November 5, 2025

Lightbridge Presents Three Technical Papers on Lightbridge Fuel Technology at American Nuclear Society's TopFuel 2025 Conference

RESTON, Va., Nov. 05, 2025 (GLOBE NEWSWIRE) -- Lightbridge Corporation ("Lightbridge" or the "Company") (Nasdaq: LTBR), an advanced nuclear fuel technology company, today announced the presentation of three technical papers at the American Nuclear Society's (ANS) TopFuel 2025 conference, held October 5-9, 2025, in Nashville, Tennessee. These papers highlight Lightbridge's ongoing advancements in nuclear fuel design, fabrication, and performance assessment, contributing to the industry's efforts to enhance reactor safety, efficiency, and sustainability.

The papers, authored by Lightbridge's fuel development experts, demonstrate innovative methodologies and conceptual assessments for Lightbridge Fuel™, the Company's proprietary metallic nuclear fuel technology. Key details include:

- "***Development of a Method for Comparison of Lightbridge's Advanced Fuel Materials Against Conventional UO_2 Fuel Performance***" by R. Wang, C. Kirby, K. Paaren, B. Aktas, and S. Holcombe. This paper outlines a quantitative evaluation method using the OECD/NEA benchmark on the Three Mile Island Unit 1 Main Steam Line Break, to compare transient performance of Lightbridge's fuel material against standard uranium dioxide fuel in pressurized water reactors.

- "***Conceptual Assessment of Lightbridge Fuel™ Post-CHF Performance***" by Birol Aktas. This work provides a conceptual analysis of Lightbridge Fuel's behavior under post-critical heat flux conditions, emphasizing its potential to leverage a "time-at-temperature" strategy for improved operational flexibility and return-to-service options during anticipated operational occurrences, such as locked rotor events.

- "***Lightbridge Fuel Fabrication Modeling in ABAQUS with Experimental Comparisons***" by Kyle M. Paaren, Eric Shaber, and Scott Holcombe. This paper details finite element analysis simulations using ABAQUS to model the co-extrusion fabrication process for Lightbridge Fuel rods, validated against experimental data from Idaho National Laboratory, to predict material dimensions, stresses, and strains for fuel qualification.

These contributions were presented as part of the conference proceedings published by ANS, underscoring Lightbridge's commitment to rigorous, peer-reviewed research in nuclear fuel innovation. For access to the full papers, please visit the ANS website at www.ans.org, or https://www.ans.org/meetings/topfuel2025/.

Seth Grae, President and Chief Executive Officer of Lightbridge Corporation, commented, “The presentation of these papers at TopFuel 2025 reflects our team’s dedication to advancing nuclear fuel technology through methodical analysis and experimental validation. By sharing these insights with the global nuclear community, we aim to accelerate the adoption of Lightbridge Fuel™, which offers enhanced safety margins, economic benefits, and proliferation resistance for both existing and future water-cooled large and small modular reactors.”

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 2000® Index and the Russell 3000® 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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