

The National Organization of Test, Research and Training Reactors

Q4. December 9, 2025

A note from our Chair

Hello TRTR Community!

As we draw to a close on 2025, I'm pleased to share with you a summary of the major strides our community has made over the past year in advancing test reactors, research infrastructure, and reactor-development programs worldwide. It has been a remarkably active year — one that positions us for even greater progress in the months ahead.

Policy and Programmatic Advances:

- <u>U.S. Department of Energy (DOE) New Test-Reactor Pilot Program</u>: In June 2025, DOE formally announced a new Pilot Program to accelerate the testing of advanced nuclear reactor designs under DOE authority — allowing qualified companies to build and operate test reactors outside of traditional National Lab sites.
- Expansion of Domestic Fuel and Materials Infrastructure: Also in 2025, DOE launched a complementary pilot to build advanced nuclear fuel production lines — intended to reduce U.S. dependence on foreign sources of enriched uranium and enable the fuel supply for advanced reactors.

International Milestones in Test and Advances Reactors:

- In China, the ongoing work on molten salt reactor technology continues apace: the project known as TMSR-LF1 recently achieved a major milestone, reportedly completing the first thorium-to-uranium fuel conversion in its molten-salt core (Nov 2025), marking progress in thorium-fuel research.
- In Europe, lead-cooled fast-reactor development also made headway: in Sweden, a prototype test facility for the 55 MW lead-cooled design SEALER-55 is under construction
- positioning the project to deliver a demonstration reactor as early as 2029. Globally, the continued construction of new power reactors (per data from the World Nuclear Association) underscores rising demand for nuclear infrastructure; this growth is paralleled by increased interest in research reactors as training, fuel-testing, and R&D platforms.

Looking ahead, 2026 brings many opportunities for the community as we continue to grow and adapt to the changing landscape. Some of these include:

- Assisting DOE with their reviews in support of the Pilot Program
- Encouraging collaborations around fuel development, materials testing, and advanced
- reactor designs • Preparing for expanded demand for trained reactor operators, technical personnel, and regulatory oversight — a need that should drive investments in training, standardization, and safety culture
- Engaging internationally learning from and contributing to global projects (in China, Europe, Brazil and elsewhere), sharing data, and aligning research priorities for maximum scientific and societal benefit

Thank you all for all of your support during 2025. This continues to be a time of growth for the community and there are many changes at the NRC. We are still awaiting what the <u>restructure at the NRC</u> will bring to the community. I encourage you to please continue to participate in the NRC's quarterly calls and feel free to reach out to me anytime.



Cameron Goodwin Rhode Island Nuclear Science Center

Quarterly Call Summary

Q4 Quarterly Call Missed Due to Government Shutdown Lasting 43 Days (ML25272A004) •Commissioner Ho Nieh Confirmed: Ho Nieh was confirmed by the Senate as an NRC Commissioner replacing Chris Hanson. His term will expire June 30th, 2029. •Douglas Weaver, a longtime NRC and Westinghouse employee, has been nominated to replace Commissioner Caputo, is awaiting Senate confirmation now. • NUREG 1478 Comments: The comment period for the draft of NUREG 1478, Revision 3, has ended with 5 comment letters received from TRTR members and the public. •<u>Letter on NRC Reorganization</u>: TRTR submitted a letter to the NRC urging that regulation for research reactors remain its own dedicated branch during the upcoming reorganization. •Next call scheduled for January 27, 2026, 03:00 PM to 04:30 PM ET (ML25329A337)

Over \$2.7 million in Reactor Upgrades <u>NEUP FY25</u>

Title	Institution	Amount
Enhanced Security and Monitoring to Support Growth at the OSURR	The Ohio State University	\$181,092
Crane Replacement at the Oregon State TRIGA Reactor	Oregon State University	\$804,000
Aging reactor safety system replacement at the Breazeale Nuclear Reactor	Pennsylvania State University	\$911,300
New Fission Chamber for Rhode Island Nuclear Science Center	Rhode Island Nuclear Science Center	\$681,850
<u>Kansas State University</u> <u>Research Reactor Primary</u> <u>Tank Refurbish</u>	Kansas State University	\$138,182

Member Facilities in the News

<u>Kansas State Relaunches Nuclear Engineering Degree Supported By TRIGA Reactor</u> Kansas State's TRIGA reactor has resumed operation after a several year shutdown for maintenance, and the university has resumed its nuclear engineering undergraduate program after a nearly 30 year hiatus!

