



**Lightbridge**

**2025**

**Annual Report to  
Stockholders**



# Directors and Officers

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## Board of Directors

### **SETH GRAE**

Chairman and Chief Executive Officer  
Chairman of the American Nuclear  
Society's International Council

### **SWETA CHAKRABORTY, PH.D.**

Chief Executive Officer  
We Don't Have Time U.S.

### **JESSE FUNCHES**

Former Chief Financial Officer U.S.  
Nuclear Regulatory Commission

### **SHERRI GOODMAN**

Secretary General of the International  
Military Council on Climate & Security

### **DANIEL B. MAGRAW**

Senior Fellow and Professorial Lecturer,  
Foreign Policy Institute at the Johns  
Hopkins School of Advanced  
International Studies

### **MARK TOBIN**

Chief Executive Officer  
Camp Facility Services

## Executive Officers

### **SETH GRAE**

Chairman and Chief Executive Officer

### **LARRY GOLDMAN, C.P.A.**

Chief Financial Officer & Corporate Secretary

### **ANDREY MUSHAKOV, PH.D.**

Executive Vice President –Nuclear Operations

# Corporate Information

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## **CORPORATE HEADQUARTERS**

Lightbridge Corporation  
11710 Plaza America Drive  
Suite 2000  
Reston, Virginia 20190 USA

## **INVESTOR RELATIONS**

Copies of Lightbridge's 2025  
Annual Report on Form 10-K are  
available at no charge. Please  
direct requests and other  
investor relations questions to:

Lightbridge Corporation  
Attn: Investor Relations  
11710 Plaza America Drive  
Suite 2000  
Reston, Virginia 20190 USA  
+1 347-947-2093  
IR@ltbridge.com

## **TRANSFER AGENT AND REGISTRAR**

Computershare Trust Company  
350 Indiana Street  
Golden, Colorado 80401 USA  
+1 800-962-4284

## **AUDITORS**

BDO USA, P.C.  
Philadelphia, Pennsylvania

## **OUTSIDE LEGAL COUNSEL**

Hogan Lovells U.S. LLP  
Washington, D.C.

## **STOCK EXCHANGE LISTING**

Nasdaq Capital Market  
Symbol: LTBR

## **2026 ANNUAL MEETING**

Thursday, May 14, 2026  
11:00 a.m. ET

Online Access:  
[www.virtualshareholdermeeting.com/LTBR2026](http://www.virtualshareholdermeeting.com/LTBR2026)

# About Lightbridge

Lightbridge Corporation (NASDAQ: LTBR) is focused on developing advanced nuclear fuel technology essential to 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 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 to deliver 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. An extensive worldwide patent portfolio backs Lightbridge's innovative fuel technology. Lightbridge is included in the Russell 2000® and Russell 3000® Indexes. For more information, please visit [www.ltbridge.com](http://www.ltbridge.com).



# CEO Letter to Stockholders



To our Valued Shareholders,

Let me start with the big picture, because the scale is difficult to overstate. The world is entering an era of unprecedented electricity demand. Global electricity demand is not just growing – it is accelerating. In the United States alone, demand is projected to grow by approximately 25% by the early 2030s. But the United States is only part of the story. Across the developing world, billions of people are gaining access to electric power. Economies are electrifying transportation, heating, and industrial processes that previously relied on fossil fuels. Layered on top of all this is the rapid expansion of artificial intelligence and data centers, which require massive amounts of reliable, baseload electricity.



*From L to R: U.S. Senator Mike Lee (UT), Lightbridge CEO Seth Grae, U.S. Energy Secretary Christopher Wright, discussing the resurgence of the U.S. nuclear energy sector*

Against this backdrop, nuclear energy is once again widely recognized as essential. Governments around the world have committed to expanding nuclear capacity to achieve energy security, decarbonization, and economic growth. However, meeting this demand at the pace required will depend on solutions that can be deployed faster and more cost-effectively than building entirely new reactor fleets.

This is where Lightbridge occupies a unique and differentiated position in the nuclear industry.

Lightbridge is not developing a new reactor that may take decades to license, construct, and deploy. Instead, we are developing a fundamentally new nuclear fuel: a metallic uranium-zirconium alloy, co-extruded with its cladding in a patented helical multi-lobe geometry. This is a new fuel invention, not an incremental evolution of today's fuel designs.

Our fuel is designed for use in existing and new light-water reactors, enabling significantly higher power output while simultaneously enhancing safety.

Today, the vast majority of nuclear electricity worldwide is produced by large light water reactors (LWRs), and almost all nuclear plants under construction or on order are LWRs. These reactors are designed to operate for many decades, often approaching a century through continued license extensions. We expect that virtually all LWRs, existing and new, can be upgraded to use Lightbridge Fuel, making fuel upgrades one of the most practical and cost-effective ways to expand nuclear energy output using infrastructure that is already licensed, built, and connected to the grid.

While the global industry is also developing over a hundred new reactor concepts, including microreactors, advanced reactors, and small modular reactors, we believe that electricity produced by existing and new LWRs using Lightbridge Fuel has the potential to achieve lower levelized cost of electricity than power from the emerging designs, including light water SMRs, while delivering meaningful capacity growth at global scale.



*Lightbridge and INL team performing a visual inspection of a finished enriched uranium-zirconium coupon sample inside a glovebox*

### **2025 Achievements: Fuel Development Execution**

During 2025, Lightbridge achieved significant fuel development milestones, advancing from design and fabrication into active in-reactor testing. Key accomplishments included:

#### **Final Design Review Completed (June 2025):**

Successfully completed the final design review for our irradiation experiment at Idaho National Laboratory's Advanced Test Reactor (ATR). This rigorous, multidisciplinary review independently validated our neutronics, thermal-hydraulics, and mechanical design parameters, clearing the path to fabrication and irradiation.

#### **Took Advantage of the FAST Method (June 2025):**

Announced the use of the Fission Accelerated Steady-state Test (FAST) method, utilizing highly enriched uranium (26–30%) to accelerate burnup accumulation and compress testing timelines while preserving data relevance for NRC licensing.

#### **Key Fabrication Milestone Achieved (July 2025):**

Successfully produced enriched uranium-zirconium alloy coupon samples using our proprietary co-extrusion process, the same process envisioned for commercial-scale manufacturing.

#### **ATR Insertion and Start of Capsule Irradiation Testing (October–November 2025):**

Loaded capsules containing the fabricated fuel material coupon samples into the ATR experiment assembly and commenced irradiation testing to generate critical burnup-dependent performance data.

These accomplishments collectively moved Lightbridge from years of preparatory engineering work into active in reactor validation – a critical inflection point in our fuel qualification process.

### **Near-Term Milestones: The Next 12–24 Months**

Over the next 12 to 24 months, Lightbridge plans to focus on a defined sequence of technical and regulatory milestones. Each of these steps is designed to systematically reduce technical, regulatory, and commercialization risk:

#### **Post-Irradiation Examination (PIE) of INL Test Samples**

Evaluation of structural integrity, dimensional stability, fission product behavior, and thermal performance of irradiated coupon samples.

#### **Continued Development of the Fabrication Process**

Refinement and scale-up of the patented co-extrusion process, supporting future rodlet and full-length fuel rod fabrication.

#### **Progression Toward Fuel Rodlet Testing in a Reactor**

Transition from material-level testing to rodlet-level in-reactor testing, a key step toward full fuel assembly qualification.



*Members of the Lightbridge and INL teams observing the capsule loading into an experimental assembly.*

#### **Site Selection and Deployment Planning for the Lightbridge Expandable Fuel Facility (LEFF)**

Initial site evaluation and deployment planning to support future commercial fuel manufacturing.

#### **Expansion of Modeling and Safety Analysis Capabilities**

Continued development of neutronics, thermal-hydraulics, and fuel performance models, including RELAP5-3D and BISON work, to support licensing and prospective utility customer engagement.

#### **Initiation of NRC Engagement**

Commencement of structured, ongoing interaction with the Nuclear Regulatory Commission in support of fuel qualification and licensing.

#### **Structured Engagement with Prospective Utility Customers**

Re-establish and expand disciplined, ongoing engagement with nuclear utilities to align Lightbridge Fuel design, testing, and licensing activities with utility operational, economic, and regulatory requirements. These interactions will inform fuel specifications, qualification strategies, deployment pathways (including lead test rod/lead test assembly programs), and commercialization planning, ensuring Lightbridge Fuel meets or exceeds utility expectations for safety, performance, reliability, and licensability.

## The Lightbridge Commercialization Path

Following the successful execution of these near-term milestones, Lightbridge's commercialization pathway is well defined and aligned with established nuclear industry practices:

- 1. Material Testing** – Completion of irradiation testing and PIE of fuel material samples.
- 2. Rodlet Testing** – In-reactor testing of fuel rodlets to validate performance at an assembly-relevant scale.
- 3. Lead Test Rod (LTR) and Lead Test Assembly (LTA) Demonstrations** – Deployment of lead test rods and/or lead test assemblies in operating commercial reactors.
- 4. NRC Licensing** – Regulatory approval of Lightbridge Fuel for commercial use.
- 5. Batch Reloads** – Initial commercial reload batches in operating reactors.
- 6. Broad Commercial Adoption** – Expansion across the global water-cooled reactor fleet.

Each stage represents a clear value inflection point and further risk reduction on the path to commercial deployment.



*Finished enriched uranium-zirconium coupon samples after characterization and visual inspection results confirmed their suitability for irradiation testing in the Advanced Test Reactor*

## Expanded Scope at Idaho National Laboratory and Industry Engagement

In addition to our ongoing irradiation testing work, we significantly expanded our activities at Idaho National Laboratory in 2025, including:

- Review of the Lightbridge Fuel Qualification Plan
- RELAP5 3D and BISON code development for Lightbridge Fuel
- Post-irradiation examination for Lightbridge's fuel material samples

We also strengthened our in-house technical team across neutronics, thermal-hydraulics, materials, fuel performance, regulatory licensing, and program management to support the next phase of fuel development and NRC engagement.

In March 2026, we announced an initial engineering contract with Stern Laboratories, Inc. (“Stern Labs”) to assess the thermal and hydraulic performance of Lightbridge Fuel for use in Light Water Reactors (“LWRs”). Stern Labs is a leading employee-owned Canadian provider of specialized nuclear experimental services and tooling to the nuclear industry. Stern Labs’ expertise in manufacturing electrically heated nuclear fuel simulators and performing full-scale critical heat flux and component qualification tests makes them an ideal partner. We expect that the data from this program will demonstrate the improved thermal margins of Lightbridge Fuel in LWRs and support U.S. regulatory licensing for commercial deployment.

Finally, we further demonstrated growing industry engagement by presenting three technical papers at the ANS TopFuel 2025 conference, addressing safety performance, transient behavior, and fabrication modeling—reinforcing confidence across regulators, partners, and utilities.



*Enriched Uranium-Zirconium Rod Post-Extrusion*



*Close-up View of the Enriched Uranium-Zirconium Rod Post-Extrusion, still covered in the extrusion lubricant*

### **Commitment to Nuclear-Grade Quality**

As we advance toward commercialization, we are equally focused on how Lightbridge Fuel will be manufactured and delivered. Utilities rightly expect nuclear suppliers to meet the highest standards of quality, reliability, and discipline, and we recognize that maintaining those standards across the supply chain has become an increasing focus for operators worldwide.

From design through fabrication and eventual commercial production, Lightbridge is committed to the highest nuclear quality assurance practices and a culture of engineering rigor that meets or exceeds utility and regulator expectations. Quality is not a compliance exercise for us; it is a core design requirement. As we move toward commercial fuel supply, our objective is to be viewed by utilities not simply as a new fuel supplier, but as a **best-in-class** one.

## Looking Ahead

The nuclear energy industry is experiencing its strongest policy and market support in a generation. As demand for reliable, clean, baseload power accelerates worldwide, we believe Lightbridge is well-positioned to deliver a fuel technology that can increase power output, improve safety, and leverage existing reactor infrastructure.

We look forward to providing further updates as our irradiation testing progresses and as we advance toward regulatory licensing and commercialization.

Sincerely,

A handwritten signature in cursive script that reads "Seth Grae".

Seth Grae  
Chairman and Chief Executive Officer  
Lightbridge Corporation

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

**FORM 10-K**

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2025

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Commission file number: 001-34487

**LIGHTBRIDGE CORPORATION**

(Exact name of registrant as specified in its charter)

Nevada

(State or other jurisdiction of  
incorporation or organization)

91-1975651

(I.R.S. Employer  
Identification No.)

11710 Plaza America Drive, Suite 2000 Reston, VA 20190

(Address of principal executive offices) (Zip Code)

(571) 730-1200

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

<u>Title of each class</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered</u>
<u>Common Stock, \$0.001 par value</u>	<u>LTBR</u>	<u>The Nasdaq Capital Market LLC</u>

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes  No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes  No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer	<input type="checkbox"/>	Accelerated Filer	<input type="checkbox"/>
Non-accelerated Filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

At June 30, 2025, the aggregate market value of shares held by non-affiliates of the registrant (based upon the closing sale price of such shares on the Nasdaq Capital Market on June 30, 2025) was \$327,566,337.

At February 20, 2026 there were 34,152,062 shares of the registrant's common stock issued and outstanding.

Documents Incorporated by Reference

Portions of the registrant's definitive proxy statement to be filed with the Securities and Exchange Commission in connection with its 2026 Annual Meeting of Stockholders

are incorporated by reference into Part III of this Form 10-K.

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**LIGHTBRIDGE CORPORATION**  
**FORM 10-K**  
**FOR THE FISCAL YEAR ENDED DECEMBER 31, 2025**  
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## FORWARD-LOOKING STATEMENTS

In addition to historical information, this Annual Report on Form 10-K, including, but not limited to, the sections entitled “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Business,” contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. All statements other than statements of historical fact are statements that could be deemed forward-looking statements. We use words such as “believe,” “expect,” “anticipate,” “project,” “target,” “plan,” “effect,” “intend,” “aim,” “will,” “may,” “can,” “potential,” “enhance,” or similar expressions, which are intended to identify forward-looking statements. Such statements include, among others:

- those concerning market and business segment growth, demand, and acceptance of our nuclear fuel technology and other steps toward the commercialization of Lightbridge Fuel™;
- any projections of sales, earnings, revenue, margins, or other financial items;
- any statements of the plans, strategies, and objectives of management for future operations and the timing and outcome of the development of our nuclear fuel technology;
- any statements regarding future economic conditions or performance;
- any statements about future financings and liquidity;
- the Company’s anticipated financial resources and position; and
- all assumptions, expectations, predictions, intentions, or beliefs about future events and other statements that are not historical facts.

You are cautioned that any such forward-looking statements are not guarantees of future performance and involve risks and uncertainties, particularly given the regulatory, technical, financial, and market risks associated with the development and commercialization of our nuclear fuel, as well as assumptions that if they were to ever materialize or prove incorrect, could cause the results of the Company to differ materially from those expressed or implied by such forward-looking statements. Such risks and uncertainties, among others, include:

- our ability to commercialize our nuclear fuel technology, including risks related to the design and testing of nuclear fuel incorporating our technology and the degree of market adoption of the Company’s product and service offerings;
- dependence on strategic partners;
- any adverse changes to our agreements or relationship with the U.S. government and its national laboratories;
- our ability to fund our future operations, including general corporate overhead and outside research and development (R&D) expenses, and continue as a going concern;
- the future market and demand for our fuel for nuclear reactors and our ability to attract customers;
- our ability to manage the business effectively in a rapidly evolving market;
- our ability to employ and retain qualified employees and consultants that have experience in the nuclear industry;
- competition and competitive factors in the markets in which we compete, including from accident tolerant fuels (ATFs);
- access to and availability of nuclear test reactors and the risks associated with unexpected changes in our nuclear fuel development timeline;
- access to and availability of adequate resources and manufacturing capabilities at national laboratories that affect our nuclear fuel development timeline and project costs;
- our ability to deploy and operate a dedicated nuclear fuel fabrication facility;
- the increased costs associated with metallization of our nuclear fuel;

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- uncertainties related to conducting business in foreign countries;
- public perception of nuclear energy generally;
- changes in laws, rules, and regulations governing our business;
- changes in the political environment;
- development and utilization of, and challenges to, our intellectual property domestically and abroad;
- the volatility of the trading price of our securities and the potential for purchasers of our securities to incur substantial losses; and
- the other risks and uncertainties identified in Item 1A. Risk Factors included herein.

Most of these factors are beyond our ability to predict or control and you should not put undue reliance on any forward-looking statement. Future events and actual results could differ materially from those set forth in, contemplated by or underlying the forward-looking statements. Forward-looking statements speak only as of the date on which they are made. The Company assumes no obligation and does not intend to update these forward-looking statements for any reason after the date of the filing of this Annual Report on Form 10-K, to conform these statements to actual results or to changes in our expectations, except as required by law.

## PART I

### ITEM 1. BUSINESS

When used in this Annual Report on Form 10-K, the terms “Lightbridge,” the “Company,” “we,” “our,” and “us” refer to Lightbridge Corporation together with its wholly-owned subsidiaries, Lightbridge International Holding LLC and Thorium Power Inc.

#### Overview

At Lightbridge, we believe that increasing the supply of reliable electric power is necessary for people and economies to flourish. We are developing next generation nuclear fuel for water-cooled reactors that could significantly improve the economics and safety of existing and new nuclear power plants, large and small, and enhance proliferation resistance of spent nuclear fuel while supplying clean energy to the electric grid or to “behind the meter” customers for electric power, including data centers. We project that the world’s energy needs and climate goals can only be met if nuclear power’s share of the energy-generating mix grows substantially in the coming decades. We believe Lightbridge can benefit from a growing nuclear power industry, and that our nuclear fuel can help enable that growth to happen.

We believe our metallic fuel could offer significant economic and safety benefits over traditional nuclear fuel, primarily because of the superior heat transfer properties and the resulting lower operating temperature of our all-metal fuel.

U.S. and international electricity demand is growing rapidly due to AI-driven data centers, electrification, and industrial development. Solely in the U.S., demand is expected to grow by ~3 million gigawatt hours over the next 20 years, increasing demand by ~70% from current day. In particular, the data center demand tends to be stable around the clock and will likely require resources that can provide firm, reliable generation.

