

# Quadrant Nuclear Industries & Idaho National Laboratory Announce Strategic Partnership to Advance Domestic HALEU Supply

*Collaboration at Idaho National Laboratory will support research and development for advanced fuel recycling and recovery of strategic nuclear materials*

IDAHO FALLS, ID, UNITED STATES, June 30, 2026 /EINPresswire.com/ -- [Battelle Energy Alliance, LLC](#) (BEA) and [Quadrant Nuclear Industries Inc.](#) (QNI) have entered a strategic partnership project to accelerate the domestic production of high-assay low-enriched uranium (HALEU). HALEU is a critical fuel source for the next generation of advanced nuclear reactors.



HALEU, generally defined as uranium enriched between 5% and less than 20% U-235, is expected to be an important fuel source for existing and many advanced reactor designs under development in the United States. Establishing reliable domestic supply pathways is widely viewed as essential to the demonstration and deployment of next-generation nuclear technologies.

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Our work with BEA and INL supports the national imperative to strengthen HALEU availability for advanced reactors while advancing responsible used-fuel recycling and material recovery.”

*Dee L. Mewbourne, Ed.D.,  
Chief Executive Officer of QNI.*

Under the Strategic Partnership Project, QNI and BEA will conduct collaborative research and development at Idaho National Laboratory (INL), including work associated with INL’s Material Recovery Pilot Plant (MRPP), a research facility supporting front-end processing of used nuclear fuel. QNI’s objective is to advance the design of a privately owned and funded fuel recycling facility intended to recover HALEU from used nuclear fuel currently held by

the U.S. Department of Energy.

By leveraging INL's zirconium removal prior to extraction (ZIRCEX) process, QNI aims to transform this used fuel into a commercially viable domestic HALEU supply that will directly enable the deployment of advanced reactor technologies across the country. QNI's broader objective is to advance a privately funded fuel-recycling platform that could contribute to the United States' advanced reactor fuel supply, subject to applicable DOE approvals, site access arrangements, regulatory and environmental review, and definitive agreements.

QNI and INL are testing aluminum and zirconium-clad highly enriched uranium fuels using the hybrid ZIRCEX process to produce HALEU. The project involves initial fuel treatment and use of INL's solvent extraction modeling capabilities to design a purification process. INL will act as a consultant on QNI's full-scale plant design.

"QNI is focused on building a practical domestic pathway for advanced nuclear fuel supply," said Vice Admiral, U.S. Navy (Retired) Dee L. Mewbourne, Ed.D., Chief Executive Officer of QNI. "Our work with BEA and INL supports the national imperative to strengthen HALEU availability for advanced reactors while advancing responsible used-fuel recycling and material recovery."

QNI's ongoing work and partnership with BEA position the company to contribute to DOE's objective to strengthen the domestic nuclear fuel cycle, reduce dependence on foreign enrichment supply chains, and support the deployment of advanced nuclear energy technologies in the United States.

About Quadrant Nuclear Industries, Inc.

Quadrant Nuclear Industries, Inc. is a U.S.-based advanced nuclear fuel-cycle company developing domestic capabilities for the recovery of high-assay low-enriched uranium and other strategic isotopes from used nuclear fuel. Led by Chief Executive Officer Vice Admiral, U.S. Navy (Retired) Dee L. Mewbourne, Ed.D., QNI is advancing its flagship Vanguard plant initiative to support the U.S. advanced reactor fuel cycle, reduce reliance on foreign enrichment supply chains, and contribute to a secure and sustainable domestic nuclear fuel infrastructure. For more information, visit [www.QNI.energy](http://www.QNI.energy).

About Idaho National Laboratory

Idaho National Laboratory is one of the U.S. Department of Energy's national laboratories. INL performs work in each of DOE's strategic goal areas: energy, national security, science, and the environment. INL is the nation's leading center for nuclear energy research and development and is managed by Battelle Energy Alliance for DOE's Office of Nuclear Energy. For more information, visit [www.inl.gov](http://www.inl.gov).

Forward-Looking Statements

This release contains forward-looking statements regarding QNI's plans, objectives, and expected future activities, including statements about potential facility development, the recovery of HALEU and other strategic isotopes, and QNI's response to U.S. Department of Energy

solicitations. Forward-looking statements are based on current expectations and assumptions and are subject to risks, uncertainties, and changes in circumstances, including but not limited to U.S. Department of Energy selection and approval processes, regulatory and environmental review, site access arrangements, the negotiation and execution of definitive agreements, and other factors outside QNI's control. Actual outcomes may differ materially. QNI undertakes no obligation to update any forward-looking statements except as required by law.

Media Contacts:

All media inquiries regarding QNI, including requests for comment, should be directed to: Nicholas A. Walton, Chief Operating Officer, Quadrant Nuclear Industries Inc., [nwalton@qni.energy](mailto:nwalton@qni.energy), (781) 797-0004

Nicholas Walton  
Quadrant Nuclear Industries, Inc.  
[nawalton@qni.energy](mailto:nawalton@qni.energy)

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