<u>3 University of Florida Students Earn Reactor Operator Licenses</u>

3 students at University of Florida passed the NRC issued licensing exam to become Reactor Operators in Fall 2025.

Profile of High Flux Isotope Reactor

Oak Ridge National Laboratory details the operations of the High Flux Isotope Reactor.

<u>UNM Hosts Nuclear Engineering Camp</u> The University of New Mexico School of Engineering hosted its first Experience Nuclear Engineering 2025 for 19 high school students from across the US! Activities included

experiments with the UNM Reactor as well as tours and other hands-on activities. Ohio State's Nuclear Reactor Laboratory awarded \$1M ARPA-E Grant

The OSU Nuclear Reactor Laboratory was awarded \$1,065,750 to support the development of advanced energy technologies such as fusion reactors.

Reed Research Reactor Video The Reed Research Reactor was featured on the local news in Portland!

Purdue University Reactor Video

The Purdue University Reactor was featured on the local news in Indianapolis!

Reportable Occurrences Kansas State University Research Reactor

Event No 57930: Changes were made to the normal and emergency electrical power systems described without properly completing the 50.59 review process. ML25262A173

University of New Mexico AGN-201 Reactor <u>Event No 57948</u>: Reactor exceeded maximum licensed power level due to operator inattention

during positive-period excess reactivity measurements. Scrams functioned appropriately and reactor shut down before exceeding Technical Specification power limit.

Missouri University Research Reactor

Event No 58063: Experiments that exceeded Technical Specification Limits on reactivity were installed in the Reactor Core.

See our website for a table of reportable occurrences.

Read More

Inspection Reports Reed Research Reactor

No violations. <u>ML25247A075</u> related. <u>ML25261A250</u>

3 Severity Level IV Violations: Security

Oregon State TRIGA Reactor No violations. <u>ML25266A100</u>

University of New Mexico AGN-201 Reactor No violations. ML25273A169

Rhode Island Nuclear Science Center No violations. ML25317A696

See our website for a table of inspection reports.

Read More

Licensing Actions Atomic Alchemy

Atomic Alchemy has submitted their construction permit application (ML25255A199) to build

the MEITNER-1 isotope production facility. The facility is to be made up of 4 15 MW reactors using PULSTAR fuel. More information about Atomic Alchemy's engagement with the NRC can be found <u>here</u>. See our website for a table of licensing actions.

Read More

• April 16-18: <u>ANS Student Conference</u> 2026

EVENTS

- April 19-23: <u>International Conference</u>
- on the Physics of Reactors • April 20-21: International Radioisotope Supply Chain Meeting
- o April 20-24: The European Research Reactor Conference • June 15-19: <u>Technical Meeting on</u>

Operation, Maintenance and Ageing

Management for Research Reactors • Sept 21-25: 2026 TRTR Annual Meeting (Save the date!)



ISOTOPIC TOPICS <u>Poland's MARIA Research Reactor Gets</u>

Columbia University.

New Operating License: The MARIA reactor in Poland was issued a new non-expiring license in August after a 4 month shutdown while the license renewal application was reviewed.

<u>UK Considers New Isotope Production</u> Reactor in Wales: A new isotope production reactor called ARTHUR (the Advanced Radioisotope Technology for Health Utility Reactor) has been proposed for the

Trawsfynydd nuclear site in Wales. The proposed reactor is based on the OPAL reactor in Australia. Columbia's Nuclear Reactor: A new article detailing the history of the TRIGA Reactor that was constructed, but never operated, at

Pele Reactor Fuel Received: Idaho National Laboratory has received the TRISO fuel for the Project Pele reactor. The reactor is expected to begin operations in 2027 or 2028.