This potential need for firm, baseload power combined with on-going international, state, and corporate carbon emissions reduction targets means that nuclear power is expected to be a critical part of new electricity generation construction for the next few decades. Interest in advanced nuclear generating technologies is high, punctuated by the U.S. Federal Government’s target to expand nuclear generation capacity by approximately 300 gigawatts electric by 2050.

Lightbridge Fuel™ is an advanced nuclear technology that can be a large part of the planned expansion of nuclear generation. As designed, we expect that our fuel could increase output from existing nuclear reactors as well as reduce the unit generating costs and increase the output of new large-scale and small modular nuclear reactors. Furthermore, Lightbridge Fuel™ may provide safety benefits and non-proliferation benefits and may increase reactor uptime through longer fueling cycles.

Emerging nuclear technologies include small modular reactors (SMRs), which are now in the development and licensing phases. We expect that Lightbridge Fuel™ can provide water-cooled SMRs with the same benefits our technology brings to large reactors, with such benefits being even more meaningful to the economic case for deployment of SMRs, including potential load following capability when included on a virtually zero-carbon electric grid with renewable energy sources. We expect Lightbridge Fuel™ to enable power uprates in SMRs.

We have obtained patent validation in key countries that we believe would have a commercial market for our fuel and continue to seek patent protection in countries that either currently operate or we expect to build and operate nuclear power reactors compatible with our fuel technology.

In addition to patent protection, we rely on trade secrets, proprietary know-how, and confidential technical data to protect and extend the commercial value of our nuclear fuel technology. Certain data that will be generated from fuel fabrication, irradiation testing, post-irradiation examination, and related analyses will be maintained as trade secrets and will not be publicly disclosed. We believe that the protection of this proprietary information is important to preserving our competitive position, extending the effective life of our intellectual property portfolio beyond the expiration of issued patents, and supporting the long-term commercialization of our technology. We anticipate testing our nuclear fuel through third-party vendors and others, including the United States Department of Energy’s (DOE) national laboratories. Currently, we are performing the majority of our R&D activities within and in collaboration with the DOE’s national laboratories.

## Our Nuclear Fuel

We are engaged in the design and development of proprietary, innovative nuclear fuels to improve the cost-competitiveness, safety, proliferation resistance and performance of nuclear power generation. Our fuel design remains in the research and development stage and will require extensive testing, regulatory review, and qualification before it can be commercially deployed.

Since 2010, we have been focused on the concept of all-metal fuel (i.e., non-oxide fuel) for use in currently operating and new-build reactors, inspired by the anticipated needs of prospective customers that have expressed interest in the improved economics and enhanced safety that we believe our metallic fuel can provide via power uprates.

The fuel in a nuclear reactor generates energy in the form of heat. That heat is then converted through steam into electricity that is delivered to the transmission and distribution grid. We have designed our innovative, proprietary metallic fuels to be capable of significantly higher burnup and power density compared to conventional oxide nuclear fuels. Burnup is the total amount of electricity generated per unit mass of nuclear fuel consumed and is a function of the power density of a nuclear fuel and the amount of time the fuel operates in the reactor. Power density is the amount of heat power generated per unit mass of nuclear fuel. Conventional oxide fuel used in existing commercial reactors is nearing the limit of its power density capability. As a result, further optimization is needed to (i) increase power output from the same core size to improve reactor economics, and (ii) enhance the fuel performance of nuclear power generation. We believe Lightbridge Fuel™ can meet these goals.

As the nuclear power industry prepares to meet the increasing global demand for electricity production, nuclear utilities are seeking longer operating cycles and higher reactor power outputs for current and future reactor fleets. We believe our proprietary nuclear fuel designs have the potential, based on our preliminary evaluations, to improve the nuclear power industry's economics by:

- enabling increased reactor power output via a power uprate (potentially up to a 30% increase) without changing the core size in new build pressurized water reactors (PWRs), including future SMRs;
- providing an increase in power output of potentially up to 17% or more in existing PWRs; and
- offering enhanced proliferation resistance due to reduced amount of plutonium in spent Lightbridge Fuel™ compared to conventional uranium dioxide spent fuel.

We believe our fuel designs, which use multi-lobe metallic fuel rods with a proprietary helical geometry that enhances heat transfer with the goal of improving thermal margins, may allow current and new-build nuclear reactors to safely increase power production and reduce operations and maintenance costs on a per kilowatt-hour basis. New-build nuclear reactors could also benefit from the reduced upfront capital investment per kilowatt of generating capacity in the case of new-build reactors implementing a power uprate. In addition to projected electricity production cost savings, we believe our technology may allow utilities or countries to deploy fewer new reactors to generate the same amount of electricity (in the case of a power uprate), resulting in significant capital cost savings. For utilities or countries that already have operating reactors, we expect that our nuclear fuel could be utilized to both increase the power output of those reactors as well as enable them to load follow with electric grid demands, which demands have become increasingly variable with large additions of intermittent renewable energy generation.

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### ***Anticipated Safety Benefits of Lightbridge Fuel™***

The anticipated safety benefits of Lightbridge Fuel™ are as follows:

- Lightbridge Fuel™ is expected to operate at lower operating temperatures than current conventional nuclear fuel, contributing to lower stored thermal energy in the fuel rods; it is therefore not expected to generate explosive hydrogen gas under design-basis accidents when there is a loss of coolant in the reactor;
- enhances structural integrity of the nuclear fuel rods; and
- has lighter and stiffer fuel assembly, which may contribute to improved seismic performance.

Due to the expected significantly lower fuel operating temperature and higher thermal conductivity, our metallic nuclear fuel rods are expected to provide major improvements to safety margins during certain off-normal events. The U.S. Nuclear Regulatory Commission (NRC) licensing processes require engineering analysis of a large break loss-of-coolant accident (LOCA), as well as other scenarios. The LOCA scenario assumes failure of a large water pipe in the reactor coolant system. Under LOCA conditions, the fuel and cladding temperatures rise due to reduced cooling capacity. A recent analytical modeling study of Lightbridge Fuel™ by Structural Integrity Associates that was funded by the U.S. DOE shows that under a design-basis LOCA scenario in a PWR reactor, unlike conventional uranium dioxide fuel, the cladding of the Lightbridge-designed metallic fuel rods would stay below the 850-900 degrees Celsius temperature at which steam begins to react with the zirconium cladding to generate hydrogen gas. Build-up of hydrogen gas in a nuclear power plant can lead to a hydrogen explosion, which contributed to the damage at the Fukushima Daiichi nuclear power plant. Lightbridge Fuel™ is expected to mitigate hydrogen gas generation in design-basis LOCA situations.

### ***Lightbridge Spent Fuel – Proliferation Resistance***

The April 2018 issue of Nuclear Engineering and Design, a technical journal affiliated with the European Nuclear Society, included a peer-reviewed article stating that after analyzing Lightbridge's fuel, the authors concluded that any plutonium extracted from Lightbridge's spent fuel would not be useable for weapon purposes. We anticipate the following proliferation resistance advantages for our metallic fuel:

- one-half of the amount of plutonium produced and remaining in the spent fuel as compared to conventional uranium dioxide fuels; and
- lower Plutonium-239 fraction compared to uranium dioxide fuel.

Therefore, our spent fuel would be unsuitable as a source for weapon purposes.

A modified variant of Lightbridge Fuel™ incorporating plutonium instead of, or in addition to, uranium in the metallic fuel rods could potentially be used to dispose of plutonium from reprocessed used reactor fuel, utilizing the plutonium to generate electricity. We believe a modified variant of our fuel also has the potential to be used to dispose of excess plutonium from nuclear weapons.

### ***Target Market for Lightbridge Fuel™***

We expect Lightbridge Fuel™ to be suitable for improving the operations of a broad range of water-cooled nuclear reactor technologies. Our potential market segments include uprates to existing water-cooled commercial power reactors, advanced fuel in new large-scale water-cooled reactors, and advanced fuel in new water-cooled SMRs.

We believe the most significant economic benefit of Lightbridge Fuel™ may be its potential to provide a 30% power uprate in new-build water-cooled reactors, where power generation and containment equipment can be designed to accommodate the higher power output potentially achievable with Lightbridge Fuel™.

While existing large reactors may not be able to realize that full benefit because their systems are not designed to handle that much of an increase in power, for existing large PWRs we estimate power uprates that could be taken from Lightbridge Fuel™ to be 17% or potentially higher. Additionally, existing large PWRs could benefit from longer fueling cycles, increasing generation and availability at these facilities.

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The all-in costs of owning and operating a nuclear power plant include fuel costs, operating costs, and, for new and recently built or up-rated plants, recovery of capital costs. These costs are spread out over the generation that the nuclear plant is able to produce. Because nuclear fuel cost is a relatively small fraction of total generating cost, particularly for new or uprated plants, even a relatively modest increase in power output or longer cycle time between fueling (reducing downtime and increasing availability) could have an outsized economic benefit by increasing the generation that capital and fixed operating costs are amortized over, potentially making Lightbridge Fuel's value proposition (uprate, efficiency, safety) more compelling. Additionally, Lightbridge's safety benefits could provide some benefits to fixed operating costs while improving a plant's safety profile and reducing risk.

### ***Nuclear Power as Clean and Low Carbon Emissions Energy Source***

Nuclear power provides clean, reliable baseload electricity. The growth of electric power demand in the U.S. and globally from data centers, building and transportation electrification, and industrial expansion will require large amounts of new baseload energy, which nuclear energy is well positioned to provide. Other competing power sources, including natural gas generation, wind and solar energy, batteries, geothermal energy, and hydroelectricity have some combination of geographical and infrastructure constraints, cost challenges, or intermittency and reliability challenges which will limit their ability to serve this new baseload power demand without a large increase in nuclear energy.

According to the World Nuclear Association (WNA), nuclear reactors produce no greenhouse gas emissions during operation, and over the course of their lifecycles, produce about the same amount of CO<sub>2</sub> equivalent emissions per unit of electricity generated as wind power. The WNA further notes that almost all proposed pathways to achieving significant decarbonization suggest an increased role for nuclear power, including those published by the International Energy Agency (IEA), the Massachusetts Institute of Technology Energy Initiative, and the U.S. Energy Information Administration (EIA).

We believe that deep cuts to CO<sub>2</sub> emissions are only possible with electrification of most of the transportation and industrial sectors globally, which will require powering such sectors, and other current global electricity needs, with non-emitting or low-emitting energy sources or no-carbon liquid fuels. We believe this can be done only with a large increase in nuclear power—several times the amount that is generated globally today. We believe that our nuclear fuel technology could play an important role in reaching this goal.

### **Development of Lightbridge Fuel™**

#### ***Fuel Development Strategy – Lead Test Assemblies (LTAs)***

We believe our metallic fuel can be used in different types of water-cooled commercial power reactors, such as PWRs, boiling-water reactors (BWRs), Russian-designed water-cooler commercial power reactors (VVERs), Canada Deuterium Uranium (CANDU) heavy water reactors, water-cooled SMRs, and water-cooled research reactors. The long-term milestones towards development and commercialization of nuclear fuel LTAs include, among other things, irradiating nuclear material samples and prototype fuel rods with enriched uranium in test reactors, conducting post-irradiation examination of irradiated material samples and/or prototype fuel rods, performing thermal-hydraulic experiments, performing seismic and other out-of-reactor experiments, performing advanced computer modeling and simulations to support fuel qualification, designing an LTA, entering into a lead test rod/assembly agreement(s) with a host reactor(s), demonstrating the production process of lead test rods and/or lead test assemblies at an expandable fuel facility and demonstrating the operation of lead test rods and/or lead test assemblies in commercial reactors.

Below is a brief description of certain key fuel development steps leading up to an LTA operation in a commercial reactor.

#### **Fuel Fabrication**

In the short to medium term, we expect the development of the fabrication processes for Lightbridge Fuel™ to continue to be performed utilizing existing facilities and equipment within the DOE national laboratory complex at Idaho National Laboratory (INL). Discussions are currently ongoing with the INL to perform the next phase of process development activities and establish the capability to manufacture development quantities of prototype fuel rods for irradiation testing.

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Fabrication of LTAs will require deployment of a dedicated Lightbridge Expandable Fuel Facility (LEFF). We estimate the major scopes of work to establish a manufacturing capability for lead test rods/LTA could take several years to complete and require tens of millions of dollars or more in capital expenditures. Expanding the throughput of LEFF from LTA to batch reload quantities would require a substantial additional capital investment in the manufacturing facility and equipment and, based on our preliminary cost estimates, will require hundreds of millions of dollars or more in capital expenditures. These cost estimates assume sufficient funding availability and that the LEFF project receives prioritization by the DOE and NRC to facilitate access to the required quantities of the high assay low enriched uranium (HALEU) material, and timely regulatory licensing of the LEFF.

### **Nuclear Fuel Material Coupon Sample Irradiation Test**

Lightbridge's irradiation testing program includes irradiation of fuel material coupon samples of its uranium-zirconium fuel alloy which will allow characterization of the underlying thermophysical behavior of the fuel alloy. This project is currently underway with INL. We began irradiation testing of the Lightbridge Fuel™ material coupon samples in the Advanced Test Reactor (ATR) in November 2025. The fuel material coupon samples are contained within sealed irradiation capsules during testing and are not in direct contact with reactor coolant. We expect the initial batch of partially irradiated fuel material coupon samples to come out of the ATR in 2026, with post-irradiation examination anticipated to begin in late 2026 or early 2027. The remaining fuel material coupon samples will continue their irradiation testing until reaching their target burnup which is currently expected to occur as soon as 2028. The data obtained from this fuel material coupon sample irradiation program is expected to be a fundamental component of Lightbridge's accelerated fuel qualification approach described below, as it will be used to inform and develop the physics-based models and simulations of the fuel rod behaviors.

### **Loop Irradiation Testing**

The purpose of the loop irradiation testing of Lightbridge's prototype metallic fuel rods is to demonstrate the performance and behavior of the fuel rods under prototypic commercial reactor operating conditions typical of PWRs at a power level and burnup accumulation higher than the fuel would experience in normal operation in a commercial power plant. This will provide a physical demonstration of the capabilities of the fuel rods to ensure reactor safety. Such testing is expected to provide sufficiently detailed information to validate the performance of individual fuel rods, ensuring that their behavior under normal operating conditions in an NRC-regulated nuclear power plant is well enough understood to support a license amendment request to the NRC for an LTA operation.

We plan on such a loop irradiation test to be performed in the ATR at INL. The ATR currently has limited irradiation loop test facilities; however, the planned installation of the new so-called "I-loops" in the coming years will increase the loop irradiation capacity of ATR for performing tests on Lightbridge Fuel™ in the desired test conditions.

We expect the performance of the loop irradiation test to take three years of in-reactor time plus an additional one year for post-irradiation examination, wherein analysis of the fuel rod performance and behavior is performed, from the time when the additional test loop becomes available.

### **Preparation for an LTA Operation**

Insertion of LTAs with Lightbridge's fuel rods in a nuclear power plant requires the power plant owner to obtain approval from the NRC based on a safety evaluation and justification that the LTAs will not be detrimental to the plant's licensed operations. This justification must address numerous technical areas (e.g., neutronics design, mechanical design, thermal hydraulic design, materials science, reactor operations, etc.) and include considerations of the performance of the limited number of LTAs themselves as well as their interaction with other fuel assemblies in the reactor core which may be impacted by the presence of the LTAs. The safety evaluation must result in confirmation that the plant's ability to ensure plant worker and public safety is not compromised due to the operation of the LTAs. This safety justification will require cooperation between Lightbridge, the fuel manufacturer for the current fuel assemblies operating in the host reactor core, and the power plant owner and will depend on the realization of the following:

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- our expected time estimates for loop availability in the ATR can be achieved by the national laboratory complex;
- partnership with nuclear power plant and fuel manufacturer for LTA demonstration purposes is achieved in a timely manner and does not delay the assumed start of work;
- potential accelerated fuel qualification methodology that we currently plan to develop for Lightbridge Fuel™ is accepted by the NRC as sufficient for the safety justification of the LTAs;
- execution of out-of-reactor fuel development activities can be performed in parallel with LTA design;
- facilities and personnel for completion of the fuel development work are available when necessary and do not delay the execution of our research and development activities;
- by implementation of accelerated burn-up techniques, the irradiation loop at ATR is capable of 50% reduction in irradiation time compared to operating commercial reactor fuel cycle; and
- LEFF is deployed within the timelines capable of manufacturing sufficient LTA quantities of metallic fuel rods to the desired rod length and specification to ensure insertion of LTAs in a commercial reactor when needed.

### ***Expected Fuel Development and Commercialization Timeline and Factors Affecting Timing of Commercialization***

There are inherent uncertainties in the cost and outcomes of the many steps needed for successful deployment of our fuel in commercial nuclear reactors, which makes it difficult to accurately predict the timing of the commercialization of our proprietary nuclear fuel designs and manufacturing processes. However, based on our best estimate and assuming adequate R&D funding levels, we expect to begin demonstration of lead test rods and/or possibly LTAs with our metallic fuel in commercial reactors in the early- to mid-2030s and begin receiving purchase orders for initial fuel reload batches from utilities in the late 2030s. Lightbridge aims to engage early with relevant nuclear regulators to inform our future R&D activities.

While we continue to target LTAs with our metallic fuel in commercial reactors in the mid-2030s, there are several potential developments that, if successful, could potentially accelerate our anticipated timelines by up to a few years. These developments include:

- Expedited nuclear fuel testing through advanced modeling and simulation, as well as potential use of accelerated irradiation techniques, such as the use of high-enriched uranium in so-called Fission Accelerated Steady-state Test type experiments
- Early engagement with a strategic partner to establish fabrication infrastructure or a Lightbridge expandable fuel fabrication facility on a co-located site to complete development of the manufacturing process for our fuel rods
- Streamlined regulatory pathways enabled by pre-submission consultations with the NRC, in part supported by recent legislation such as the ADVANCE Act and longstanding federal initiatives
- Supportive federal policies originating from recent executive orders, which laid the groundwork for continued federal prioritization of next-generation nuclear technology and a mandate given to the NRC to shorten regulatory review and approval timelines to 12 months for existing reactors and 18 months for new reactor applications. These initiatives, along with current regulatory and legislative efforts, reinforce a policy environment that may be favorable to an accelerated commercialization pathway for Lightbridge Fuel™. In addition, some companies developing advanced reactors have deployed pilot-scale facilities that include buildings with security and infrastructure features similar to what Lightbridge would require, which may give us greater certainty regarding the cost and timing of deploying such a facility.

