June 2, 2025

Lightbridge Completes Final Experiment Design for Designated ATR Core Position

RESTON, Va., June 02, 2025 (GLOBE NEWSWIRE) -- Lightbridge Corporation (Nasdaq: LTBR), a leader in advanced nuclear fuel technology, today announced the completion of the final design review for its upcoming irradiation experiment, marking a critical step toward advancing its next-generation Lightbridge Fuel™ product. The design review, a required approval before proceeding with the experiment, is a significant milestone in the ongoing collaboration between Lightbridge and the Idaho National Laboratory (INL).

Key highlights of this achievement include:

- **Final Design Review Completed**: The final design review of Lightbridge's irradiation experiment was successfully completed, constituting the necessary approval to proceed with the experiment. This milestone is an important step toward the next phase of testing in INL's Advanced Test Reactor (ATR).
- **Independent Approval of Experiment Parameters**: The neutronics, thermal, and mechanical parameters for the experiment have been independently reviewed and approved by INL scientists. These parameters are designed to support the safe and effective operation of the experiment in the ATR, ensuring reliable and accurate testing conditions.
- **Irradiation Testing to Support Regulatory Efforts**: The planned irradiation testing program, coupled with post-irradiation examination activities (the scope of which will be detailed in a future Project Task Statement), aims to generate critical irradiation performance data for Lightbridge's advanced fuel. This data will play a key role in supporting Lightbridge's regulatory licensing efforts for the commercial deployment of its innovative fuel technology.

"This is a significant milestone in our collaboration with Lightbridge," said **Jess Gehin, Associate Laboratory Director for Nuclear Science & Technology** at Idaho National Laboratory. "We share a common commitment to advancing nuclear technology, marked by the completion of this final design review and approval of experiment parameters. This irradiation experiment is an important step in testing and validating the performance of Lightbridge's advanced fuel in a test reactor environment."

"We are pleased to complete this crucial phase of the experiment design process," said **Dr. Scott Holcombe, Vice President of Engineering,** at Lightbridge. "The successful approval of the final design, along with the collaboration with INL, will enable us to move forward with the irradiation testing in the Advanced Test Reactor. This testing will provide essential data to support our regulatory efforts and further validate the performance of Lightbridge Fuel™ as we move toward commercial deployment."

"China and Russia are the only other countries that we believe have test reactors with the capabilities that the Advanced Test Reactor will provide for Lightbridge. We are grateful to the U.S. Department of Energy and Idaho National Laboratory for making the important

decision to allow industry to access the Advanced Test Reactor and for allowing Lightbridge to utilize this reactor," said **Seth Grae, President and CEO of Lightbridge**. "It is an important achievement for Lightbridge to have obtained this approval to begin in-reactor testing of our fuel."

About Idaho National Laboratory
Battelle Energy Alliance manages INL for the U.S. Department of Energy's Office of Nuclear Energy. INL is the nation's center for nuclear energy research and development, and also performs research in each of DOE's strategic goal areas: energy, national security, science and the environment. For more information, visit www.inl.gov. Follow us on social media: Facebook, Instagram, LinkedIn and X.

About Lightbridge Corporation
Lightbridge Corporation (NASDAQ: LTBR) is focused on developing advanced nuclear fuel technology essential for delivering abundant, zero-emission, clean energy and providing energy security to the world. The Company is developing Lightbridge Fuel™, a proprietary next-generation nuclear fuel technology for existing light water reactors and pressurized heavy water reactors, significantly enhancing reactor safety, economics, and proliferation resistance. The Company is also developing Lightbridge Fuel for new small modular reactors (SMRs) to bring the same benefits plus load-following with renewables on a zero-carbon electric grid.

Lightbridge has entered into two long-term framework agreements with Battelle Energy Alliance LLC, the United States Department of Energy's operating contractor for Idaho National Laboratory, the United States' lead nuclear energy research and development laboratory. DOE's Gateway for Accelerated Innovation in Nuclear program has twice awarded Lightbridge to support the development of Lightbridge Fuel over the past several years. Lightbridge is participating in two university-led studies through the DOE Nuclear Energy University Program at Massachusetts Institute of Technology and Texas A&M University. An extensive worldwide patent portfolio backs Lightbridge's innovative fuel technology. Lightbridge is included in the Russell Microcap® Index. For more information, please visit www.ltbridge.com.

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Forward Looking Statements
With the exception of historical matters, the matters discussed herein are forward-looking statements. These statements are based on current expectations on the date of this news release and involve a number of risks and uncertainties that may cause actual results to differ significantly from such estimates. The risks include, but are not limited to: Lightbridge's ability to commercialize its nuclear fuel technology; the degree of market adoption of Lightbridge's product and service offerings; Lightbridge's ability to fund general corporate overhead and outside research and development costs; market competition; our ability to attract and retain qualified employees; dependence on strategic partners; demand for fuel for nuclear reactors; Lightbridge's ability to manage its business effectively in a rapidly

evolving market; the availability of nuclear test reactors and the risks associated with unexpected changes in Lightbridge's fuel development timeline; the increased costs associated with metallization of Lightbridge's nuclear fuel; public perception of nuclear energy generally; changes in the political environment; risks associated with war in Europe; changes in the laws, rules and regulations governing Lightbridge's business; development and utilization of, and challenges to, Lightbridge's intellectual property; risks associated with potential shareholder activism; potential and contingent liabilities; as well as other factors described in Lightbridge's filings with the Securities and Exchange Commission (the "SEC"). Lightbridge does not assume any obligation to update or revise any such forward-looking statements, whether as the result of new developments or otherwise, except as required by law. Readers are cautioned not to put undue reliance on forward-looking statements.

A further description of risks and uncertainties can be found in Lightbridge's Annual Report on Form 10-K for the fiscal year ended December 31, 2024, and in its other filings with the SEC, including in the sections thereof captioned "Risk Factors" and "Forward-Looking Statements", all of which are available at http://www.sec.gov/ and www.ltbridge.com.

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Source: Lightbridge Corporation