

ARISE Program Overview

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NPPAC

INTERNATIONAL NUCLEAR SAFEGUARDS

Build capacity of the International Atomic Energy Agency and member States to implement international safeguards obligations.

NUCLEAR EXPORT CONTROLS

Build domestic and international capacity to implement export control obligations.

NUCLEAR VERIFICATION

Support negotiation of and implement agreements and associated monitoring regimes to verifiably reduce nuclear weapons and nuclear programs.

NONPROLIFERATION POLICY

Develops approaches and strategies to address emerging nonproliferation and arms control challenges and opportunities.

The ARISE Program Approach

Prepare advanced nuclear technology stakeholders to meet the highest nonproliferation/safeguards standards



Engage with Advanced Nuclear Industry



Build Safeguards Knowledge Base and Capacity for Advanced Nuclear

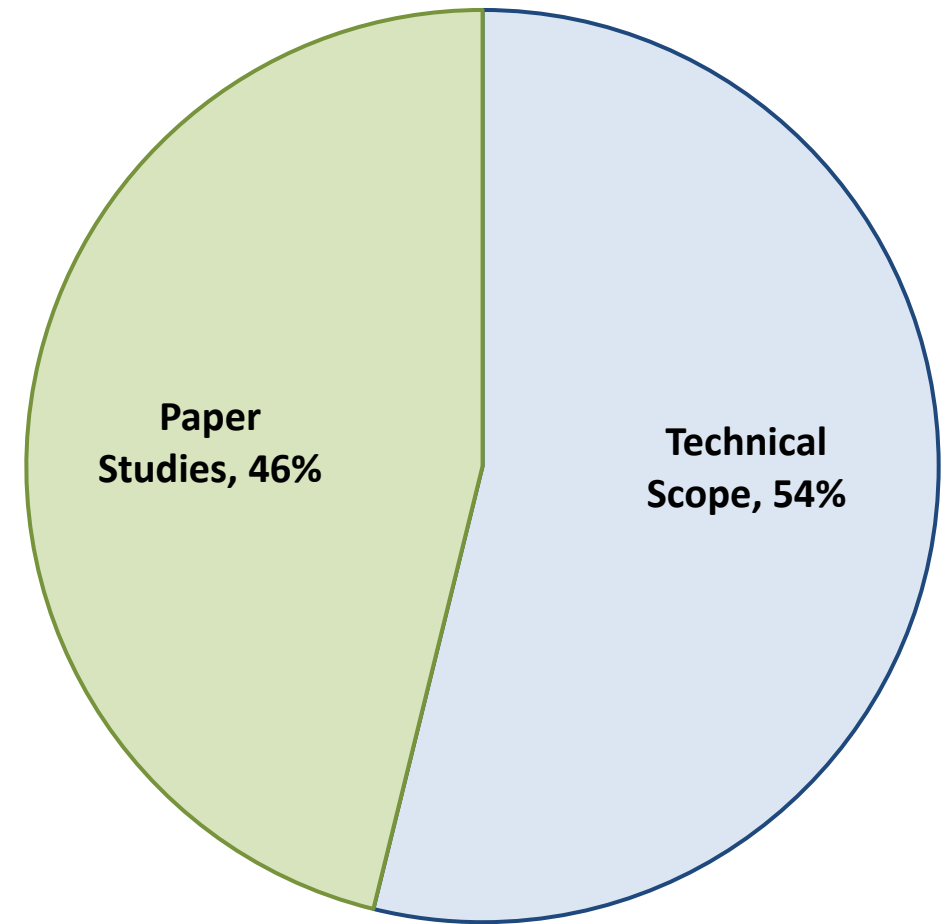
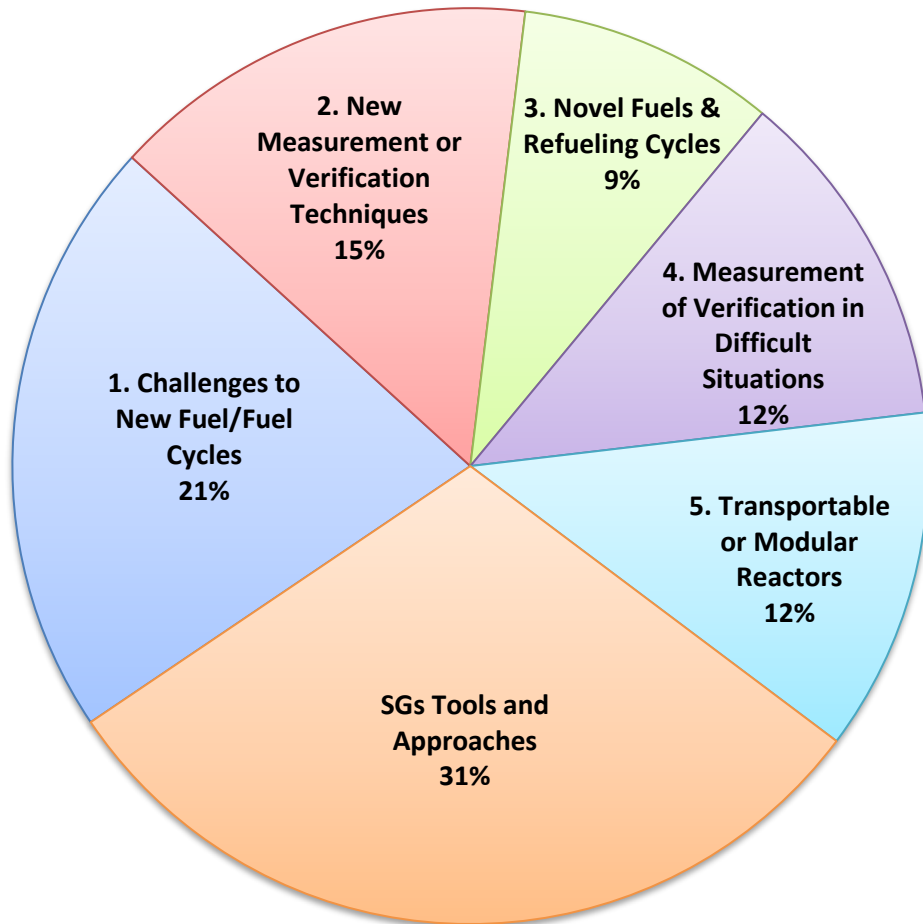