### *Next Steps Toward Our Fuel Development and Timeline for the Commercialization of Our Nuclear Fuel LTAs*

We anticipate fuel development milestones for Lightbridge Fuel™ over the next 2-3 years will consist of the following:

- **Testing:** Produce fuel rodlets necessary for testing to be performed under our INL agreements and potentially in commercial nuclear reactors in the future.
- **Modeling:** Continue development and/or validation (benchmarking) of Lightbridge-specific methods and modifications to existing modeling codes to accurately predict Lightbridge Fuel™ performance over the full domain of operating conditions for which Lightbridge Fuel™ will be licensed.
- **Fuel Qualification Plan:** Complete a Phenomena Identification and Ranking Table (PIRT) analysis and refine a Fuel Qualification Plan that describes our approach to characterizing and validating the performance our fuel rods, assemblies, and assembly components in relevant operation scenarios, and validation of the modeling tools that accurately describe the performance of Lightbridge Fuel™ in the relevant conditions.
- **NRC Engagement Plan:** Prepare and submit the NRC Engagement Plan that outlines how and when Lightbridge will engage the NRC regarding submission of relevant information and supporting documentation for license applications.
- **Fabrication:** Continue efforts to develop and establish a manufacturing process for the co-extrusion of clad rodlets for loop irradiation testing and other fuel testing. In addition, we plan to complete site selection and begin deployment of an LEFF with capacity to produce partial-length fuel rods for irradiation testing and full-length fuel rods for lead test rods and lead test assemblies for demonstration of our fuel in commercial reactors.
- **Thermal-Hydraulic Analysis and Experiments:** Perform thermal-hydraulic modeling of Lightbridge Fuel™ to prepare for a series of thermal-hydraulic experiments to confirm pressure drop, critical heat flux performance, and other thermal-hydraulic parameters of Lightbridge Fuel™ under various operating conditions in different types of reactors.

### *Certain Challenges and Uncertainties Affecting the Development and Timing of Commercialization*

#### 1. Funding and/or in-kind support from government and/or strategic partners and/or other third-party sources

Presently, our ability to fund our fuel development program at a level necessary to adhere to our projected fuel development timelines depends on the amount of funding available to us. In addition to our fuel development costs, we have ongoing corporate overhead and other fixed costs, such as in-house project management and project control personnel. To date, most of our funding has come from the Company's equity offerings via our at-the-market (ATM) facility. As a result, we believe our ability to continue raising additional capital through our ATM facility (which is subject to favorable market conditions and availability) and/or seeking and securing significant funding and/or in-kind contributions from government and/or strategic partners and/or other third-party sources to support our fuel development program is essential for us to adhere to our expected timelines for our fuel development and commercialization efforts.

#### 2. Availability of suitable test loops in the ATR

The availability of irradiation test loops for fuel in the ATR is limited and highly competitive. If sufficient loop capacity within the ATR is not available, we may not be able to obtain sufficient data to justify regulatory approval for LTA demonstration in a large commercial PWR in a commercially feasible timeframe. This would likely necessitate additional loop irradiation testing in another test reactor or a lead test rod (LTR) demonstration in a large commercial PWR before LTA demonstration could commence.

#### 3. Partnerships with fuel vendors and nuclear utilities

The ability to design and fabricate an LTR and/or LTAs, and engagement with a nuclear utility that is willing to accept our LTR/LTAs, is required to demonstrate our nuclear fuel in a commercial reactor. In the U.S., the nuclear fuel fabricator and the nuclear utility will be primarily responsible for securing the necessary regulatory licensing approvals for the LTR/LTA operation. We plan to also build relationships with large reactor and/or SMR reactor fuel vendors, as well as existing nuclear utilities and/or potential SMR customers.

#### 4. Supply chain infrastructure for HALEU

Establishment of required supply chain infrastructure to support HALEU metallic fuel is a necessary step in the commercialization of our nuclear fuel. Existing commercial nuclear infrastructure, including conversion facilities, enrichment facilities, de-conversion facilities, fabrication facilities, fuel storage facilities, fuel handling procedures, fuel operation at reactor sites, used fuel storage facilities and shipping containers, were designed and are in most cases currently licensed to handle uranium in oxide form with enrichment up to 5% in the isotope uranium-235. Our fuel designs for light water reactors are expected to use uranium metal with uranium enrichment levels up to 19.75% and would therefore require certain modifications to existing commercial nuclear infrastructure to enable commercial nuclear facilities to receive and handle our fuels. Those nuclear facilities will need to complete a regulatory licensing process and obtain regulatory approvals to be able to process, handle, or ship uranium metal with enrichment levels up to 19.75% and operate commercial reactors and spent fuel storage facilities using our metallic fuel.

To support establishment of domestic HALEU infrastructure, the DOE announced on December 7, 2022 the creation of a HALEU Consortium. According to the DOE, the purposes of the HALEU Consortium include: (1) providing the Secretary of Energy HALEU demand estimates for domestic commercial use; (2) purchasing HALEU made available to members for commercial use under the program; (3) carrying out demonstration projects using HALEU under the program; and (4) identifying actionable opportunities to improve the reliability of the HALEU supply chain. On December 15, 2022, the Company submitted a formal request to the DOE to join the HALEU Consortium to mitigate HALEU supply risk. On January 12, 2023, the Company received written confirmation from the DOE of Lightbridge's membership in the HALEU Consortium. HALEU is a key component necessary for the fabrication and operation of Lightbridge Fuel™ in light water reactors.

#### 5. Need for experimental data on our metallic fuel

There is a lack of publicly available experimental data on our metallic fuel. We will need to conduct various irradiation experiments to confirm fuel performance under normal and off-normal reactor conditions. Irradiation testing of Lightbridge Fuel™ in conditions that are prototypic of commercial reactor operating conditions and that represent off-normal and/or accident conditions, as well as other experiments on unirradiated and irradiated metallic fuel samples will be essential to demonstrate the performance and advantages of our metallic fuel. We are planning loop irradiation testing of our metallic fuel samples in the ATR at INL as part of this effort. Additionally, we need to conduct thermal-hydraulic experiments to collect experimental data relating to pressure drop, critical heat flux performance, and other thermal-hydraulic parameters for Lightbridge Fuel™. There are a limited number of experimental facilities with suitable capabilities for performing these experiments.

#### 6. Need for development of new analytical models to support our metallic fuel

Existing analytical models may be inadequate to fully analyze our metallic fuel. New analytical models, capable of accurately predicting the behavior of our metallic fuel during normal operation and off-normal events, may be required. Experimental data measured from our planned irradiation demonstrations and thermal-hydraulic tests will help to identify areas where new analytical models, or modifications to existing ones, may be required.

#### 7. Need to develop and demonstrate a qualified fabrication process for our metallic fuel rods

Demonstration of a qualified fabrication process both for partial-length irradiation fuel rod samples and subsequently for full-length (approximately 12 to 14 feet) metallic fuel rods for large PWR or BWR LTAs and shorter length for SMRs (approximately 6 feet) is required. Past operating experience in icebreaker reactors (a nuclear-powered icebreaker ship), with differently shaped fuel rods with a similar metallic fuel composition involved fabrication of metallic fuel rods up to 3 feet in length. To date, fabrication of full-length uranium-zirconium metallic fuel rods for large PWRs and BWRs has not been demonstrated. In 2021, we demonstrated the co-extrusion of full-length rods using surrogate materials (i.e., rods which replaced the uranium component with a suitable physical analogue). On February 12, 2025, we announced a successful co-extrusion demonstration of a clad cylindrical rod comprising depleted uranium and zirconium alloy with a length of approximately eight feet. Co-extrusion is the primary forming operation in the manufacturing of our fuel and these demonstrations were important milestones on the path to developing and qualifying the full manufacturing process for actual fuel rods with enriched uranium and zirconium alloy.

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See Item 1A. *Risk Factors* in this Annual Report on Form 10-K for a discussion of certain risks that may delay or impair such fuel developments, including, among others, the availability of financing and the many risks inherent in developing a new type of nuclear fuel.

### ***Government Support/Approvals Needed, Relationships with Critical Development Partners/Vendors and Other Government Regulation***

Due to the long fuel development timelines to commercialization and the significant amount of R&D funding required to bring our next generation nuclear fuel technology to market, the Company would benefit from funding and/or in-kind contributions from government and/or strategic partners and/or other third-party sources. It will be challenging for the Company to fund all its future fuel development efforts on its own within expected timelines or at all without significant funding and cost sharing contributions from governments, strategic partners and third parties, particularly if market conditions limit the Company's ability to raise capital for these efforts on favorable terms or at all.

In addition to external funding and/or in-kind support, political support for our project is similarly important. The sales and marketing of our services and technology internationally may be subject to U.S. export control regulations, including 10 C.F.R. Part 810 and 10 C.F.R. Part 110 and the export control laws of other countries. Governmental authorizations may be required before we can export our services or technology or collaborate with foreign entities. NRC regulations at 10 C.F.R. Part 110 govern the export and import of nuclear equipment and material. Part 810 generally governs the exports of technology for development, production, or use (see 10 C.F.R. §810.3 for definitions of these terms) of reactors, equipment, and material subject to Part 110. If authorizations are required and not granted, our international business could be materially affected. Furthermore, the export authorization process is often time consuming and any delays could impact our fuel development and commercialization timelines. Violation of export control regulations could subject us to fines and other penalties, such as losing the ability to export for a period of years, which would limit our revenue growth opportunities and significantly hinder our attempts to expand our business internationally.

The testing, fabrication, and use of nuclear fuels by our future partners, licensees and nuclear power generators will be heavily regulated. The test facilities and other locations where our fuel designs may be tested before commercial use require governmental approvals from the host country's nuclear regulatory authority. The responsibility for obtaining the necessary regulatory approvals will lie with our research and development contractors that conduct such tests and experiments. Nuclear fuel fabricators, which could potentially fabricate fuel using our technology under commercial licenses from us, are similarly regulated. Utilities that operate nuclear power plants that may utilize the fuel produced by these fuel fabricators require specific licenses relating to possession and use of nuclear materials as well as numerous other governmental approvals for the ownership and operation of nuclear power plants.

### ***Recent Developments – Lightbridge Fuel™***

#### Memorandum of Understanding with Oklo, Inc.

In January 2025, we signed a Memorandum of Understanding (MOU) with Oklo, Inc. (Oklo). Oklo is developing advanced micro-reactors to provide clean, reliable, and affordable energy at scale. The MOU covers: (1) conducting a preliminary evaluation of feasibility of co-locating a Lightbridge Commercial-scale Fuel Fabrication Facility at Oklo's proposed commercial fuel fabrication facility; (2) exploring opportunities for collaboration on reprocessing and recycling of spent uranium zirconium fuel; and (3) exploring any other areas of collaboration that may be of mutual interest. We believe there may be some potential synergies in co-locating our expandable fuel facility at Oklo's proposed site. We also believe that recycling and reprocessing spent uranium-zirconium fuel may represent another area of potential synergies.

#### Master Services Agreement with Amentum Technology Inc.

In December 2025, the Company entered into a Master Services Agreement (MSA) with Amentum Technology Inc. (Amentum) relating to the performance of activities by Amentum in support of the co-location feasibility study under the MOU with Oklo, as well as other activities as the Company and Amentum may agree from time to time. In January 2026, we entered into a statement of work under our MSA with Amentum pursuant to which we expect to incur approximately \$0.4 million in costs during 2026 related to the Oklo co-location feasibility study.

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### Memorandum of Understanding and Collaborative Agreement for Cladding Alloy Compositions

In November 2025, Lightbridge entered into an MOU and a separate Collaboration Agreement with a U.S. manufacturer specializing in advanced specialty metals to support the research and development of cladding alloy compositions for potential use as cladding materials for Lightbridge Fuel™. Under the MOU, the parties agreed to pursue a phased technical evaluation program beginning with alloy development, melting, processing, and characterization activities (Phase 1). The Collaboration Agreement governs the conduct of Phase 1 research and provides a framework for developing future project plans. Lightbridge expects to incur approximately \$0.3 million in Phase 1 costs in 2026, which will be expensed as incurred and included in research and development expenses. Each party will bear its own costs unless a project plan specifies cost-sharing. The agreements do not create any commercial supply obligations, minimum purchase commitments, or other financial commitments by either party, and any future scale-up or supply arrangements would require separate definitive agreements following successful completion of earlier phases. The MOU and Collaboration Agreement may be terminated by either party upon notice.

### Commencement of Irradiation Testing of Lightbridge Fuel™ Material Coupon Samples

In November 2025, we announced the start of irradiation testing of the Company's recently manufactured enriched uranium-zirconium alloy fuel material coupon samples in the ATR at INL. This milestone represents a significant step forward in the Company's fuel development and testing program conducted under its Cooperative Research and Development Agreement (CRADA) with Battelle Energy Alliance, LLC (BEA), the DOE's operating contractor for INL. The irradiation testing campaign is expected to provide essential data on the fuel alloy's microstructural evolution, thermal conductivity properties, and other data as a function of burnup that are critical to the qualification and licensing of Lightbridge Fuel™ for future commercial use.

### Idaho National Laboratory Agreements

In December 2022, Lightbridge entered into agreements with BEA to support the development of Lightbridge Fuel™. The framework agreements use an innovative structure that consists of an "umbrella" Strategic Partnership Project Agreement (SPPA) and an "umbrella" CRADA, each with BEA, with an initial duration of seven years.

The initial phase of work under the two agreements that was previously released culminated in the insertion of extruded unclad fuel material coupon samples using enriched uranium supplied by the DOE and the start of irradiation testing in the ATR at INL in November 2025. The initial phase of work aims to generate irradiation performance data for Lightbridge's delta-phase uranium-zirconium alloy relating to various thermophysical properties. The data will support fuel performance modeling and regulatory licensing efforts for commercial deployment of Lightbridge Fuel™. We use a rolling wave planning approach for project management purposes on the released scopes of work. It is an iterative planning technique in which the work to be accomplished in the near term is planned in detail, while work further in the future is planned at a higher level. As such, periodic revisions to the scope and/or cost estimates are anticipated.

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[Updates to the SPPA](#)

In October 2025, the Company and BEA entered into Modification No. 3 to the SPPA extending the duration of this umbrella agreement from 7 years to 12 years. The following table summarizes current project task statements (PTSs) under the SPPA, and related modifications through the filing date of this Annual Report on Form 10-K:

Agreement	Effective Date	Duration	Estimated Reimbursable Costs (in millions)
<b>SPPA PTS No. 1</b>			
<i>Fabrication and irradiation test specimens and fuel coupons</i>	December 2022	42 months	\$ 1.1
Modification No. 1	May 2023	-	-
Modification No. 2	March 2024	-	\$ 0.6
Modification No. 3	October 2024	-	\$ 0.3
Modification No. 4	March 2025	4 month reduction	\$ 0.6
Modification No. 5	January 2026	8 month extension	-
<b>Total SPPA PTS No. 1</b>		46 months	<b>\$ 2.6</b>
<b>SPPA PTS No. 2</b>			
<i>Technical consultation on the drafting of a fuel qualification plan</i>	November 2025	12 months	<b>\$ 0.5</b>
<b>SPPA PTS No. 3</b>			
<i>Safety analysis codes, code development for Lightbridge Fuel™, model development for Lightbridge Fuel™, and light water reactor applications</i>	December 2025	44 months	<b>\$ 3.5</b>
<b>SPPA PTS No. 4</b>			
<i>Code development for fuel performance modeling</i>	December 2025	60 months	<b>\$ 3.7</b>
<b>SPPA PTS No. 5</b>			
<i>Post-irradiation examination of fuel specimens</i>	December 2025	48 months	<b>\$ 5.0</b>
<b>Grand Total SPPA</b>			<b>\$ 15.3</b>

[Updates to the CRADA](#)

In November 2025, the Company and BEA entered into Modification No. 1 to the CRADA, extending the end of the term from September 27, 2029 to September 27, 2032. The following table summarizes current PTSs under the CRADA, and related modifications through the reporting period:

Agreement	Effective Date	Duration	Estimated Reimbursable Costs (in millions)
<b>CRADA PTS No. 1</b>			
<i>Experiment assembly for irradiating Lightbridge Fuel™ alloy within the ATR</i>	December 2022	54 months	\$ 2.3
Modification No. 1	May 2023	-	\$ 0.3
Modification No. 2	May 2023	23 months	-
Modification No. 3	January 2025	-	\$ 1.6
<b>Total CRADA PTS No. 1</b>		77 months	<b>\$ 4.2</b>
<b>Grand Total CRADA</b>			<b>\$ 4.2</b>

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### [Aggregate Financial Impact](#)

After considering all modifications and new PTSs, expected cash payments from the Company to BEA under both the CRADA and the SPPA are estimated at approximately \$19.5 million on a cost reimbursable basis over the performance periods. As of December 31, 2025, \$5.4 million has been cumulatively expensed and the balance of the remaining obligations that may be incurred under these agreements is \$14.1 million. These obligations are generally cancellable with 30-60 days' notice and, therefore, are not considered firm commitments, and are not expensed until incurred.

### [Future Scope and Risks](#)

The Company anticipates entering into additional PTSs and/or modifications to existing PTSs under the SPPA and/or CRADA with INL to expand the scope of work, including performing the next phase of fabrication process development work and other potential activities. The successful execution of this project is subject to an increase in project scope and risks, including potential delays, cost overruns, regulatory challenges, and changes in funding availability. We anticipate that subsequent phases of work under the two umbrella agreements that have not yet been released may include loop irradiation testing in the ATR, and post-irradiation examination of one or more uranium-zirconium fuel rodlets, transient experiments in the Transient Reactor Test Facility at INL and subsequent post-irradiation examination of the test rodlets.

### [Purchase of High-Performance Computer for Fuel Modeling](#)

During the fourth quarter of 2025, the Company completed the purchase of a high-performance computer (HPC). The HPC is specifically configured for advanced nuclear modeling and requires specialized software and environmental conditions and provides a significant expansion of computational capability necessary for us to continue developing and simulating the viability of our nuclear fuel technology. To support the HPC, the Company also entered into agreements with additional vendors to provide co-location services, hardware/software management services, and additional nuclear simulation software. Costs for the HPC and related services and software are expensed as incurred and included in research and development expenses. Such items totaled approximately \$2.0 million for the year ended December 31, 2025.

