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Lightbridge Completes Work Under U.S. Department of Energy GAIN Voucher at Idaho National Lab to Support Irradiation Testing of Lightbridge Fuel™

Milestone Achievement Establishes Design and Safety Case for Testing in the Advanced Test Reactor

RESTON, Va., Oct. 21, 2021 (GLOBE NEWSWIRE) -- [Lightbridge Corporation](#) (Nasdaq: LTBR), an advanced nuclear fuel technology company, announced today that it has successfully completed work under the U.S. Department of Energy's (DOE) Gateway for Accelerated Innovation in Nuclear (GAIN) voucher program to support development of Lightbridge Fuel, in collaboration with Idaho National Laboratory (INL).

The scope of the project included the design of an experiment for the irradiation of Lightbridge metallic fuel material samples in the Advanced Test Reactor (ATR) at INL. Together, the Lightbridge and INL teams established the test plan for the measurement of key thermophysical properties of Lightbridge Fuel material both before and after irradiation in the ATR. From there, INL performed a detailed design and established the safety case needed for insertion of the experiment in the ATR. This included the control of parameters such as sample enrichment, thermal-hydraulic capacity, maximum sample temperature, neutron fluence, and the physical location of test capsules within the ATR.

The next step in the testing program is to contract for the high-assay low-enriched uranium (HALEU) material and fabrication of the sample coupons for insertion into the ATR. Lightbridge's goal is to have the experiment available for insertion into the ATR when its core internal change out maintenance outage is completed. The actual experiment insertion is subject to the final duration of the outage, the availability of testing positions in the ATR and INL's prior commitments for testing. Once the required burn up is achieved in the ATR, post-irradiation testing is planned.

Dr. Jess Gehin, chief scientist for the Nuclear Science and Technology directorate at INL commented, "As the nation's center for nuclear energy research and development, INL is proud to work with private sector companies such as Lightbridge to further the DOE's strategic goal areas: energy, national security, science and the environment. We look forward to the continued development of Lightbridge Fuel, along with opportunities to work together with Lightbridge in the future."

Seth Grae, President and CEO of Lightbridge, commented, "Today's announcement marks a major milestone achievement for Lightbridge, which makes the design and safety case for Lightbridge Fuel samples to be tested in the Advanced Test Reactor at INL. I want to thank the teams at Lightbridge and Idaho National Lab for their collaborative efforts under the truly

unprecedented conditions of a global pandemic to complete this important work. I also want to thank the Department of Energy and the GAIN program for their continued support of advanced nuclear technology research at Lightbridge.”

About Lightbridge Corporation

Lightbridge (NASDAQ: LTBR) is an advanced nuclear fuel technology development company positioned to enable carbon-free energy applications that will be essential in preventing climate change. The Company is developing Lightbridge Fuel™, a proprietary next-generation nuclear fuel technology for Small Modular Reactors, as well as existing light-water reactors, which significantly enhances reactor safety, economics, and fuel proliferation resistance. To date, Lightbridge has been awarded twice by the U.S. Department of Energy’s Gateway for Accelerated Innovation in Nuclear program to support development of Lightbridge Fuel™. Lightbridge’s innovative fuel technology is backed by an extensive worldwide patent portfolio. Lightbridge is included in the Russell Microcap® Index. For more information, please visit: www.ltbridge.com.

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Lightbridge is on Twitter. Sign up to follow @LightbridgeCorp at <http://twitter.com/lightbridgecorp>.

About Idaho National Laboratory

INL is a U.S. Department of Energy (DOE) national laboratory that performs work in each of DOE’s strategic goal areas: energy, national security, science and environment. INL is the nation’s center for nuclear energy research and development. Day-to-day management and operation of the laboratory is the responsibility of Battelle Energy Alliance.

Forward Looking Statements

With the exception of historical matters, the matters discussed herein are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including statements regarding the timing and outcome of research and development activities, other steps to commercialize Lightbridge Fuel™ and future governmental support and funding for nuclear energy. 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: the Company’s ability to commercialize its nuclear fuel technology; the degree of market adoption of the Company’s product and service offerings; the Company’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, including small modular reactors; the Company’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 the Company’s fuel development timeline; the increased costs associated with metallization of our nuclear fuel; public perception of nuclear energy generally; changes in the political environment; risks associated with the further spread of COVID-19, including the ultimate impact of COVID-19 on people, economies, and the Company’s ability to access capital

markets; changes in the laws, rules and regulations governing the Company's business; development and utilization of, and challenges to, our 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. 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 31st, 2020 and in its other filings with the Securities and Exchange Commission, 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