February 12, 2025

Lightbridge Successfully Co-Extrudes a Demonstration Coupon Sample with Uranium-Zirconium Alloy and Cladding

Figure 1: Lightbridge and INL teams at Idaho National Laboratory

RESTON, Va., Feb. 12, 2025 (GLOBE NEWSWIRE) -- Lightbridge Corporation (Lightbridge) (Nasdaq: LTBR), an advanced nuclear fuel technology company, today announced a significant milestone in its innovative nuclear fuel development efforts, successfully performing a co-extrusion demonstration of a coupon sample consisting of an alloy of depleted uranium and zirconium with an outer cladding made of nuclear-grade zirconium alloy material at Idaho National Laboratory (INL). The co-extrusion process demonstration conducted at INL entailed pressing the metallic alloy billet encased in zirconium alloy cladding through a die to produce a cylindrical rod with a length of approximately 8 feet.

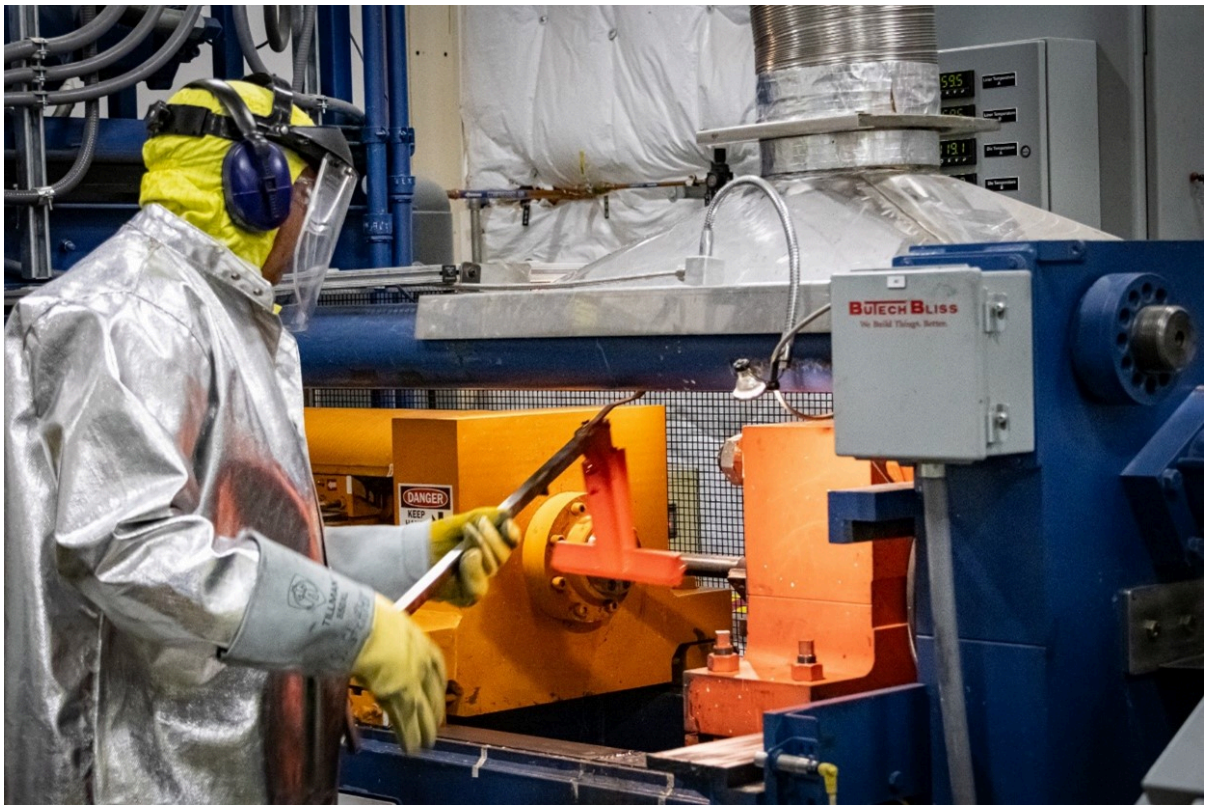

Figure 2: Heated-up billet assembly being loaded into the extrusion press prior to co-extrusion