### [Software Code Development Agreements](#)

In October 2025, we entered into an Agreement for Safety Analysis Codes and Services for Lightbridge Fuel Designs with Numerical Advisory Solutions, LLC (NAS), a provider of nuclear engineering analysis software. Under the agreement, NAS will perform code-development, benchmarking, and modeling services to support the creation of Lightbridge's proprietary fuel-safety analysis methods and the adaptation of industry-standard computer codes for the Lightbridge Fuel™ helical-cruciform metallic U-Zr design. The work scope includes hold-point reviews and deliverable acceptance by Lightbridge with an estimated completion window between October 2026 through January 2027. The total contract value is approximately \$0.8 million, with milestone-based payments. The resulting software and analysis models will be owned by Lightbridge and are expected to strengthen Lightbridge's internal capability to perform reactor safety analyses in support of future regulatory submissions and commercial fuel demonstrations.

In December 2025, we also entered into an agreement with Studsvik Scandpower, a provider of nuclear fuel management software, to develop a transport methodology based on their existing CMS5 software that will model the Lightbridge Fuel™ design. We would need to separately purchase a license to the CMS5 software after it has been developed to meet Lightbridge's specifications. The total contract value for development of the code is approximately \$0.3 million, payable upon the completion of work, expected in mid-2026.

Costs for software code development are expensed as incurred and included in R&D expenses. However, work on these arrangements is in the preliminary stages or has not yet begun, and no expenses were incurred during the year ended December 31, 2025.

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### Critical Heat Flux Test Program

In February 2026, we entered into an initial engineering contract and statement of work with an organization providing specialized experimental services to assess the thermal and hydraulic (TH) performance of Lightbridge Fuel™ for use in water-cooled reactors. The experimental program will be carried out in phases and include: the design and fabrication of an electrically heated fuel simulator and its acceptance testing, nine-rod PWR critical heat flux tests, with an option for the Company to also choose to conduct nine-rod BWR critical power tests, a full scale TH test program to support the U.S. licensing of Lightbridge Fuel™ in commercial PWRs, and an option for the Company to also choose to conduct a full scale TH thermal test program to support the U.S. licensing of Lightbridge Fuel™ in commercial BWRs. Phase 1 work includes prototype fuel simulator design, fabrication, and acceptance testing and is estimated to take one year to complete and cost approximately \$0.5 million.

### Romania Feasibility Study of Lightbridge Fuel™ for use in CANDU reactors

On October 16, 2023, we engaged Institutul de Cercetări Nucleare Pitești, a subsidiary of Regia Autonomă Tehnologii pentru Energia Nucleară (RATEN ICN) in Romania to perform an engineering study to assess the compatibility and suitability of Lightbridge Fuel™ for use in CANDU reactors. This assessment covers key areas including mechanical design, neutronics analysis, and thermal and thermal-hydraulic evaluations. The findings from this engineering study will play an important role in guiding future economic evaluations and navigating potential regulatory licensing-related issues for potential use of Lightbridge Fuel™ in CANDU reactors.

The results of this Feasibility Study indicated that Lightbridge Fuel™ can double the discharged burnup in a CANDU reactor at U-235 enrichment levels of less than 3% compared to conventional uranium dioxide fuel. Based on these favorable initial results, we plan to continue further evaluation of Lightbridge Fuel™ in CANDU reactors and are currently in the process of finalizing the scope of work for the next phase of activities.

In August 2025, we entered into an agreement with RATEN ICN (the 2025 RATEN ICN Agreement) to evaluate conducting irradiation tests for several Lightbridge Fuel™ rodlets, with the objective of irradiating the rodlets to one or more target discharge burnups and subjecting the irradiated rodlets to post irradiation examination. The 2025 RATEN ICN Agreement provides for two phases: in Phase 1, RATEN ICN was to conduct scoping studies to develop preliminary experiment designs, evaluate infrastructure and equipment needs, and obtain cost and schedule estimates for potential new driver fuel, and in Phase 2, if the results of Phase 1 were acceptable to Lightbridge, RATEN ICN would implement refurbishments, procure equipment and driver fuel as needed, finalize experiment design, fabricate and operate the test assembly, and complete post-irradiation examination. Lightbridge would be responsible for supplying experimental fuel rodlets for use in the irradiation tests. The Phase 1 work was completed as of December 31, 2025. The Company is currently evaluating the results of the Phase 1 work. No decision has been made about the Phase 2 scope as of the date hereof.

### **Competition**

Currently, competition with respect to the design of commercially viable nuclear fuel products is limited to conventional uranium dioxide fuels, which are reaching the limits in terms of their capability to enable power uprates. While we believe conventional uranium dioxide fuel may be capable of achieving power up-rates of up to 10% in existing PWRs or extending the fuel cycle length from 18 to 24 months, doing so would require uranium-235 enrichment levels above 5% (as is also the case with our metallic fuel), higher reload batch sizes, or a combination thereof. This is the direction the commercial U.S. nuclear power industry is currently pursuing.

In addition to conventional uranium dioxide fuel, potential competition to our metallic fuel technology can come from ATF. We regard ATF as part of a series of incremental changes to conventional uranium dioxide fuel over time. ATF uses uranium dioxide with added substances and/or changes to the cladding tube. After the accident at the Fukushima Daiichi nuclear power plant in March 2011, the U.S. Congress directed the DOE to investigate every aspect of nuclear plant operation including the existing uranium dioxide fuel pellets contained in zirconium-based alloy tubes (cladding). According to the February 2019 Nuclear Energy Institute technical report on ATF titled “Safety and Economic Benefits of Accident Tolerant Fuel,” advanced fuel design concepts (such as ATF) were accelerated by combining recent operating experience with worldwide research and development. Over the past decade, the ATF program has received significant DOE funding support and initial interest from utility customers conducting ATF demonstration programs in their operating reactors. For example, in January 2022, Southern Nuclear agreed to load four lead test assemblies with a chromia and alumina doped ATF design. Similar ATF concepts are being tested by Framatome and GE Nuclear.

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When the DOE originally launched the ATF program, the program was focused solely on achieving enhanced safety benefits, such as extra “coping time” during severe accidents. Over the past few years, we believe many ATF vendors concluded that the unexpectedly small accident tolerance benefits their ATF fuel concepts offered (such as up to a few extra hours of coping time during severe accidents rather than their original goal of approximately 72 hours) were not enough of an incentive for nuclear utilities to adopt ATF designs, which would cost more and have reduced efficiency relative to conventional uranium dioxide fuels. As a result, ATF vendors have begun exploring opportunities for extending the operating cycle length in existing PWRs and/or power uprates in BWRs by going to higher enrichments (i.e., from approximately 5% to 7-8% enrichments) with ATF designs. If they are successful in extending the cycle length and/or achieving power uprates in a cost-effective way, this could give sufficient economic incentive for nuclear utilities to switch to the ATF designs in the coming years. This recent shift in positioning by many ATF vendors represents a competitive threat to Lightbridge for use in existing large PWRs, as ATF vendors are now trying to encroach into a critical element of Lightbridge’s value proposition, i.e., the ability of Lightbridge Fuel™ to extend the cycle length from 18 to 24 months in existing large PWRs and/or offer power rate uprates opportunities. While it is not certain that the ATF vendors will be successful in this approach, if ATF could enable longer cycles and/or power uprates, it could severely weaken or undermine our economic value proposition in existing large light water reactors (LWRs). That said, we believe Lightbridge Fuel™ remains the only advanced light-water reactor fuel in development that can provide power uprates, cycle length extensions, improved safety, and load following in a single product as desired by the utilities.

Nuclear power faces competition from other sources of electricity as well, including natural gas, which at times in recent years has been the cheapest option for power generation in the U.S. and has resulted in some utilities abandoning nuclear initiatives. Other sources of electricity, such as renewables like wind and solar, may also be viewed as safer than nuclear power, although we believe that generating nuclear energy with Lightbridge Fuel™ is the safest way to produce baseload electricity.

### **Raw Materials**

We plan to utilize small quantities of raw materials for our testing and demonstration efforts over the next several years. During the commercial phase of our operations, we will ultimately need to procure significant quantities of enriched uranium and zirconium materials necessary for fabrication of our metallic fuel rods. The availability of uranium metal enriched to 19.75% in the isotope uranium-235 is currently limited to small quantities sufficient only for research and testing purposes. Deployment of our fuel in light water reactors will necessitate increasing enrichment level from 5% up to 19.75% at enrichment facilities, as well as deployment of de-conversion/metallization capability at a commercial scale, and the design and licensing of a shipping container capable of accommodating fuel assemblies with uranium metal enriched up to 19.75%.

### **Use of Artificial Intelligence Tools**

We continue to explore and adopt innovative technologies to enhance our business operations and research capabilities. In this regard, the Company has begun utilizing certain nuclear industry-focused artificial intelligence tools that leverage machine learning and advanced analytics to support information gathering, data analysis, and research workflows related to nuclear fuel development and industry trends.

The Company uses tools to supplement internal analysis and decision-making. While the tools are designed to improve efficiency and support our R&D and market research efforts, they do not replace the professional judgment of our management, engineers, or other technical personnel. The Company does not rely exclusively on AI-generated content or recommendations for any material regulatory submissions, safety decisions, or financial reporting.

### **Future Potential Collaborations and Other Opportunities**

In the ordinary course of business, we engage in periodic reviews of opportunities to invest in or acquire companies or units within companies to leverage operational synergies and establish new streams of revenue. We will be opportunistic in this regard and may also partner or contract with entities that could be synergistic to our fuel business or present an attractive stable business and/or growth opportunity in the nuclear space.

## **Our Intellectual Property**

Our intellectual property rights include multiple U.S. and international patents and patent applications, trade secrets, trademark rights, and contractual agreements. Our patent applications are directed to our proprietary nuclear fuel technology and we seek additional patent protection for our fuel designs, development, and related alternatives by filing patent applications in the U.S. and other countries as appropriate. In addition to our issued and pending patents, we rely on trade secrets and proprietary know-how related to our nuclear fuel technology, design methodologies, and development processes. We also own trademarks to the Lightbridge corporate name and the Lightbridge logo.

We ensure that we own intellectual property created for us by employees, independent contractors, consultants, companies, and any other third-party by signing agreements with them that assign rights to any foreground intellectual property to us. We maintain these rights through internal controls and confidentiality procedures, including nondisclosure and assignment-of-invention agreements with employees, independent contractors, consultants, and third parties who perform work for us.

We received no new patents in 2025 and currently have 24 pending patent applications (worldwide). As of December 31, 2025, we held 11 U.S. patents and 146 foreign patents. The expiration dates of these patents, unless they are a continuation or divisional patent filing, are generally 20 years from their application dates. Our U.S. patents begin to expire in 2027.

## **Nuclear Industry and Market**

### ***Overview of the Nuclear Power Industry***

Nuclear power is a non-fossil, low-carbon energy source capable of providing continuous, dispatchable baseload electricity. According to the IEA, nuclear energy supplied approximately 9% of global electricity generation in 2024, maintaining its role as one of the world's largest sources of low-carbon power. Global nuclear output reached an estimated 2.7 million gigawatt hours in 2024, the highest annual generation on record, according to the WNA.

According to the WNA, as of December 2025, there were approximately 438 operable commercial nuclear power reactors worldwide, representing about 397 gigawatts electric of generating capacity. In addition, 71 reactors were under construction globally, with 120 reactors in advanced planning stages. The majority of operable reactors are LWRs, consisting primarily of PWRs, BWRs, and VVERs.

PWRs are the most prevalent reactor type in commercial operation, representing an estimated 70–80% of the world's total nuclear generating capacity. BWRs and pressurized heavy-water reactors (PHWRs)—including CANDU reactors—account for most of the remaining operating capacity. These water-cooled reactor designs, which include both large reactors and water-cooled SMRs, constitute the primary addressable market for Lightbridge Fuel™.

In the United States, nuclear energy remains the largest source of carbon-free electricity. The EIA reported that nuclear power generated approximately 18% of U.S. electricity in 2024. Many U.S. reactors have received license extensions permitting operation for up to 60 or 80 years. Utilities are increasingly evaluating life extension, modernization, and power uprate projects in response to rising electricity demand—driven in part by electrification and the rapid expansion of energy-intensive data centers and industrial loads.

Growing global support for advanced nuclear technologies—including SMRs, advanced reactor designs, and improved fuel technologies—continues to reinforce nuclear power's role in long-term decarbonization strategies. Nuclear energy is projected to play a significant role in meeting global climate targets, particularly in regions seeking reliable, firm, low-carbon power to complement intermittent renewable energy sources.

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We expect Lightbridge Fuel™ to be compatible with a wide range of water-cooled reactors, including existing and future LWRs, SMRs, and PHWRs. These water-cooled reactors collectively make up the large majority of both existing, under-construction, and planned reactors today, and we expect will continue collectively to make up the large majority of nuclear power produced in the world for decades to come. The size, age profile, and long-term operating horizon of the global reactor fleet, together with continued growth in electricity demand, represent significant potential market opportunities for Lightbridge Fuel™, particularly in applications where utilities seek improved fuel performance, increased power output, enhanced safety margins, and improved operational flexibility.

### ***Growing Importance of Energy Security***

Russia's invasion of Ukraine highlighted the need for countries to diversify energy production and reduce reliance on fossil fuels supplied by nations that may threaten national security. In response, many governments have revisited their nuclear energy strategies, extending the life of existing plants or accelerating plans for new facilities. The United Kingdom and France continue to advance new nuclear projects, Belgium reversed its decision to close all nuclear plants, and Canada, Sweden, Romania, and Ghana have announced deployment plans. More recently, Poland received European Union approval for state aid to construct its first nuclear power plant, marking a significant step toward regional energy independence. In Asia, Japan has strengthened nuclear fuel supply partnerships with Kazakhstan to secure long-term uranium access. In India, the recently enacted Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India Act is replacing older legislation to open the nuclear sector to private participation, modernize safety regulation, and support the country's clean-energy expansion. Globally, the IEA projects global nuclear capacity could expand by up to 70% by 2035 and according to the World Economic Forum, there are approximately 70 reactors under construction across 15 countries, with 115 further reactors planned. These developments underscore that a stable domestic energy supply is critical to energy security and price stability, and policymakers increasingly view nuclear energy as a cornerstone of a secure and resilient energy future.

In the U.S., recent federal initiatives aimed at modernizing the DOE's authorization framework and improving coordination with the NRC continue to shape the regulatory landscape for advanced nuclear technologies. These efforts, which include streamlining review processes and promoting more risk-informed, performance-based oversight, are intended to support innovation and accelerate the development of next-generation reactor systems. We continue to monitor these developments and engage with relevant agencies as they refine their approaches to advanced nuclear projects.

### **Human Capital Resources**

As of December 31, 2025, we had thirteen full-time employees and utilized a network of independent contractors, outside agencies, and technical facilities with specific skills to assist with various business functions including, but not limited to, corporate, financial, personnel, research and development, and communications. This allows us to draw upon resources that are specifically tailored to our internal needs. We have a competitive compensation plan and benefits plan that is designed to attract, retain, and reward individuals and includes a 401k plan with a 100% matching employer contribution with immediate vesting.

Our mission is to help the world combat climate change and meet energy goals. We are passionate about understanding the needs of our society, and we work hard to develop our next generation nuclear fuel. We also believe that supporting our team with a wonderful work environment supports and empowers us to accomplish our goals. The Company's human resource professional is a resource available for employees regarding the development of their careers and training. We also have physical and mental health programs that are available to our employees. We believe that our relationship with our employees and contractors is satisfactory.

### **Available Information**

We make available, free of charge on our website, [www.ltbridge.com](http://www.ltbridge.com), our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, including exhibits, and amendments to those reports filed or furnished pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934, as amended, as soon as reasonably practicable after such reports are electronically filed with, or furnished to, the Securities and Exchange Commission (SEC). The SEC also maintains an internet site that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC at [www.sec.gov](http://www.sec.gov). The information posted on our website is not incorporated into this Annual Report on Form 10-K, and any reference to our website is intended to be an inactive textual reference only.

## ITEM 1A. RISK FACTORS

Our business faces significant risks. You should carefully consider all the information set forth in this annual report and in our other filings with the SEC, including the following risk factors which we face, and which are faced by our industry. Our business, financial condition, and results of operations could be materially and adversely affected by any of these risks. In that event, the trading price of our common stock would likely decline, and you might lose all or part of your investment. This Annual Report on Form 10-K also contains forward-looking statements that involve risks and uncertainties. Our results could materially differ from those anticipated in these forward-looking statements, as a result of certain factors including the risks described below and elsewhere in this Annual Report on Form 10-K and our other SEC filings. See also “Forward-Looking Statements” above.

### **Risks Related to Our Business and to the Commercialization of Lightbridge Fuel™**

***We will need to raise significant additional capital in the future to expand our operations and continue our R&D activities and we may be unable to raise such funds when needed on acceptable terms, or at all. Any capital raises may cause significant dilution to our shareholders.***

We will need to raise significant additional capital in the future to continue our operations and fund our research and development activities required to advance the development and commercialization of our nuclear fuel. Depending on a variety of factors, we may be unable to raise sufficient capital on acceptable terms, or at all, which could materially harm our business or result in significant dilution to our stockholders beyond what we currently expect.

As of December 31, 2025, we had approximately \$201.9 million in cash and cash equivalents and an accumulated deficit of approximately \$183.8 million. We have incurred substantial and recurring losses from operations and expect to continue to incur significant losses for the foreseeable future as we remain in the early stages of developing our nuclear fuel.

Although we raised approximately \$182.0 million of gross proceeds during 2025 through our ATM equity programs, our existing capital resources will be insufficient to fund our operations, research and development activities, and commercialization efforts to become cash-flow positive. Our future capital requirements may be higher than currently anticipated due to factors such as increased research and development costs, unanticipated technical challenges, regulatory requirements, or delays in achieving development milestones.

We expect to seek additional funding through a combination of public or private equity offerings, strategic alliances, government grants, debt financings, or other financing arrangements. However, such financing may not be available to us when needed, on acceptable terms, or at all. Our ability to raise additional capital may depend on numerous factors, including market conditions, investor perception of our progress, regulatory developments, and broader economic conditions.

If we are unable to obtain sufficient additional capital when required, we may be forced to delay, reduce, or cease our operations, including substantially reducing or suspending our research and development activities, which would materially and adversely affect our business, financial condition, results of operations, and prospects. In such circumstances, investors may lose all or a substantial portion of their investment in our common stock.