Prepare Stakeholders for New Technologies and Business Models

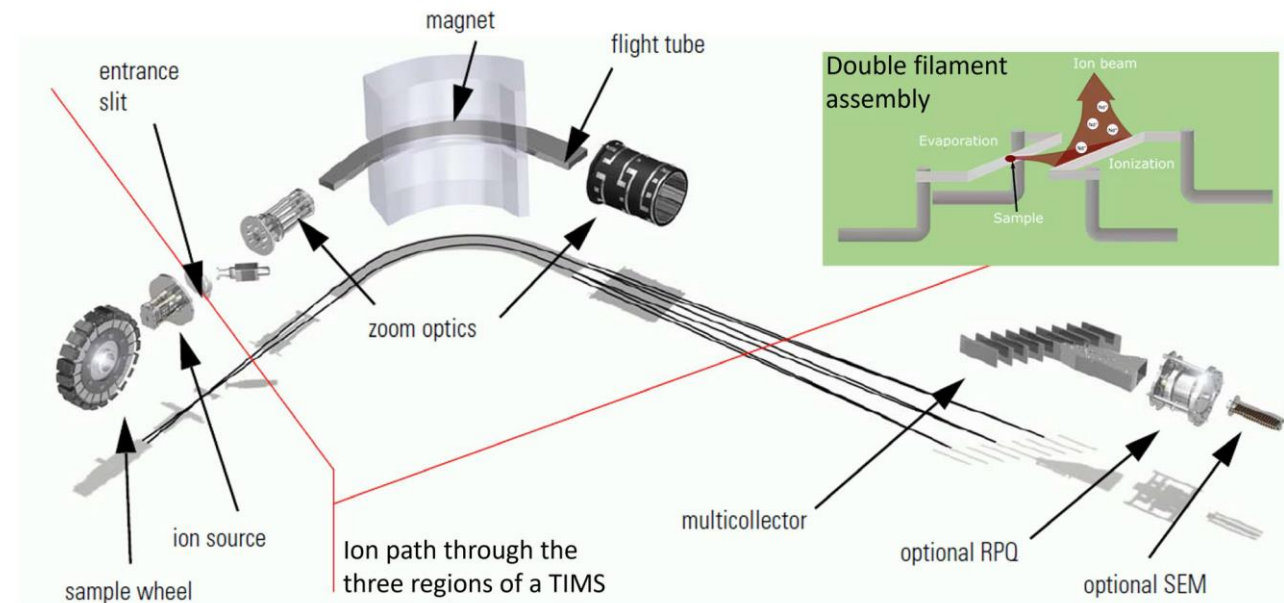
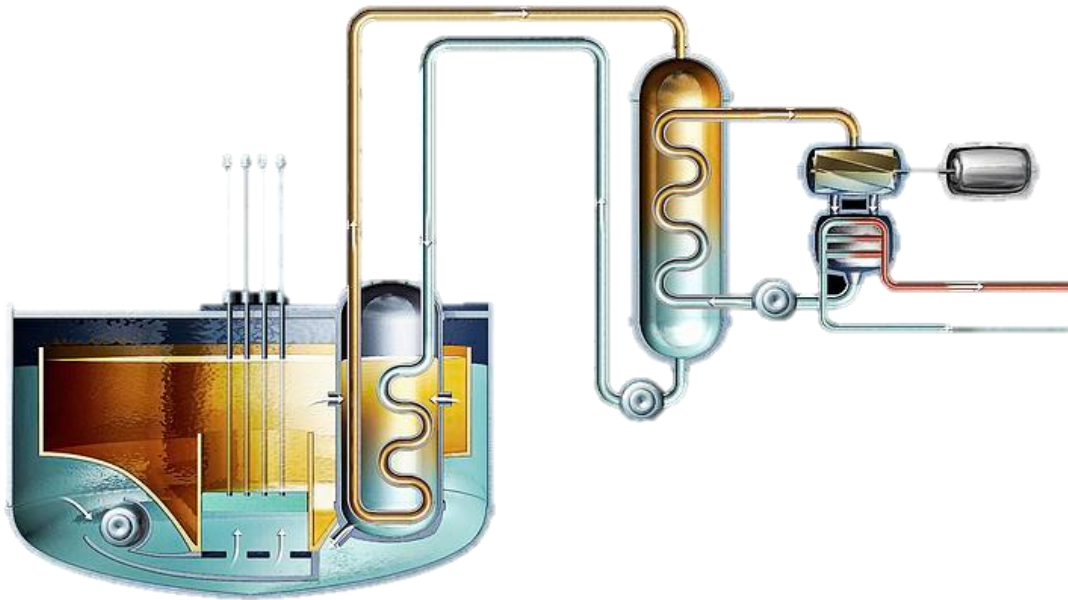
Technical Focus Areas

