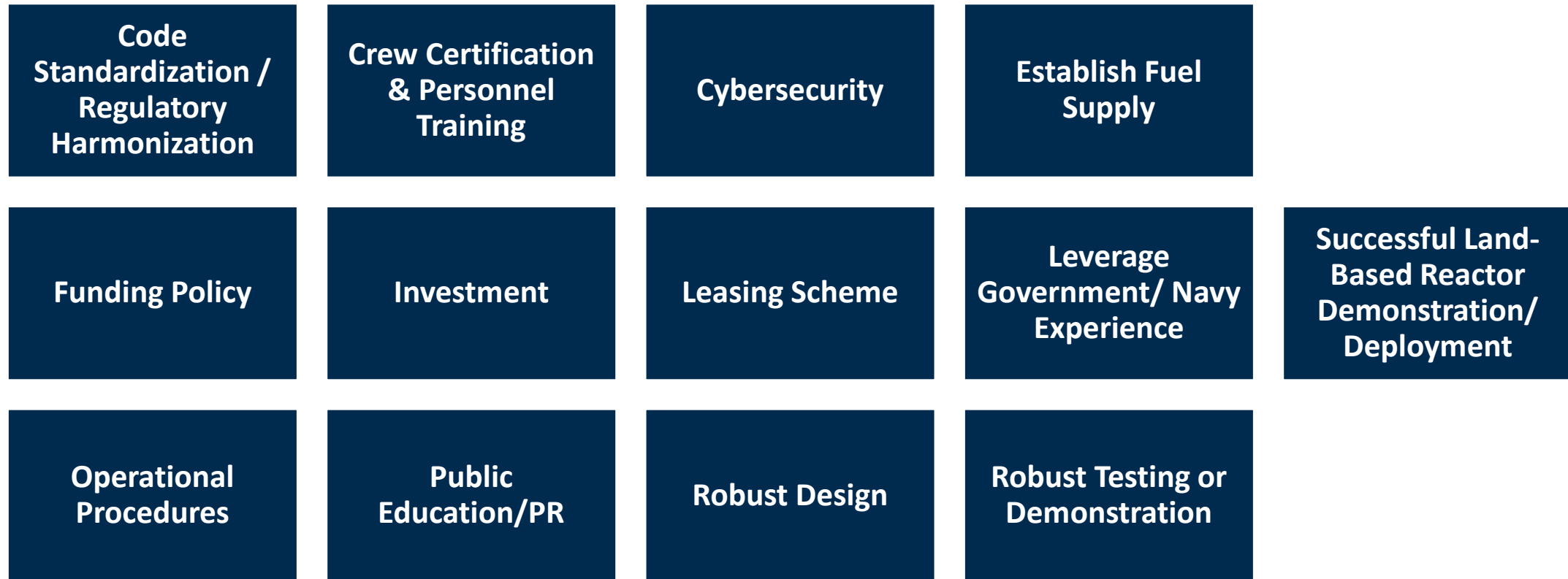


# Task 4 Summary



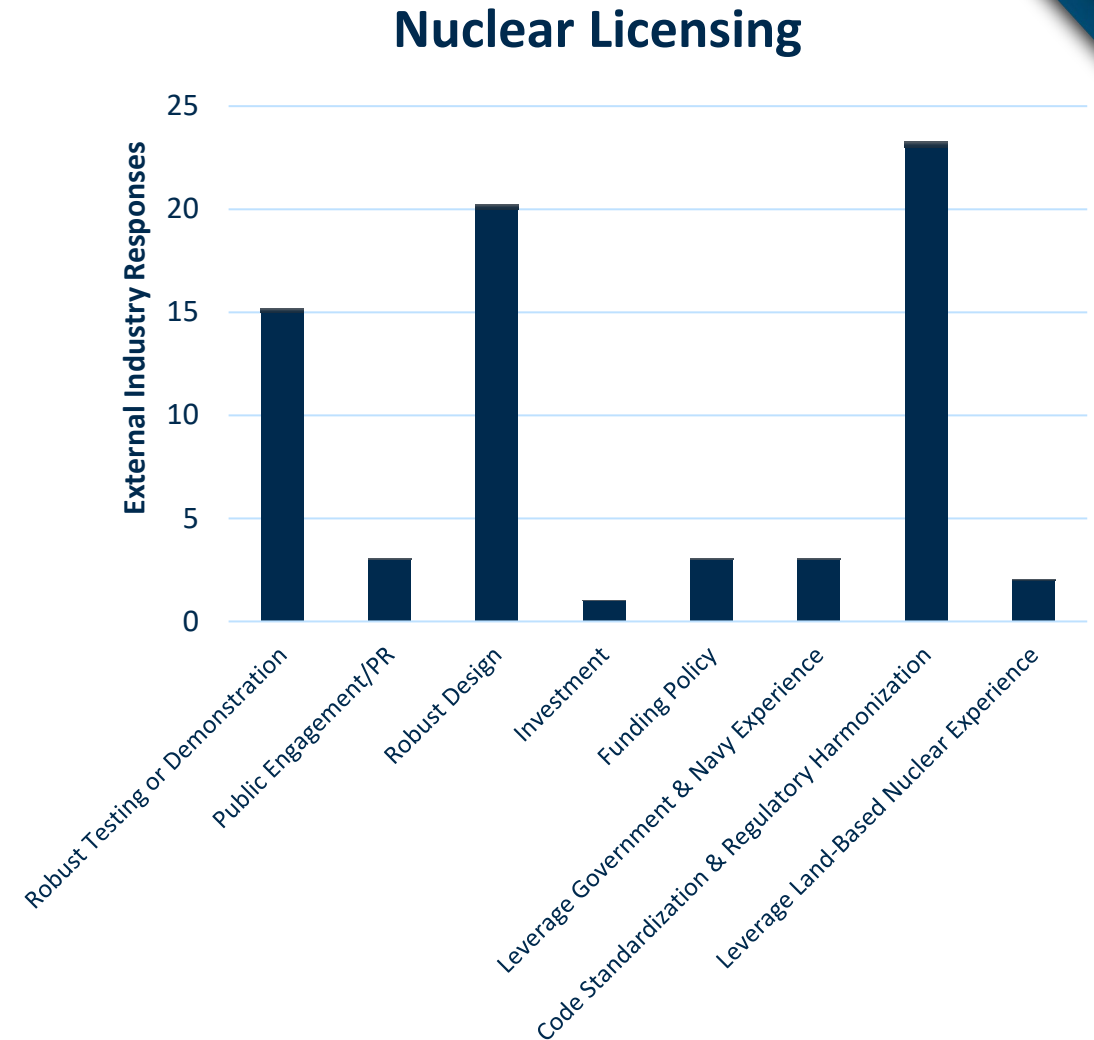
# Task 4 Approach – Addressing Barriers

Responses typically fall under one or more categories to overcome potential barriers or issues to adoption:



# Task 4 Deliverable

- Summarize and describe potential barriers to advancing nuclear-maritime technology and novel applications
  - Consider both U.S. and International barriers
- Provide Recommendations to Address Key Barriers
  - Summary of Solicited Input from Industry Experts
  - Literature review of other identified approaches to address barriers
  - Prioritization of recommendations and actions to address barriers
- Conclusion and Recommendations for Future Work



# Project Next Steps

- Complete and Submit Task 4 Deliverable
- Support the Publication of Deliverables through June 2025
- Support marketing of publications
- Continue future projects referenced in the final deliverable report

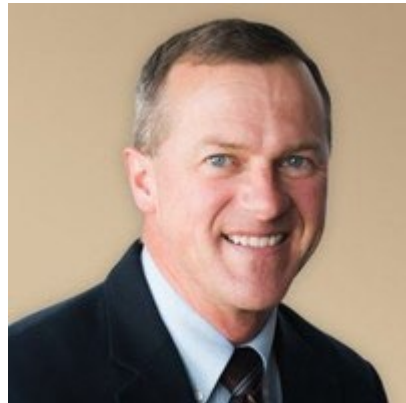
# Meet the NRIC/INL Team

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# Meet the ABS Team

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