When we raise additional funds by issuing equity securities, including using our ATM facility, our stockholders will in some circumstances experience dilution, and sales of substantial amounts of our common stock may contribute to a decline in the trading price of our common stock. New investors may have rights superior to existing securityholders. Debt financing, if available, would result in substantial fixed payment obligations and may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures, or declaring dividends. Any debt financing or additional equity that we raise may contain terms, such as liquidation and other preferences, which are not favorable to us or our stockholders.

***The amount of time and funding needed to bring our nuclear fuel to market and generate revenue may greatly exceed our projections.***

The development of our nuclear fuel will take a significant amount of time and funding, and any shortfall in R&D funding levels or a delay in achieving fuel development milestones, or uncertainty in regulatory licensing timelines could result in significant delays and cost overruns. We cannot at this stage accurately predict the amount of funding or the time required to successfully develop, manufacture and sell our nuclear fuel in the future. However, our current estimate is that our metallic fuel development program is expected to take approximately 10-15 years before we can secure our initial commercial order for a batch reload. The actual cost and time required to commercialize our fuel technology may vary significantly depending on, among other things, the results of our research and product development efforts; the cost of developing or licensing our nuclear fuel; changes in the focus and direction of our research and product development programs; access to test reactor loops and/or other test facilities; competitive and technological advances; the cost of filing, prosecuting, defending and enforcing claims with respect to patents; the regulatory approval process; fuel manufacturing process; availability of metallic high assay low enriched uranium, and marketing and other costs associated with commercialization of these technologies. Because of this uncertainty, even if financing is available to us, we may need significantly more capital than anticipated, which may not be available on terms acceptable to us or at all, and the expected revenues and other expected benefits from our nuclear fuel technology may be delayed or never realized.

***Declining Political Support or Reductions in Government Funding for Nuclear Energy Could Materially Adversely Affect Our Business.***

Our business strategy depends on sustained political support for nuclear energy and advanced reactor technologies. While recent policy actions have been favorable, political priorities can shift rapidly with changes in administration, congressional leadership, or broader public sentiment. A reduction in bipartisan support for nuclear innovation could materially affect the regulatory environment, slow or complicate licensing pathways, limit access to government programs, or reduce the willingness of federal agencies to engage in long-term partnerships. Although we do not rely exclusively on U.S. government funding, any such changes could materially impact our business. Many of the programs that support the development, testing, and commercialization of advanced nuclear technologies are subject to annual appropriations and policy direction from elected officials. Even if such programs remain authorized, diminished political backing could result in reduced funding levels, delays in grant or contract awards, or changes in program priorities that no longer align with our technology. Any of these outcomes could adversely impact our development timelines, increase our capital requirements, or limit our ability to advance our fuel technology.

***Our current economic model for selling our nuclear fuel may prove to be inaccurate and subject to competition and our nuclear fuel technology products may not be cost effective.***

Although our preliminary economic model concludes that our nuclear fuel technology may provide economic benefits to utilities by enabling power uprates, it is based upon a number of assumptions that may not prove to be accurate. If our model is inaccurate, our nuclear fuel product may not provide nuclear utility customers with sufficient economic incentive to switch from existing nuclear fuels, and we could lose or fail to develop customers. For example, if ATF is successful in extending the cycle length from 18 to 24 months and/or enabling significant power uprates in existing PWRs, this could severely weaken or undermine the anticipated economic value of our nuclear fuel for large PWRs.

Separately, our economic model for SMRs is in the development stage and its viability is subject to favorable wholesale power prices in the markets in which our nuclear fuel may be used, the necessary upfront capital investment to enable up to a 30% power uprate in future SMRs using our nuclear fuel and the future costs of uranium metallization and fabrication of our fuel rods and fuel assemblies at commercial scale, all of which are inherently unpredictable.

Additionally, we believe our metallic fuel can be used in CANDU heavy water reactors. While the initial feasibility study indicates the potential for Lightbridge Fuel™ to double the burnup in CANDU reactors, we do not yet have an economic model for CANDU-type reactors and are uncertain at this time as to potential economic benefits, if any, our metallic fuel could provide in those types of reactors.

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A failure of our current and future economic models, or a failure to find a strategic alternative, such as a potential business combination partner, would adversely affect our business, financial condition, and results of operations and may result in the failure of the Company.

### ***The cost of production of our nuclear fuel could be prohibitively expensive.***

In order for our metallic fuel to succeed, we will need to be able to produce our nuclear fuel at a price that is economically viable. We have received estimates that metallization of our nuclear fuel could be achieved at a commercial scale for approximately \$5,000 to \$10,000 per kilogram of heavy metal using known metallization/de-conversion technologies. To bring the cost of metallization/de-conversion further down, we estimate that it would require a new government-funded research and development program that could take 15-20 years or longer and cost several billion dollars. In October 2024, DOE launched a HALEU program whereby DOE is funding production of 250 metric tons of HALEU in both oxide and metallic forms in the United States over the next 10 years to facilitate establishment of a U.S. supply chain for HALEU. There can be no assurance that we will be able to produce our nuclear fuel at a price that is economically feasible or that future research efforts will lower the cost of production. If we are unable to produce our nuclear fuel at a price that is economically viable, the market for our nuclear fuel may never develop and our current business model will fail.

### ***Dependence on the Future Availability of Cost-Competitive Metallic HALEU and Commercial-Scale Fuel Fabrication Infrastructure***

A key factor affecting the long-term commercial viability of our metallic nuclear fuel is the ability to produce fuel at a cost that is economically competitive for reactor operators. Although our current fuel development activities are not dependent on commercial availability of HALEU or commercial metallization/de-conversion capabilities, the future commercialization of Lightbridge Fuel™ will ultimately require a reliable supply of HALEU in metallic form and the development of commercial-scale metallization and fabrication infrastructure. At present, no commercial supplier in the United States provides HALEU in metallic form at the enrichment levels and quantities needed for commercial deployment of our nuclear fuel, and existing metallization/de-conversion processes remain limited to government-supported research settings. While these constraints are not expected to impact our near-term R&D activities or our ability to execute the current phases of our fuel development program, they represent known long-term industry uncertainties. If future metallization/de-conversion costs prove to be higher than expected, or if government-supported technology development does not lead to commercially viable cost levels, our fuel may not achieve the economic competitiveness necessary for broad market adoption. These supply chain limitations may influence the timing, production costs, and capital requirements associated with eventual commercialization of Lightbridge Fuel™, including the need for additional government programs, strategic partnerships, or capital investment to establish the supporting fuel cycle infrastructure.

We will evaluate the potential costs associated with future industrial-scale fabrication of our fuel and the impact of those costs on our commercialization strategy, partnerships, and long-term capital requirements. However, our evaluation of such costs is subject to significant uncertainty because no commercial-scale metallization/de-conversion capability exists today in the United States for the type of fuel we intend to produce.

### ***We have limited experience deploying and operating a dedicated nuclear fuel fabrication facility, and our lack of operational experience with a LEFF could materially and adversely affect our business.***

We have not previously constructed, licensed, or operated a pilot-scale and/or commercial-scale nuclear fuel fabrication facility. The proposed LEFF would represent a new and highly specialized manufacturing capability involving complex metallurgical processes, nuclear material handling, criticality safety controls, quality assurance systems, and compliance with extensive regulatory requirements. Our management team has limited direct experience designing, constructing, commissioning, and operating a dedicated nuclear fuel fabrication facility of the type contemplated for the LEFF.

The deployment of the LEFF would require significant capital investment, specialized technical expertise, qualified personnel, supply chain coordination, regulatory approvals from the NRC, various local permits, and access to sufficient quantities of HALEU. The process of developing operational capabilities at the LEFF could involve substantial engineering challenges, process development risks, construction delays, cost overruns, equipment procurement challenges, equipment performance issues, and regulatory licensing uncertainties. If we are unable to effectively manage these complexities, we may experience significant delays, increased capital expenditures, safety or compliance issues, or an inability to achieve targeted production volumes or quality standards.

In addition, operating a nuclear fuel fabrication facility requires adherence to rigorous nuclear quality assurance standards, environmental, health, and safety regulations, security requirements, and nuclear material accountability protocols. Any failure to establish or maintain appropriate operational controls could result in regulatory enforcement actions, license modifications, civil penalties, operational shutdowns, reputational harm, or increased oversight. Recruiting and retaining personnel with the requisite nuclear fabrication, metallurgical, and regulatory compliance expertise may also prove difficult or costly.

If we are unable to successfully design, license, construct, commission, and operate the LEFF on a timely and cost-effective basis, our ability to manufacture lead test rods and/or lead test assemblies, scale production to commercial quantities, and generate future revenues from fuel sales could be materially and adversely affected. Any such difficulties could significantly delay our commercialization timeline, require additional capital raising, dilute existing stockholders, or adversely impact our business, financial condition, results of operations, and prospects.

### ***Changes to, or termination of, any agreements with the U.S. government national laboratories, or deterioration in our relationship with the U.S. government, could adversely affect our research and development activities.***

We are a party to agreements and arrangements with U.S. national laboratories that are subject to review and approval by the DOE and which are important to our R&D activities. Termination, expiration, or modification of one or more of these agreements or their agreements with others could adversely affect our future prospects to develop our fuel and/or commercially deploy it. In addition, deterioration in our relationship with the U.S. national laboratories that are parties to these agreements and/or the DOE could impair or impede our ability to successfully implement these agreements, which could adversely affect our R&D activities.

***Development of our nuclear fuel technology is dependent upon the availability of a test reactor and access to adequate resources and manufacturing capabilities at national laboratories.***

Our fuel designs are still in the research and development stage and further research, development, and demonstration will be required in test facilities, such as the ATR at INL. We may not be able to contractually secure another reactor in which to test our fuel designs. As a result, commercialization of our nuclear fuel technology may be significantly delayed, perhaps indefinitely, which would adversely affect our business, financial condition, and results of operations.

Our current R&D plan includes the use of research reactors made available by the U.S. government and the DOE, including but not limited to the ATR at INL. These reactors are limited in terms of technical capabilities, operating cycles, and prior reservations for similar research and development services. While the ATR may have enough space for additional flow loops where fuel rods can be irradiated, the reactor currently has only one such loop available, limiting how much fuel rod material that can be inserted into the reactor as well as its duration in the reactor. If sufficient capacity within the ATR is not available on a timely basis, we may not be able to obtain sufficient data to justify regulatory approval for LTA demonstration in a large commercial PWR in a commercially feasible timeframe. This would likely necessitate additional loop irradiation testing in another test reactor or LTR demonstration in a large commercial PWR in addition to the ATR loop testing before LTA demonstration could commence.

Funding for any improvement of capabilities or continued operations of these reactors is subject to the priorities of the U.S. government, as well as the appropriation of funding by the U.S. Congress, and cannot be assured. Changes in these factors are outside of the Company's control and could cause significant delays and/or cost increases in our R&D programs.

Furthermore, we currently rely on existing manufacturing equipment and capabilities at INL to demonstrate our co-extrusion fabrication process using depleted uranium and zirconium alloy and to eventually manufacture samples using enriched uranium and zirconium alloy for irradiation testing in a test reactor environment. INL has indicated to the Company that due to resource and manufacturing equipment constraints, it may not be able to meet the Company's preferred project timeline. Based on the actual costs and project performance to date, we believe that the total project cost will likely exceed the previously anticipated budgets.

***Our fuel designs have never been tested in an existing commercial reactor and actual fuel performance, as well as the willingness of commercial reactor operators and fuel fabricators to adopt a new design, is uncertain.***

Nuclear power research and development entails significant technological risk. New designs must undergo extensive development and testing necessary for regulatory approval. Our fuel designs are still in the research and development stage and, while certain testing on our fuel technologies has been completed, further testing and experiments will be required in order to achieve commercialization. For example, our proposed metallic fuel uses a helical multi-lobe form to increase its surface area and shorten the distance for heat generated in the fuel rod to reach water, resulting in an improved ability to cool the fuel. However, this proposed shape may also result in non-uniform distribution of heat flux that may have an adverse impact on the critical heat flux and limit power uprate capabilities of our metallic fuel. Additional testing and development may result in changes to the design of our proposed metallic fuel, which could decrease its realizable benefits and impair the ability of nuclear utilities to utilize nuclear fuel incorporating our technology.

Furthermore, the fuel technology has yet to be sufficiently demonstrated in operating conditions equivalent to those found in an existing commercial reactor. Utility companies and reactor operators may hesitate to adopt unproven fuel types due to operational or safety concerns. Until we are able to successfully demonstrate operation of our fuel designs in commercial reactor conditions, we cannot confirm the ability of our nuclear fuel to perform as expected, including its ability to enable a power uprate, a longer operating cycle, or other anticipated performance and safety benefits. Safety concerns or incidents during testing, transportation, or use could damage the company's reputation and lead to liability claims. In addition, there is also a risk that suitable testing or manufacturing facilities may not be available to us on a timely basis or at a reasonable cost, which could cause development program schedule delays and/or cost overruns.

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There is also a risk that fuel fabricators that manufacture and supply commercial nuclear fuel assemblies to nuclear utility customers may not enter into a commercial arrangement with us relating to our metallic nuclear fuel designs. Unforeseen engineering difficulties may arise during manufacturing or scaling production. A failure to enter into a commercial arrangement with one or more existing nuclear fuel fabricators could adversely affect our business, financial condition, and results of operations and may result in the failure of the Company.

If our fuel designs do not perform as anticipated in commercial reactor conditions, we will not realize revenues from licensing or other use of our fuel designs.

***Existing commercial nuclear infrastructure in many countries is limited to uranium material in dioxide form with enrichments limited to 5%. Our nuclear fuel will be in a metallic form and will be enriched to higher levels, which will require modifications to existing commercial nuclear infrastructure and could impede commercialization of our technology.***

Existing commercial nuclear infrastructure, including conversion facilities, enrichment facilities, de-conversion facilities, fabrication facilities, fuel storage facilities, fuel handling procedures, fuel operation at reactor sites, used fuel storage facilities and shipping containers, were in most cases designed and are currently licensed to handle uranium in oxide form with enrichment up to 5% of the isotope uranium-235. Our fuel designs are expected to use uranium metal with uranium enrichment levels up to 19.75% and would therefore require certain modifications to existing commercial nuclear infrastructure to enable commercial nuclear facilities to handle our fuels. Those nuclear facilities will need to complete a regulatory licensing process and obtain regulatory approvals to be able to process, handle, or ship uranium metal with enrichment levels up to 19.75% and operate commercial reactors using our metallic fuel. There is significant risk that some relevant entities within the nuclear power industry may be slow in making any required facility infrastructure modifications or obtaining required licenses or approvals to enable enrichment to 19.75%, de-conversion to metallic uranium, fabrication of metallic fuel rods and assemblies, shipment of fresh and irradiated metallic fuel assemblies, interim storage of fresh and irradiated fuel assemblies in spent fuel pools or dry cask storage facilities at reactor sites, or permanent disposal of spent metallic fuel at a high-level repository, or may not make the necessary modifications at all. Disposal or recycling of our spent fuel may face scrutiny, requiring additional safeguards. There is also a risk associated with possible negative perception of uranium enrichment greater than 5% that could potentially delay or hinder regulatory approval of our nuclear fuel designs.

Our nuclear fuel designs rely on fabrication technologies that in certain material ways are different from the fabrication techniques presently utilized by existing commercial fuel fabricators. In particular, our metallic fuel rods must be produced using a co-extrusion fabrication process. Presently, most commercial nuclear fuel is produced using a pellet fabrication technology, whereby uranium dioxide is formed into small pellets which are stacked and sealed inside metallic tubes. Our co-extrusion fabrication technology involves co-extrusion of a composite solid fuel rod from a metallic matrix containing uranium and zirconium alloy. Fabrication of full-length (approximately 12 to 14 feet) PWR metallic fuel rods for large reactors and shorter length for SMRs or CANDUs has yet to be sufficiently demonstrated for our uranium-zirconium fuel. There is a risk that the fuel fabrication process utilized to date to produce our metallic fuel rods may not be feasibly adapted to the fabrication of full-length metallic fuel rods usable in commercial reactors.

***We are part of the nuclear power industry, which is highly regulated. Our fuel designs differ from fuels currently licensed and used by commercial nuclear power plants. The regulatory licensing and approval process for nuclear power plants to operate with our nuclear fuels may be delayed and made more costly, and industry acceptance of our nuclear fuels may be hampered.***

The nuclear power industry is a highly regulated industry. Evolving regulations may impose additional compliance costs or require design modifications. All entities that operate nuclear facilities and transport nuclear materials are subject to the jurisdiction of the NRC or its counterparts around the world. Our fuel designs differ significantly in some aspects from the fuel used today by commercial nuclear power plants. Extensive testing and performance demonstration may delay approvals or reveal deficiencies.

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These differences will likely result in more prolonged and extensive review by the NRC and its counterparts around the world that could cause fuel development program delays and delays in commercialization. Entities within the nuclear industry may be hesitant to be the first to use our nuclear fuel, which currently has no history of commercial use. Furthermore, our fuel development timeline relies on the relevant nuclear regulator to accept and approve technical information and documentation about our nuclear fuel that is generated during the fuel qualification program. There is a risk that regulators may require additional information regarding the fuel's behavior or performance which necessitates additional, unplanned analytical and/or experimental work which could cause program schedule delays and require more research and development funding.

### ***Successful execution of our business model is dependent upon public support for nuclear power and overcoming public opposition to nuclear energy.***

Successful execution of our business model is dependent upon public support for nuclear power in the United States and other countries. Nuclear power faces strong opposition from certain competitive energy sources, individuals, and organizations. The accident that occurred at the Fukushima nuclear power plant in Japan beginning on March 11, 2011 increased public opposition to nuclear power in some countries, resulting in a slowdown in or, in some cases, a complete halt to new construction of nuclear power plants, early shut down of existing power plants, or dampening of the favorable regulatory climate needed to introduce new nuclear technologies. As a result of the Fukushima accident, some countries that were considering launching new domestic nuclear power programs have delayed or cancelled preparatory activities they were planning to undertake as part of such programs. Furthermore, nuclear fuel fabrication and the use of new nuclear fuels in reactors must be licensed by the NRC and equivalent governmental authorities around the world. In many countries, the licensing process includes public hearings and allows for an extensive administrative process, which may delay the issuance of necessary licenses. Upon commercialization, a reduction or elimination of customer contracts or future customer contracts resulting from lower public support, less raw materials, lower demand, increased regulation, and increased costs could adversely affect our business model and future prospects.