- 1 Challenges and Approaches to Safeguard New Fuels and Associated Fuel Cycle Processes
- 2 Techniques for Nuclear Material Measurement and/or Verification that Do Not Exist
- 3 Safeguards Approaches for Novel Fueling/Refueling Methods **and Continuous Operations Models**
- 4 Applying Safeguards Where Nuclear Material Measurement and/or Verification is Difficult
- 5 Safeguarding Transportable and Modular Reactors

FY24 Recap on Funded Projects



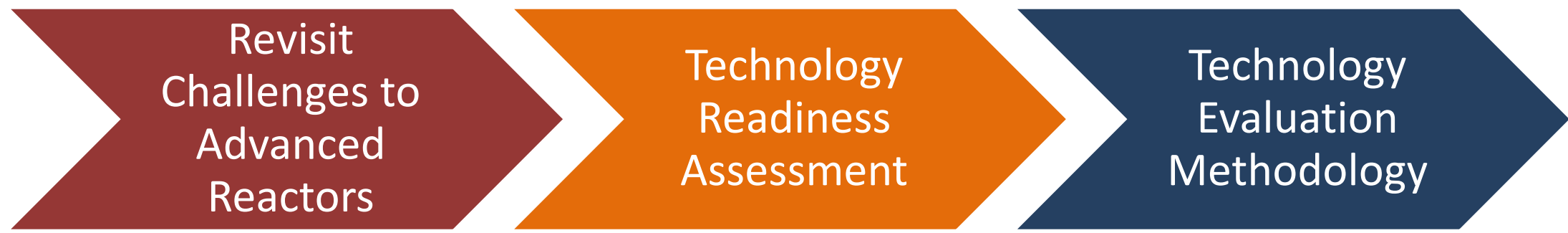
ARISE Technical Project Highlights



FY24 Direct Vendor Engagements

- Westinghouse
- Kairos Power
- ThorCon
- TerraPower Natrium
- TerraPower MCRE
- X-Energy
- Ultra Safe Nuclear Corporation
- Electric Power Research Institute
- International Atomic Energy Agency

Technology Readiness and Challenges Study (TRACS)



April – May 2024

May – July 2024

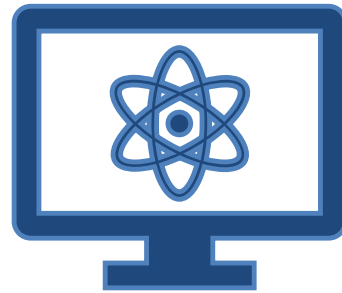
Q4 FY24

- Discuss and define the challenges for different classes of advanced reactor technologies.
- Identify and assess the state of technologies to address advanced reactor challenges.
- Conceptualize and formalize a method for evaluating technology solutions for advanced reactor challenges.

Engaging with the Advanced Reactor Community



Informational
Materials



Educational
Opportunities



Enriching
Experiences

Opportunities with ARISE

July	August	Q4	September	October
21-24	TBD	TBD	10-12	21-25
INMM Annual Conference	Deep Dive: DIV	NFASEs	SSeBD Course	IAEA SMR Conference
Portland, OR	ANL, IL	Europe Canada	ORNL, TN	Vienna, Austria

Contact Us

Learn More About Us:

<https://nuclear-nexus.anl.gov/>



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