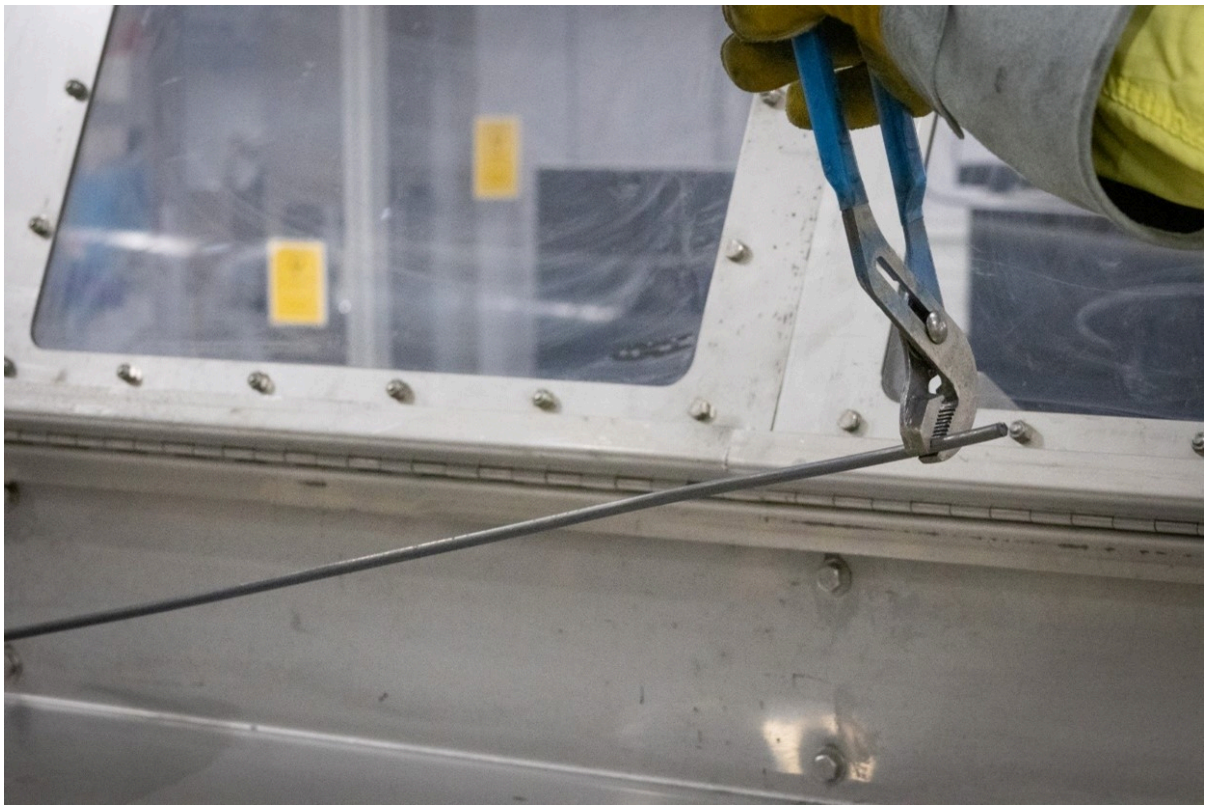

Figure 3: Co-extruded rod sample after co-extrusion process

A video demonstration of the co-extrusion process can be found on Lightbridge's YouTube Channel at https://www.youtube.com/@lightbridgecorporation

The video can be found at: https://youtu.be/PnK_FXz1Jqk

The co-extrusion of this demonstration coupon sample represents a key fabrication milestone under Lightbridge's Strategic Partnership Project Agreement with Battelle Energy Alliance LLC (BEA), the U.S. Department of Energy's (DOE) operating contractor for INL.

The uranium-zirconium alloy used in the demonstration rodlet is the same composition that Lightbridge plans to use for its future commercial Lightbridge Fuel™ product. INL and Lightbridge will now work together to analyze the co-extruded coupon sample to confirm the extrusion process parameters.

These efforts pave the way for future production of coupon samples using enriched uranium, which will undergo capsule irradiation testing in INL's Advanced Test Reactor (ATR) under an existing Cooperative Research and Development Agreement between Lightbridge and BEA. This planned irradiation testing program, coupled with post irradiation examination activities whose scope is to be released via a future Project Task Statement, aims to generate critical irradiation performance data for Lightbridge's advanced fuel and support regulatory licensing efforts for its commercial deployment.

"This milestone exemplifies the collaboration and innovation driving the advancement of Lightbridge Fuel," said **Ron Crone, INL Associate Laboratory Director.** "The co-extrusion of this coupon sample leverages the capabilities of INL's Materials and Fuels Complex and underscores our commitment to advancing nuclear energy innovation. We are proud to support Lightbridge in this important work."

Dr. Scott Holcombe, Vice President of Engineering at Lightbridge Corporation, added, "This successful co-extrusion demonstration is a testament to the continuous progress we have made over the past year on demonstration of our fuel fabrication process in our collaborative efforts with INL. By integrating the uranium-zirconium alloy with nuclear-grade cladding material, we're advancing the safety, efficiency, and performance of nuclear fuel, bringing us closer to commercialization and real-world deployment."

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.

To receive Lightbridge Corporation updates via e-mail, subscribe at https://www.ltbridge.com/investors/news-events/email-alerts

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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, 2023, 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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Photos accompanying this announcement are available at

https://www.globenewswire.com/NewsRoom/AttachmentNg/5a130fe2-bb3d-4405-b639-785196ae5ffa

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A video accompanying this announcement is available at

https://www.globenewswire.com/NewsRoom/AttachmentNg/fcb4a752-b83a-4075-af36-72c6e9d1ae54

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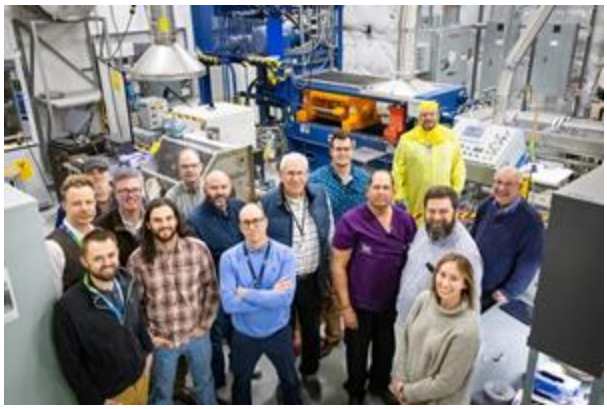
Figure 1



Lightbridge and INL teams at Idaho National Laboratory

Figure 2

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Co-extruded rod sample after co-extrusion process