### ***Our nuclear fuel fabrication process is dependent on outside suppliers of nuclear and other materials and any difficulty by us and/or a future fuel fabricator partner in obtaining these materials could be detrimental to our ability to eventually market our nuclear fuel either directly or through a future fuel fabricator partner.***

Production of Lightbridge Fuel™ rods and/or fuel assemblies is dependent on the ability of the Company and/or our future fuel fabricator partners to obtain supplies of nuclear material utilized in our fuel assembly design. Our proposed nuclear fuel products require HALEU in metallic form, enriched between 5% and 19.75% in the isotope uranium-235, with presently no commercial supply of HALEU available in the U.S. Currently HALEU can only be sourced in limited quantities from the DOE.

The Company and/or our future fabricator partners will also need to obtain metal for components, particularly zirconium or its alloys. These materials are regulated and can be difficult to obtain or may have unfavorable pricing terms. Any difficulties in obtaining these materials could have a material adverse effect on the ability to market fuel based on our technology.

### ***We rely on a limited number of suppliers for HALEU or other key source materials and/or key components and/or key equipment necessary for the development and fabrication of our nuclear fuel, which could, under certain circumstances, adversely delay our research and development activities.***

If the supply of a single-sourced or limited-sourced material and/or key component and/or key equipment is delayed or ceases, we may not be able to produce the related test fuel rod, which could adversely delay our research and development activities. In addition, a single-source or limited-source supplier of a key component or a key piece of equipment could potentially exert significant bargaining power over price, quality, or other terms relating to these materials or equipment, which could have a material adverse effect on our financial condition, results of operations and cash flows.

### ***Labor shortages and supply chain disruptions could prevent us from meeting our R&D timelines and have a negative impact on our financial results.***

Shipping delays exist worldwide, as there is much greater demand for shipping and reduced capacity. Additionally, certain material and equipment prices are expected to remain at high levels due to inflationary cost pressures and global transportation complexities. We may experience supply chain disruptions related to third-party vendors negatively impacted by the availability of qualified labor, restrictions on employees' ability to work, facility closures, disruptions to ports and other shipping infrastructure, border closures and other travel or health-related restrictions. These disruptions may impact our supply chain and delay the development of our nuclear fuel technology, which could negatively impact our financial results and our ability to execute timely on our R&D strategy, should they persist.

***If the price of non-nuclear energy sources falls, whether as the result of government policy or otherwise, there could be an adverse impact on nuclear energy, which would have a material adverse effect on our operations.***

In certain markets with a diversified energy base, decisions on new-build power plants are largely affected by the economics of various energy sources. If prices of non-nuclear energy sources fall, it could limit the deployment of new-build nuclear power plants in such markets. This could reduce the size of the potential markets for our nuclear fuel technology.

In addition, the U.S. federal and state government policies have created deployment uncertainty for nuclear power. While many prior federal incentives prioritizing wind and solar energy deployment have largely expired, many state incentive programs remain in place. U.S. federal government policy has shifted to encourage fossil fuels and nuclear power. However, the timelines for deployment, including the time to license projects, remain an obstacle for nuclear power. This may negatively impact our project licensing and our potential customers' desire to purchase our products and services, or may be utilized by our existing or new competitors to develop a competing business model or products or services that may be potentially more attractive to customers than ours, any of which could have a material adverse effect on our results of operations or financial condition.

***We are dependent on management and key personnel for our success, and the loss of which could have a material adverse effect on our business.***

Our business depends upon the recruitment and continued service of our highly skilled, educated, and trained employees, and the loss of, or the inability to attract and retain, qualified personnel could have a material adverse effect on our business. Our ability to attract, motivate, compensate, and retain highly qualified and diverse employees is necessary to support and achieve business objectives. Competition for skilled and diverse employees in our industry can be intense, and any uncertainty surrounding future employment opportunities, organizational and reporting structures and related concerns may impair our ability to attract and retain qualified employees.

The loss of the services of qualified employees and any inability to recruit effective replacements or to otherwise attract, motivate, train, or retain highly qualified and diverse employees could have a material adverse effect on our business, financial condition, and results of operations.

Also, any significant leadership change and accompanying senior management transition involves inherent risk, and any failure to ensure a smooth transition could hinder our strategic planning, execution, and future performance. While we strive to mitigate the negative impact associated with changes to our senior management team, such changes may cause uncertainty among investors, employees, and others concerning our future direction and performance. If we fail to effectively manage any leadership changes, including organizational and strategic changes, such failure could have a material adverse effect on our ability to successfully attract, motivate and retain highly qualified employees, as well as our business, financial condition, and results of operations.

***We may not be able to receive or retain authorizations that may be required for us to sell or license our technology internationally.***

The sales and marketing of our technology internationally may be subject to U.S. export control regulations and the export control laws of other countries. Governmental authorizations may be required before we can export our technology. If authorizations are required and not granted, our international business could be materially affected. The export authorization process is often time-consuming. Violation of export control regulations could subject us to fines and other penalties, such as losing the ability to export for a period of years, which would limit our revenue growth opportunities and significantly hinder our attempts to expand our business internationally.

***Potential competitors could limit opportunities to license our technology.***

Other companies may develop new nuclear fuel designs for use in the same types of reactors that we target. These nuclear fuel designs include, but are not limited to, the ATFs currently being developed and tested by several U.S. and international nuclear fuel suppliers (some with the support of the DOE). Such competitor ATF designs could undermine our nuclear fuel's economic value proposition if they extend the operating cycle length beyond 18 months. Recently, the NRC approved an increase in the burnup limit for a different manufacturer's ATFs design, which could eventually allow that design to achieve a cycle length beyond 18 months.

Some companies have existing long-term commercial contracts with nuclear power utilities that we do not have. If another company were to successfully develop a new nuclear fuel that competes with our nuclear fuel design technology, opportunities to commercialize our technology might be more limited, and our business would suffer. Moreover, many of these other companies have substantially greater financial, technological, managerial and research and development resources and experience than we do. These larger companies may be better able to handle the corresponding long-term financial requirements to successfully develop new nuclear fuel and bring it to market.

Industry groups have proposed initiatives that seek to relax existing licensing constraints, which could potentially result in conventional uranium dioxide and/or ATFs designs achieving additional cycle length extensions and/or extended power uprates in operating light water reactors. Such initiatives, if approved by the NRC, could limit the competitive advantages and market opportunities for Lightbridge Fuel™. Competitors may also challenge our patents, leading to costly litigation or loss of exclusivity.

***If the DOE were to successfully assert that an invention claimed within our 2007 or 2008 Patent Cooperation Treaty, or PCT, patent applications was first conceived or actually reduced to practice under a contract with the DOE, then our intellectual property rights in that invention could become compromised and our business model could become significantly impeded.***

Work on finite aspects and/or testing of some subject matter disclosed in our 2007 and 2008 Russian PCT patent applications was done under a government contract with the DOE. If the DOE asserted that an invention claimed in the 2007 and/or 2008 Russian PCT applications was first conceived or actually reduced to practice under such a contract, and a U.S. court agreed, the DOE could gain an ownership interest in such an invention outside of the Russian Federation and our intellectual property rights in that claimed invention could become compromised and our business model may then be significantly impeded.

***If we infringe or are alleged to infringe intellectual property rights of third-parties, our business, financial condition, and results of operations could be adversely affected.***

Our nuclear fuel designs may infringe, or be claimed to infringe, patents or patent applications under which we do not hold licenses or other rights. Third-parties may own or control these patents and patent applications in the United States and elsewhere. Third-parties could bring claims against us that would cause us to incur substantial expenses and, if successfully asserted against us, could cause us to pay substantial damages. If a patent infringement suit were brought against us, we could be forced to stop or delay commercialization of our fuel design or a component thereof that is the subject of the suit. As a result of patent infringement claims, or in order to avoid potential claims, we may choose or be required to seek a license from the third-party and be required to pay license fees, royalties, or both. These licenses may not be available on acceptable terms, or at all. Even if we were able to obtain a license, the rights may be nonexclusive, which could result in our competitors gaining access to the same intellectual property. Ultimately, we could be forced to cease some aspects of our business operations if, as a result of actual or threatened patent infringement claims, we are unable to enter into licenses on acceptable terms. This could significantly and adversely affect our business, financial condition, and results of operations. In addition to infringement claims against us, we may become a party to other types of patent litigation and other proceedings, including interference proceedings declared by the United States Patent and Trademark Office regarding intellectual property rights with respect to our nuclear fuel designs. The cost to us of any patent litigation or other proceeding, even if resolved in our favor, could be substantial. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace. Patent litigation and other proceedings may also absorb significant management time.

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***The occurrence of cybersecurity incidents, or a deficiency in our cybersecurity or the cybersecurity of our service providers, could negatively impact our business by causing disruptions to our operations, a compromise or corruption of our confidential information, regulatory enforcement and other legal proceedings, and/or damage to our business, all of which could negatively impact our financial results.***

We retain highly confidential information in our systems and those of third-party providers. Although we maintain security features designed to protect proprietary information and prevent cybersecurity incidents, such measures cannot provide absolute security and our operations may be susceptible to incidents including without limitation from circumvention of security systems, denial of service attacks, ransomware, hacking, malware, technical malfunction, employee error or noncompliance, malfeasance, physical breaches, or system disruptions. Evolving technologies, such as the use of artificial intelligence, also pose evolving threats to cybersecurity. We outsource certain functions, including IT functions, and these relationships involve the processing of our information, as well as customer, counterparty, and employee information. While we engage in actions to reduce our exposure resulting from outsourcing, we remain susceptible to third-party cybersecurity incidents. In some cases, we may not be aware of cybersecurity incidents immediately as we rely on such third-parties to inform us of a cybersecurity incident that could affect our information contained in their systems.

Cybersecurity incidents may jeopardize trade secrets, other confidential data, or further information processed by our systems or the systems of third parties. In addition, cybersecurity incidents may cause extended disruptions to operations and thus could impact our ability to develop products and conduct research and development. The techniques used to obtain unauthorized access, disable, or degrade service, or sabotage systems, change frequently, may go undetected for extended periods, and often are not recognized until after data has been taken or significant systems are compromised. Certain efforts may be nation-state sponsored and supported by significant financial and technological resources and therefore may be even more difficult to detect. We, or the third-parties with whom we contract, may not anticipate these evolving techniques or implement adequate preventive measures. We currently expend and may be required to further expend significant additional capital and other resources to protect against or respond to cybersecurity incidents. Our insurance coverage may be inadequate to compensate us for any related losses we incur and, in some cases, our insurance coverage may not cover the cybersecurity incident at all.

These issues are likely to become more difficult as we expand our operations. Any cybersecurity incident or even a perceived cybersecurity incident could cause us to: lose potential customers, investors, government contracts and governmental approvals; suffer material harm to our business, financial condition, operating results, and reputation; or be subject to regulatory actions, litigation, sanctions, or other statutory penalties.

***AI and generative AI applications present risks and challenges that can impact our business.***

While we integrate AI and generative AI (collectively, AI) into our day-to-day operations and research and development efforts to enhance efficiency and effectiveness, rapid advancements in AI technologies pose a risk, including that the algorithms may be flawed, misused or otherwise function in an unexpected manner; data sets may be insufficient, of poor quality, or contain biased information; and inappropriate or controversial data practices by data scientists, engineers, and end-users could impair results. Issues in the use of AI, combined with an uncertain regulatory environment, may result in reputational harm, liability, or other adverse consequences to our business operations to the extent we rely on the use of AI. In addition to our own use of AI, our vendors may integrate AI into their products that we use without adequate notice to us. Vendors may not be able to comply with existing or rapidly evolving regulatory or industry standards for privacy and data protection, potentially exposing us to cybersecurity risk. If we, our vendors or third-party partners experience an actual or perceived breach or privacy or cybersecurity incident because of our, a vendor, or a third-party partner's use of AI, it could lead to the loss of valuable intellectual property and confidential information. Such cybersecurity incidents could also harm our reputation and public perception of our security measures. Moreover, malicious actors worldwide increasingly employ sophisticated AI techniques to illegally obtain and misuse personal information, confidential data, and intellectual property. Any of these scenarios could result in reputational damage, loss of valuable assets, and adverse impacts on our business.

***Technological changes could render our technology and products uncompetitive or obsolete, which could prevent us from achieving market share and sales.***

Our failure to refine or advance our fuel technologies could cause our nuclear fuel to become uncompetitive or obsolete, which could prevent us from achieving market share and sales. We may need to invest significant financial resources in research and product development to keep pace with technological advances in the industry and to compete in the future, and we may be unable to secure such financing. A variety of competing alternative technologies may be in development by other companies that could result in lower manufacturing costs and/or higher fuel performance than those expected for our fuel products. Our development efforts may be rendered obsolete by the technological advances of others, and other technologies may prove more advantageous for commercialization.

***We may acquire other companies or technologies, which could divert our managements' attention, result in dilution to our stockholders and otherwise disrupt our operations and adversely affect our operating results.***

We may in the future seek to acquire or invest in businesses, applications and services or technologies that we believe could complement or expand our Company, enhance our technical capabilities, or otherwise offer growth opportunities. The pursuit of potential acquisitions may divert the attention of management and cause us to incur various expenses in identifying, investigating, and pursuing suitable acquisitions, whether or not they are consummated.

If we acquire additional businesses, we may not be able to integrate the acquired personnel, operations, and technologies successfully, or effectively manage the combined business following the acquisition. We also may not achieve the anticipated benefits from the acquired business due to a number of factors, including:

- the effect of any potential acquisition on our financial and strategic positions and our reputation;
- the inability to successfully integrate or benefit from acquired technologies or services;
- the inability to obtain the anticipated benefits of any potential acquisition, including synergies or economies of scale;
- any unanticipated costs or liabilities associated with the acquisition;
- any difficulty integrating the accounting systems, operations, and personnel of the acquired business;
- the diversion of management's attention from other business concerns;
- adverse effects to our existing business relationships with business partners as a result of the acquisition;
- the potential loss of key employees and challenges in assimilating and training new employees;
- the potential failure of the due diligence processes to identify significant problems, liabilities or other shortcomings or challenges of an acquired company or assets, which could result in unexpected litigation, regulatory exposure, financial contingencies, and known and unknown liabilities;
- the use of resources that are needed in other parts of our business; and
- the use of substantial portions of our available cash to consummate the acquisition.

In addition, a significant portion of the purchase price of companies we acquire may be allocated to acquired goodwill and other intangible assets, which must be assessed for impairment at least annually. In the future, if our acquisitions do not yield expected returns, we may be required to take charges to our operating results based on this impairment assessment process, which could adversely affect our results of operations. Large or costly acquisitions or investments may also diminish our capital resources and liquidity or limit our ability to engage in additional transactions for a period of time.

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We may require significant financing to complete an acquisition or investment through bank loans, raising of debt, issuance of equity securities or the incurrence of debt. Acquisitions could also result in dilutive issuances of equity securities or the incurrence of debt, which could adversely affect our operating results. We cannot be assured that such financing options will be available to us on reasonable terms, or at all. In addition, if an acquired business or assets fail to meet our expectations, our operating results, business, and financial position may suffer. The foregoing risks may be magnified as the cost, size or complexity of a potential acquisition or acquired company increases, or where the acquired company's market or business are materially different from ours, or where more than one integration is occurring simultaneously or within a concentrated period of time.

***If we are unable to obtain or maintain intellectual property rights and trade secrets relating to our technology, the commercial value of our technology may be adversely affected, which could in turn adversely affect our business, financial condition, and results of operations.***

Our success and ability to compete depends in part upon our ability to obtain protection in the United States and other countries for our nuclear fuel designs by establishing and maintaining intellectual property rights relating to or incorporated into our fuel technologies and products. We own a variety of patents and patent applications in the United States, as well as corresponding patents and patent applications in several other jurisdictions. We have not obtained patent protection in each market in which we plan to compete. Furthermore, our patents, trade secrets, information and intellectual property may be the subject of infringement by third parties. We do not know how successful we would be should we choose to assert our patents or other intellectual property rights against suspected infringers. Our pending and future patent applications may not issue as patents or, if issued, may not issue in a form that will be advantageous to us. Even if issued, patents may be challenged, narrowed, invalidated, or circumvented, which could limit our ability to stop competitors from marketing similar products or limit the length of term of patent protection we may have for our products. Changes in patent laws or in interpretations of patent laws in the United States and other countries may diminish the value of our intellectual property or narrow the scope of our patent protection, which could in turn adversely affect our business, financial condition, and results of operations.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets, and other intellectual property protection, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our intellectual property and proprietary rights generally. Proceedings to enforce our intellectual property and proprietary rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly, could put our patent applications at risk of not issuing, and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate, and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property and proprietary rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

We have in the past worked closely with employees in Russia and other Russian contractors and entities to develop some of our material intellectual property. Some of our earlier intellectual property rights originate from our patent filings in Russia. Our worldwide rights in some of this intellectual property, therefore, may be affected by Russian intellectual property laws, including laws adopted in response to international sanctions against Russia or otherwise. In particular, in response to the sanctions imposed by OFAC as a result of Russia's invasion of Ukraine, the Russian government issued a decree in March 2022 stating that patent holders associated with foreign states that commit "unfriendly actions against Russian legal entities and individuals" will be entitled to no remuneration from the unsanctioned use of such patent holders' intellectual property. If the application of Russian laws to some of our intellectual property rights proves inadequate, or if the rights of foreign holders of intellectual property in Russia adversely change as a result of hostilities between Russia and other countries or otherwise, we may not be able to fully avail ourselves of all of our intellectual property, and our business model may be impeded.

Additionally, sanctions or other restrictions on payments made to Russia imposed by the United States government in response to Russia's invasion of Ukraine may make it more difficult for us to maintain patent protection in certain foreign jurisdictions. Certain of our patents are maintained by the Eurasian Patent Office and the Russian patent office, Rospatent. Each of the Eurasian Patent Office and Rospatent use the Russian Central Bank to process patent annuity payments. The U.S. Office of Foreign Assets Control (OFAC) has identified the Russian Central Bank as a sanctioned entity. Paying a Russian firm or agent to make payments that will be processed by the Russian Central Bank could be deemed an act of evading or avoiding sanctions. On May 5, 2022, OFAC published General License 31, which created an exemption to such sanctions for payments made to maintain intellectual property rights. However, there can be no assurance that this exemption will be made permanent, and if it is rescinded, we may be unable to make the required annuity or other maintenance payments with respect to our Russian and Eurasian patents. If we are unable to make the required annuity or other maintenance payments, there can be no assurance that our Russian and Eurasian patents will continue to receive adequate protection in the applicable jurisdictions, which could have a material adverse effect on our patent portfolio.

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Further, in response to the sanctions imposed by OFAC, the Russian government issued a decree in March 2022 stating that patent holders associated with foreign states that commit “unfriendly actions against Russian legal entities and individuals” will be entitled to no remuneration from the unsanctioned use of such patent holders’ intellectual property. While the impact of this decree has yet to be determined, it may significantly undermine intellectual property protection in Russia. Because of this significant uncertainty with respect to the treatment of foreign owned patents maintained in Russia, there can be no assurance that we will be able to maintain adequate protection of our Russian patents.

We intend to apply for additional patents for our nuclear fuel technologies as we deem appropriate. We may, however, fail to apply for patents on important technologies or products in a timely fashion, if at all. Our existing patents and any future patents we obtain may not be sufficiently broad to prevent others from practicing our technologies or from developing competing products and technologies. Also, our portfolio of patents evolves as new patents are issued and older patents expire and the expiration of patents could have a negative effect on our ability to prevent competitors from duplicating certain or all of our products. In general, the patent positions of energy technology companies are highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. As a result, the validity and enforceability of our patents cannot be predicted with certainty.

We also rely on trade secrets to protect some of our technology, especially where it is believed that patent protection is undesirable for the Company or unobtainable. We generally require our employees, consultants, advisors, and collaborators to execute appropriate agreements with us regarding the safeguarding of confidential information. If any of these agreements are violated, or if any of our employees, consultants, advisors or collaborators unintentionally or willfully disclose our proprietary information to competitors, we may not be able to fully perfect our rights to the technologies in question, and in some instances, we may not have an appropriate remedy available for the damages that we may incur as a result of any such violation. Enforcement of claims that a third-party has illegally obtained and is using trade secrets is expensive, time consuming and uncertain. In addition, courts outside the U.S. are sometimes less willing than U.S. courts to protect trade secrets. If our competitors independently develop equivalent knowledge, methods, and know-how, we would not be able to assert our trade secrets against them and our business could be harmed.

### ***Material weaknesses in our internal control over financial reporting may be identified, which could adversely affect our ability to provide accurate and timely financial statements and harm investor confidence.***

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal controls are designed to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements in accordance with U.S. generally accepted accounting principles (GAAP). However, internal controls have inherent limitations and may not prevent or detect misstatements, errors, or fraud.

Failure to address identified weaknesses effectively and in a timely manner could result in:

- non-compliance with Section 404 of the Sarbanes-Oxley Act of 2002;
- delays in filing our periodic reports with the SEC; and/or
- potential enforcement actions or penalties.

Management has concluded that the Company’s internal control over financial reporting was effective as of December 31, 2025. See Item 9A. Controls and Procedures in this Annual Report on Form 10-K for additional information. However, we may identify additional material weaknesses in the future or otherwise fail to maintain an effective system of internal controls, which may result in material misstatement of our financial statements or cause us to fail to meet our periodic reporting obligations.

## Risks Related to the Ownership of Our Common Stock

***The issuance of additional stock in connection with financings, acquisitions, investments, our stock incentive plans or otherwise will in some circumstances dilute our stockholders.***

Our amended and restated certificate of incorporation authorizes the Company to issue up to 100,000,000 shares of common stock and up to 10,000,000 shares of preferred stock with such rights and preferences as may be determined by our board of directors. Subject to compliance with applicable rules and regulations, we may seek to expand the number of authorized common shares, and issue shares of common stock or securities convertible into our common stock from time to time in connection with a financing, acquisition, investment, our stock incentive plans or otherwise. The sale and issuance of shares of common stock under our ATM facility has resulted in dilution to our existing stockholders. Any additional issuances could result in substantial additional dilution to our existing stockholders and cause the trading price of our common stock to decline.

***We may issue preferred stock with rights senior to our common stock.***

We can issue preferred stock in one or more series and can set the terms of the preferred stock without seeking any further approval from the holders of our common stock. Any preferred stock that we issue may rank ahead of our common stock in terms of dividend priority or liquidation premiums, may have greater voting rights than our common stock, and may have consent rights over certain fundamental transactions. The interests of the holders of the preferred stock may as a consequence be different from the interests of the holders of our common stock, including in certain fundamental transactions in which the preferred stockholders would receive distributions before any distributions may be made to our common stockholders. In addition, such preferred stock may contain provisions allowing it to be converted into shares of common stock, which could dilute the value of our common stock to the then current stockholders and could adversely affect the market price of our common stock.

***There may be volatility in our stock price, which could negatively affect investments, and our stockholders may not be able to resell their shares at or above the value they originally purchased such shares.***

The market price of our common stock has fluctuated and may continue to fluctuate significantly in response to a number of factors, some of which are beyond our control, including:

- trading volume of our common stock;
- quarterly variations in operating results;
- actual or anticipated variations in our results of operations or those of our competitors;
- failure to obtain or maintain analyst coverage of our common stock, changes in earnings estimates or recommendations by securities analysts, or our failure to achieve analyst earnings estimates;
- ongoing sales of common stock under our ATM facility;
- future sales of our common stock or other securities by us or our stockholders;
- general market conditions and other factors unrelated to our operating performance or the operating performance of our competitors; and
- the risks discussed elsewhere in this Annual Report on Form 10-K.

The stock market may experience extreme volatility that is often unrelated to the performance of particular companies. These market fluctuations may cause our stock price to fall regardless of the Company's performance or related factors that are specific to the Company.

***Our ability to utilize our net operating loss carryforwards to offset future taxable income will be limited and may also expire.***

Our ability to fully utilize our existing net operating losses (NOLs) generated after the tax year 2017 will be limited and the use of our NOLs generated prior to the 2018 tax year are severely limited, due to ownership changes in prior years as defined under Section 382 of the Internal Revenue Code. An “ownership change” is generally defined as a greater than 50% change in equity ownership by value over a rolling three-year period. Future NOLs generated will be limited if (i) we undergo an “ownership change” as described under Section 382, (ii) we do not reach profitability or are only marginally profitable, or (iii) there are changes in U.S. government laws and regulations. We did not perform a complete Section 382 study to determine the limitation on prior year NOLs, due to the long timeline for developing our nuclear fuel to commercialization to generate taxable income. Further, based on the results of our phase I Section 382 study in 2022, it’s likely our NOLs generated prior to the 2018 tax year will expire unused given the 20-year carryforward period for these NOLs. Future ownership changes, some of which may be beyond our control, as well as differences and fluctuations in the value of our equity securities may adversely affect our ability to utilize our current and future NOLs and could reduce our flexibility to raise capital in future equity financings or other transactions, or we may decide to pursue transactions even if they would result in an ownership change and impair our ability to use our NOLs. We also may decide to pursue transactions even if they would result in an ownership change and impair our ability to use our NOLs. In addition, any changes to tax rules and regulations or the interpretation of tax rules and regulations could negatively impact our ability to recognize any potential benefits from our NOLs or net unrealized built-in losses.

***Shareholder activism could cause us to incur significant expense, hinder execution of our business strategy and impact our stock price.***

Shareholder activism, which can take many forms and arise in a variety of situations, could result in substantial costs, and divert management and our board’s attention and resources from our business. Additionally, such shareholder activism could give rise to perceived uncertainties as to our future, adversely affect our relationships with our employees or service providers and make it more difficult to attract and retain qualified personnel. Also, we may be required to incur significant fees and other expenses related to activist shareholder matters, including for third-party advisors. Our stock price could be subject to significant fluctuation or otherwise be adversely affected by the events, risks, and uncertainties of any shareholder activism.

**ITEM 1B. UNRESOLVED STAFF COMMENTS**

Not applicable.

## ITEM 1C. CYBERSECURITY

### *Risk Management and Strategy*

Lightbridge utilizes third-party vendors to manage its information technology (IT) systems via a Managed Service Provider (MSP) for general administration of the IT process including providing a Virtual Chief Information Officer (vCIO).

vCIO services include: (a) operational review, strategic planning, technology road-mapping; (b) development of a custom IT policy/handbook; and (c) reporting in accordance with the service level agreement and support commitment adherence data to Lightbridge via MSP's Service Delivery Team.

vCIO will also:

- Provide operational oversight of IT functions;
- Identify and help plan for improvements to Lightbridge's overall infrastructure;
- Assist with the management of technology vendors;
- Act as a point of contact in emergency/systems-down situations and liaison between Lightbridge and Dataprise resources; and
- Perform trend analysis and document recommendations to Lightbridge as needed.

Lightbridge also utilizes third-party vendors to manage its cybersecurity needs via a Managed Services Security Provider (MSSP). MSSP services include:

- Managed Security Services
- Email Phishing Simulations
- End User Security Awareness Training
- Dark Web Credential Monitoring
- Vulnerability Scanning
- Next-Generation Anti-Virus

We and our MSP/MSSP also utilize processes designed to reduce cybersecurity risk from third-party vendors and technology. For example, we may conduct upfront diligence of the third-party's cybersecurity, employ contracts that address cybersecurity risk, and monitor vendors' compliance with their representations regarding cybersecurity. The MSSP utilizes a Security Information and Event Management (SIEM) system to monitor the IT infrastructure. The SIEM and other third-party security tools/applications provide reports that include but are not limited to endpoint protection, employee security scores, phishing reports, Dark Web scanning and vulnerability scanning.

The vCIO reports to our CFO. The vCIO (and support team) has appropriate experience and training in cybersecurity and is informed about and monitors prevention, detection, mitigation, and remediation efforts through regular communication and reporting from other professionals in the industry, many of whom hold cybersecurity certifications, and through the use of technological tools and software and results from third-party audits.

The vCIO issues quarterly reports and reports to the CFO, as appropriate, to provide updates on the Company's cyber risks and threats, the status of projects to strengthen our information security systems, assessments of the information security program, and the emerging threat landscape.

The Company requires its employees and applicable contractors to take yearly cyber training and its employees and applicable contractors are also required to sign confidentiality agreements for purposes including ensuring cybersecurity. We and our MSP/MSSP have established an incident response plan to assist with responding to cybersecurity incidents. The incident response plan includes our approach to identification, escalation, and restoration from incidents, such as engaging or informing third-party experts, law enforcement, and members of the Board of Directors, as appropriate.

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### *Governance*

The Board of Directors is aware of the critical nature of managing risks associated with cybersecurity threats. The Board has established oversight mechanisms to promote effective governance in managing risks associated with cybersecurity threats because Lightbridge recognizes the significance of these threats to our operational integrity and stakeholder confidence. Furthermore, significant cybersecurity matters such as cybersecurity incidents that meet defined thresholds, and strategic risk management decisions are designed to be escalated to the Board of Directors, so that they have appropriate oversight and can provide guidance.

### *Board of Directors Oversight*

The Audit Committee is central to the Board's oversight of cybersecurity risks and bears the primary responsibility for this domain. The Audit Committee is composed of board members with diverse expertise including risk management, technology, and finance that helps equip them to oversee cybersecurity risks effectively. The Audit Committee at least annually reviews information regarding the company's cybersecurity posture and the effectiveness of its risk management strategies. This review helps with oversight of areas for improvement and aligning cybersecurity efforts with the overall risk management framework. The CFO reports to the Audit Committee regarding cybersecurity risks and provides a comprehensive briefing to the Audit Committee on a regular basis as needed, with a minimum frequency of once per year. The CFO also maintains an ongoing dialogue with the Audit Committee regarding potential cybersecurity risks and cybersecurity incidents. The vCISO is also available to address the Audit Committee, if requested. If applicable, the Audit Committee has a process to evaluate the materiality of cybersecurity incidents to determine if the incident may require disclosure, such as a Form 8-K filing. This includes assessing the potential impact of cybersecurity risks or incidents on the company's financial position, operations, and reputation.

### *Risks from Cybersecurity Threats*

As of the date of this Annual Report on Form 10-K, during the past three years, we have not experienced any cybersecurity incidents that have resulted in material disruption to operations, loss of data, or financial impact.

There can be no guarantee that there will not be a future cybersecurity incident that will have a material impact. In the event of a cybersecurity incident, our insurance coverage may be inadequate to compensate us for any related losses we incur and, in some cases, our insurance coverage may not cover the cybersecurity incident at all. Additional information on cybersecurity risks we face can be found in Part I. Item 1A. *Risk Factors*—"Risks Related to Our Business and to the Commercialization of Lightbridge Fuel™—The occurrence of cybersecurity incidents, or a deficiency in our cybersecurity or the cybersecurity of our service providers, could negatively impact our business by causing disruptions to our operations, a compromise or corruption of our confidential information, regulatory enforcement and other legal proceedings, and/or damage to our business, all of which could negatively impact our financial results" of this Annual Report on Form 10-K.

## **ITEM 2. PROPERTIES**

We lease shared office space at 11710 Plaza America Drive, Suite 2000 Reston, VA 20190 USA, which serves as our corporate headquarters. In January 2026, the lease was renewed through December 31, 2026. This space is used by our executives, employees, and contractors for administrative purposes, consulting work, and research and development activities and is currently adequate for our needs.

## **ITEM 3. LEGAL PROCEEDINGS**

From time to time, we may become involved in various lawsuits and legal proceedings, which arise in the ordinary course of business. However, litigation is subject to inherent uncertainties, and an adverse result in these or other matters may arise from time to time that may harm our business. To our knowledge, the Company does not have any current pending legal issues or proceedings.

## **ITEM 4. MINE SAFETY DISCLOSURES**

Not applicable.

**PART II**

**ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS, AND ISSUER PURCHASES OF EQUITY SECURITIES**

Our common stock is quoted on the Nasdaq Capital Market under the symbol "LTBR."

**Holders**

As of February 11, 2026, our common stock was held by 61 stockholders of record, excluding Cede & Co., the nominee for the Depository Trust & Clearing Corporation, and consequently that number does not include beneficial owners of our common stock who hold their stock in "street name" through their brokers.

**Dividends**

We have never paid dividends. While any future dividends will be determined by our board of directors after consideration of the earnings and financial condition of the Company and other relevant factors, it is currently expected that available cash resources will be utilized in connection with our ongoing operations for the foreseeable future.

**Transfer Agent**

Our transfer agent and registrar for our common stock is Computershare Trust Company.

**Recent Sales of Unregistered Securities**

None.

**ITEM 6. [RESERVED]**

## ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following Management's Discussion and Analysis of Financial Condition and Results of Operations, or MD&A, is intended to help the reader understand Lightbridge Corporation, our operations, and our present business environment. MD&A is provided as a supplement to, and should be read in conjunction with, our Consolidated Financial Statements and the accompanying Notes thereto, which are contained in Part II, Item 8. *Financial Statements and Supplementary Data* of this Annual Report on Form 10-K.

As discussed in more detail under "Forward-Looking Statements" preceding this MD&A, the following discussion contains forward-looking statements that are based on our management's current expectations, estimates, and projections, which are subject to a number of risks and uncertainties. Our actual results may differ materially from those discussed in these forward-looking statements because of the risks and uncertainties inherent in future events, including those set forth under "Forward-Looking Statements" and Part I, Item 1A. *Risk Factors*.

### Overview of Our Business and Recent Developments of Lightbridge Fuel™

#### *Our Business*

At Lightbridge, we are developing next generation nuclear fuel for water-cooled reactors that could significantly improve the economics and safety of existing and new nuclear power plants and enhance proliferation resistance of spent nuclear fuel while supplying clean energy to the electric grid or to "behind the meter" customers for electric power, including data centers. We believe our metallic fuel could offer significant economic and safety benefits over traditional nuclear fuel, primarily because of the superior heat transfer properties and the resulting lower operating temperature of our all-metal fuel. Data centers will need massive, constant power that we believe nuclear power can provide. Advances in reactor technology, combined with growing corporate and governmental support for clean energy, can position nuclear power as a cornerstone of future energy strategies for data-intensive industries, which may be willing to pay a premium for reliable, clean, and sustainable baseload electricity.

We believe our metallic fuel can be used in different types of water-cooled commercial power reactors, such as PWRs, BWRs, VVERs, CANDUs, water-cooled SMRs, and water-cooled research reactors. We have obtained patent validation in key countries that we believe would have a commercial market for our fuel and will continue to seek patent validation in countries that either currently operate or are expected to build and operate a large number of nuclear power reactors compatible with our fuel technology.

#### *Recent Developments of Lightbridge Fuel™*

##### Memorandum of Understanding with Oklo, Inc.

In January 2025, we signed a MOU with Oklo to: (1) conduct a preliminary evaluation of feasibility of co-locating a Lightbridge Commercial-scale Fuel Fabrication Facility at Oklo's proposed commercial fuel fabrication facility; (2) explore opportunities for collaboration on reprocessing and recycling of spent uranium zirconium fuel; and (3) explore any other areas of collaboration that may be of mutual interest. We believe there may be some potential synergies in co-locating our expandable fuel facility at Oklo's proposed site. We also believe that recycling and reprocessing spent uranium-zirconium fuel may represent another area of potential synergies.

##### Master Services Agreement with Amentum Technology Inc.

In December 2025, the Company entered into a MSA with Amentum relating to the performance of activities by Amentum in support of the co-location feasibility study under the MOU with Oklo, as well as other activities as the Company and Amentum may agree from time to time. In January 2026, we entered into a statement of work under our MSA with Amentum pursuant to which we expect to incur approximately \$0.4 million in costs during 2026 related to the Oklo co-location feasibility study.

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### Memorandum of Understanding and Collaborative Agreement for Cladding Alloy Compositions

In November 2025, Lightbridge entered into an MOU and a separate Collaboration Agreement with a U.S. manufacturer specializing in advanced specialty metals to support the research and development of cladding alloy compositions for potential use as cladding materials for Lightbridge Fuel™. Under the MOU, the parties agreed to pursue a phased technical evaluation program beginning with alloy development, melting, processing, and characterization activities (Phase 1). The Collaboration Agreement governs the conduct of Phase 1 research and provides a framework for developing future project plans. Lightbridge expects to incur approximately \$0.3 million in Phase 1 costs in 2026, which will be expensed as incurred and included in research and development expenses.

### Idaho National Laboratory Agreements

As noted under Part I. Item 1. *Business*, we entered into agreements with BEA to support the development of Lightbridge Fuel™. The framework agreements consist of an “umbrella” SPPA and an “umbrella” CRADA, each with BEA.

During 2025, previous task statements under both the SPPA and CRADA were modified to increase potential amounts payable to BEA. The duration of the umbrella SPPA was also extended from 7 to 12 years, and the performance period of the umbrella CRADA was extended from September 27, 2029 to September 27, 2032. In the fourth quarter of 2025, the Company and BEA entered into several new project task statements under the SPPA for BEA to provide technical consultation on drafting a fuel qualification plan, post-irradiation examination of fuel specimens, and code development for safety analysis and fuel performance modeling.

After accounting for all modifications and new project task statements, cash payments from the Company to BEA under both CRADA and SPPA are estimated at approximately \$19.5 million on a cost reimbursable basis over the performance periods. During 2025, we expensed \$2.9 million of costs reimbursable to BEA, resulting in cumulative expenses of \$5.4 million recorded to date and \$14.1 million remaining in future cost reimbursements, if and when incurred by BEA.

The successful execution of this project is subject to risks, including potential delays, cost overruns, regulatory challenges, and changes in funding availability, and if the project scope does increase, then the project will be successfully executed or completed. Regardless of whether further project modifications occur, INL has indicated to the Company that due to resource and manufacturing equipment constraints, INL may not be able to meet the Company’s preferred project timeline, and that the total project cost will exceed the current budget.

### Purchase of High-Performance Computer for Fuel Modeling

During the fourth quarter of 2025, the Company completed the purchase of a HPC. The HPC is specifically configured for advanced nuclear modeling and requires specialized software and environmental conditions and provides a significant expansion of computational capability necessary for us to continue developing and simulating the viability of our nuclear fuel technology. To support the HPC, the Company also entered into agreements with additional vendors to provide co-location services, hardware/software management services, and additional nuclear simulation software. Costs for the HPC and related services and software are expensed as incurred and included in research and development expenses. Such items totaled approximately \$2.0 million for the year ended December 31, 2025.

### Software Code Development Agreements

In October 2025, we entered into an Agreement for Safety Analysis Codes and Services for Lightbridge Fuel Designs with NAS, a provider of nuclear engineering analysis software. Under the agreement, NAS will perform code-development, benchmarking, and modeling services to support the creation of Lightbridge’s proprietary fuel-safety analysis methods and the adaptation of industry-standard computer codes for the Lightbridge Fuel™ helical-cruciform metallic U-Zr design. The estimated completion window is between October 2026 through January 2027. The total contract value is approximately \$0.8 million, with milestone-based payments. The resulting software and analysis models will be owned by Lightbridge and are expected to strengthen Lightbridge’s internal capability to perform reactor safety analyses in support of future regulatory submissions and commercial fuel demonstrations.

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In December 2025, we also entered into an agreement with Studsvik Scandpower, a provider of nuclear fuel management software, to develop a transport methodology based on their existing software that will model the Lightbridge Fuel™ concept variant. We would need to separately purchase a license to this updated software after it has been developed to meet Lightbridge's specifications. The total contract value for development of the code is approximately \$0.3 million, payable upon the completion of work, expected in mid-2026.

Costs for software code development are expensed as incurred and included in research and development expenses. However, work on these arrangements is in the preliminary stages or has not yet begun, and no expenses were incurred during the year ended December 31, 2025.

### Critical Heat Flux Test Program

In February 2026, we entered into an initial engineering contract and statement of work with an organization providing specialized experimental services to assess the thermal and hydraulic (TH) performance of Lightbridge Fuel™ for use in water-cooled reactors. The experimental program will be carried out in phases and include: the design and fabrication of an electrically heated fuel simulator and its acceptance testing, nine-rod PWR critical heat flux tests, with an option for the Company to also choose to conduct nine-rod BWR critical power tests, a full scale TH test program to support the U.S. licensing of Lightbridge Fuel™ in commercial PWRs, and an option for the Company to also choose to conduct a full scale TH thermal test program to support the U.S. licensing of Lightbridge Fuel™ in commercial BWRs. Phase 1 work includes prototype fuel simulator design, fabrication, and acceptance testing and is estimated to take one year to complete and cost approximately \$0.5 million.

### Romania Feasibility Study of Lightbridge Fuel™ for use in CANDU reactors

As noted under Part I. Item 1. *Business*, we engaged RATEN ICN in Romania to perform an engineering study to assess the compatibility and suitability of Lightbridge Fuel™ for use in CANDU reactors. The findings from this engineering study will play an important role in guiding future economic evaluations and navigating potential regulatory licensing-related issues for potential use of Lightbridge Fuel™ in CANDU reactors. In August 2025, we entered into the 2025 RATEN ICN Agreement to evaluate conducting irradiation test(s) for several Lightbridge Fuel™ rodlets. The 2025 RATEN ICN Agreement provides for two phases: in Phase 1, RATEN ICN was to conduct scoping studies to develop preliminary experiment designs, evaluate infrastructure and equipment needs, and obtain cost and schedule estimates for potential new driver fuel, and in Phase 2, if the results of Phase 1 were acceptable to Lightbridge, RATEN ICN would implement refurbishments, procure equipment and driver fuel as needed, finalize experiment design, fabricate and operate the test assembly, and complete post-irradiation examination. Lightbridge would be responsible for supplying experimental fuel rodlets for use in the irradiation tests. The Phase 1 work was completed as of December 31, 2025. The Company is currently evaluating the results of the Phase 1 work. No decision has been made about the Phase 2 scope as of the date hereof.

### ***Commercialization Outlook and Key Drivers of Timing***

The long-term milestones towards development and commercialization of nuclear fuel assemblies include, among other things, irradiating nuclear material samples and prototype fuel rods with enriched uranium in test reactors, conducting post-irradiation examination of irradiated material samples and/or prototype fuel rods, performing thermal-hydraulic experiments, performing seismic and other out-of-reactor experiments, performing advanced computer modeling and simulations to support fuel qualification, designing an LTA, entering into a lead test rod/assembly agreement(s) with a host reactor(s), demonstrating the production process of our fuel including lead test rods and/or lead test assemblies at a planned LEFF and demonstrating the operation of lead test rods and/or lead test assemblies in commercial reactors.

There are inherent uncertainties in the cost and outcomes of the many steps needed for successful deployment of our fuel in commercial nuclear reactors, which makes it difficult to accurately predict the timing of the commercialization of our nuclear fuel technology. Our ultimate commercial model remains under evaluation and may evolve as our fuel development progresses, regulatory pathways are clarified, and commercial partnerships are established. However, based on our best estimate and assuming adequate R&D funding levels, we expect to begin demonstration of lead test rods and/or possibly LTAs with our metallic fuel in commercial reactors in the mid-2030s and begin receiving purchase orders for initial fuel reload batches from utilities 15 years from now, with deployment of our nuclear fuel in the first reload batch in a commercial reactor taking place approximately two years thereafter. See Part I. Item 1A. *Risk Factors*—"Risks Related to Our Business and to the Commercialization of Lightbridge Fuel™" of this Annual Report on Form 10-K.

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We are exploring ways of shortening this timeframe that may include securing access to expanded irradiation test loop capacity in existing or new research reactor facilities and engaging early with nuclear regulators to inform them of our future R&D and licensing activities. There can be no assurance that our efforts will result in an accelerated commercialization timeline.

**Known Long-Term Industry Constraints and Uncertainties**

While our current research and development activities are not dependent on the commercial availability of HALEU in metallic form, the future commercialization of Lightbridge Fuel™ will require the establishment of a commercial-scale supply and fabrication capabilities. These matters and others are discussed further under Part I. Item 1A. *Risk Factors*—“Risks Related to Our Business and to the Commercialization of Lightbridge Fuel™—Dependence on the Future Availability of Cost-Competitive Metallic HALEU and Commercial-Scale Fuel Fabrication Infrastructure” of this Annual Report on Form 10-K.

**Operations Review**

**Consolidated Results of Operations**

The following table presents our operating results and the change in amounts for the years indicated (rounded to millions):

	Year Ended December 31,		Increase (Decrease) Change \$	Increase (Decrease) Change %
	2025	2024		
Operating Expenses				
General and administrative	\$ 14.0	\$ 8.5	\$ 5.5	65%
Research and development	9.2	4.6	4.6	100%
Total Operating Expenses	23.2	13.1	10.1	77%
Operating Loss	(23.2)	(13.1)	10.1	77%
Interest Income	3.6	1.3	2.3	177%
Net loss before Income Taxes	(19.6)	(11.8)	7.8	66%
Income tax expense	-	-	-	-
Net Loss	\$ (19.6)	\$ (11.8)	\$ 7.8	66%

**Operating Expenses**

**General and Administrative**

General and administrative expenses consist primarily of compensation and related costs for finance personnel, including stock-based compensation, and fees for professional and consulting services. Professional services are principally comprised of legal, audit, strategic advisory services, and outsourced services such as human resources and information technology.

General and administrative expenses increased by \$5.5 million for the year ended December 31, 2025, as compared to the year ended December 31, 2024. The increase was primarily due to a:

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- \$2.4 million increase in stock-based compensation for employees, contractors, and directors, reflecting several new stock-based awards granted during the year, including new performance stock awards as described in Note 8. *Stock-Based Compensation*, to the Consolidated Financial Statements;
- \$2.1 million increase in professional and consulting services as we grow the business, including legal services, strategic planning, studies related to the LEFF and environmental impacts of our fuel, and lobbying efforts, including \$0.2 million increase in stock-based compensation for these services;
- \$0.6 million increase in employee compensation, particularly bonuses and payroll taxes; and
- \$0.4 million increase in other administrative expenses, including sponsorship fees, IT expenses, recruiting fees, and dues and subscriptions.

Total stock-based compensation included in general and administrative expenses was \$4.4 million and \$1.8 million for the years ended December 31, 2025 and 2024, respectively.

### Research and Development

R&D expenses consist primarily of costs associated with our CRADA and SPPA agreements with BEA, IT expenses, employee compensation and related fringe benefits, including stock-based compensation, and other research and development costs for the development of our Lightbridge Fuel™.

The following table presents the total R&D expenses for the year ended December 31, 2025 and 2024 (rounded to millions):

	Year Ended December 31,	
	2025	2024
INL Project	\$ 2.9	\$ 1.7
IT expenses	2.0	0.1
Allocated employee compensation and stock-based compensation	3.6	1.8
Other outside R&D expenses	0.7	1.0
Total	\$ 9.2	\$ 4.6

R&D expenses increased by \$4.6 million for the year ended December 31, 2025, as compared to the year ended December 31, 2024. The increase was primarily due to a:

- \$1.2 million increase in INL project labor costs, as we entered into additional agreement modifications and new PTSs;
- \$1.9 million increase in IT expenses, which included a \$0.8 million increase in computer hardware related to the purchasing of HPC and a \$1.1 million increase in related software to support advanced nuclear modeling and simulation of our fuel;
- \$1.8 million increase in allocated employee compensation and stock-based compensation, reflecting an increase in new hires, increased employee bonuses; and several new stock-based awards granted during the year, including new performance stock awards as described in Note 8. *Stock-Based Compensation*, to the Consolidated Financial Statements; and
- \$0.3 million decrease in other outside R&D expenses resulting from a \$0.5 million decrease from the completion of the Centrus Energy Feed Study in 2024 (evaluating deployment of a Lightbridge pilot fuel fabrication facility) and completion of Phase 1 of the Romania Feasibility Study with RATEN ICN in 2025, partially offset by \$0.2 million increase in project management consulting fees.

Total stock-based compensation included in research and development expenses was \$1.4 million and \$0.3 million for the years ended December 31, 2025 and 2024, respectively.

For the years ended December 31, 2025 and 2024, external R&D services accounted for approximately 32% and 49% of total R&D expense. We expect to significantly increase our R&D spend in the near future as we focus on fuel fabrication development, irradiation testing programs, and our collaboration with the DOE at INL. We also expect to hire additional engineers to support these efforts and to further develop our software modeling and simulation capabilities for Lightbridge Fuel™.

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Due to the nature of our R&D expenditures, future costs and schedule estimates are inherently uncertain and can vary significantly as new information and the outcome of these R&D activities become available. Our future business operations are dependent on budgetary constraints due primarily to market conditions and the uncertainty of future liquidity and capital resources available to us to conduct our future R&D activities.

### Interest Income

There was an increase in interest income of \$2.3 million due to higher cash balances over the past year, which resulted in an increase in interest income earned from the purchase of treasury bills and from our bank savings account for the year ended December 31, 2025, as compared to the year ended December 31, 2024.

### Provision for Income Taxes

We incurred a pre-tax net loss for both 2025 and 2024. We reviewed all sources of income for the purpose of recognizing the deferred tax assets and concluded a full valuation allowance for 2025 and 2024 was necessary. Therefore, we did not have a provision for income taxes for both years ended December 31, 2025 and 2024. Prior period ownership changes, coupled with the Company's projections of no taxable income for the foreseeable future, will substantially limit any future benefit to be derived from our NOLs.

See Note 6. *Income Taxes*, to our Consolidated Financial Statements included in Part II. Item 8. *Financial Statements and Supplementary Data* of this Annual Report on Form 10-K for information regarding our income taxes and the limitations on the utilization and amount of our net operating loss carryforwards.

## **Liquidity, Capital Resources and Financial Position**

### ***Overview – Funding Requirements***

We assess our liquidity based on our ability to fund the cash requirements of our R&D activities, G&A expenses, contractual obligations, and other operating needs. Based on our current level of operating expenses and our available cash resources, we believe we have sufficient liquidity to fund our operations and meet our anticipated cash requirements for at least the next 12 months from the date of this filing. Our longer-term liquidity will depend on our ability to obtain additional financing, as our existing capital resources are not expected to be sufficient to fund our operations, research and development activities, and commercialization efforts beyond the next several years.

### ***Short-Term Liquidity and Capital Resources***

At December 31, 2025, we had cash and cash equivalents of \$201.9 million, as compared to \$40.0 million at December 31, 2024, an increase of \$161.9 million. We raised net proceeds of \$176.0 million from the sale of approximately 12.6 million shares of common stock during the year ended December 31, 2025. Our net cash used in operating activities for the year ended December 31, 2025, was \$14.3 million.

We believe that our existing cash and cash equivalents of \$201.9 million as of December 31, 2025, together with any additional sources such as cash flows from potential financing and proceeds from our at-the-market (ATM) equity offering program will be sufficient to meet our working capital and capital expenditure requirements for at least the next 12 months from the date of this filing. However, due to the uncertainties inherent in our research and development programs and the broader industry environment, we are unable to reliably estimate our total cash requirements over the full R&D development period or beyond the next 12 months. We expect our expenditures to increase over time as we advance the development and potential commercialization of our Lightbridge Fuel™. We do not anticipate any material incoming cash flows from operations in the near term, and we expect to continue funding our business primarily through our ATM or other equity offerings.

### ***Long-Term Liquidity and Capital Requirements***

We expect that significant additional capital will be required over multiple years to advance Lightbridge Fuel™ through development and toward commercial deployment. The amount and timing of future funding needs will depend on technical progress, regulatory requirements, facility design decisions, partnering arrangements, and the availability of government support. At this stage, we cannot reliably estimate the total funding required to reach commercial deployment. We currently intend to fund these activities through a mix of equity financing, strategic partnerships, and potential government grants or awards.

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The actual amount and timing of future capital requirements will depend on several factors, including:

- The scope, timing, and cost of R&D activities conducted at DOE national laboratories.
- The design and execution of future fuel development programs.
- The timing and structure of potential strategic partnerships and collaborations.

There is inherent uncertainty in forecasting future expenditures, and actual costs may vary materially from current estimates.

### **Sources of Liquidity**

#### **ATM Equity Offering Program**

Our current primary source of liquidity is potential proceeds from our ATM equity offerings.

On May 23, 2025, the Company filed a shelf registration statement on Form S-3 (File No. 333-287563), which was declared effective on June 4, 2025. On June 5, 2025, the Company entered into an Open Market Sale Agreement with Jefferies (the Jefferies ATM Agreement) to offer and sell the Company's common stock from time to time in one or more ATM offerings, and also filed a prospectus supplement to the base prospectus forming a part of the Company's shelf registration statement registering \$75.0 million of common stock for sale under the Jefferies ATM Agreement. On September 26, 2025, we filed a prospectus supplement pursuant to which we may issue and sell from time to time up to an additional \$75.0 million of common stock under the Jefferies ATM Agreement.

On November 28, 2025, we filed an automatic shelf registration statement on Form S-3 ASR (File No. 333-291837), which included a new prospectus supplement (the November 2025 Prospectus Supplement) pursuant to which we may issue and sell from time to time an additional \$150.0 million of our shares of common stock under the Jefferies ATM Agreement.

During 2025, we sold approximately \$144.4 million under the Jefferies ATM Agreement, receiving net proceeds (less sales commissions and expenses) of \$139.6 million. As of December 31, 2025, approximately \$142.1 million of our common stock remained available for issuance and sale pursuant to the November 2025 Prospectus Supplement.

#### **Liquidity Outlook and Risks**

Although we expect our ATM offerings to remain our primary source of working capital in 2026, there are inherent uncertainties associated with our ability to continue raising capital through an ATM program. These uncertainties include potential declines in our stock price, fluctuations in our stock trading volume, adverse overall stock market conditions, or regulatory changes that could limit our access to capital under the current ATM arrangement. In addition, the issuance of additional shares through the ATM program may result in significant dilution to existing stockholders, and the potential for such dilution could negatively impact the market price of our common stock. There can be no assurance that ATM financing will remain available to us on acceptable terms, or at all, when needed until the commercialization of our fuel.

See Note 7. *Stockholders' Equity*, to our Consolidated Financial Statements included in Part II. Item 8. *Financial Statements and Supplementary Data* of this Annual Report on Form 10-K for information regarding our prior equity financings.

We currently have no debt or lines of credit and have historically funded our operations through the sale of common stock. Although management believes additional public or private equity investments may be available in the future, adverse market conditions, unfavorable stock price movements, or reduced trading volumes could substantially impair our ability to raise capital when needed.

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**Contractual and Other Obligations**

Other than ongoing personnel-related expenditures and vendor payments, we have limited contractual obligations. As noted under Part I. Item 1. *Business*, we have entered into initial project task statements with BEA, the operating contractor of INL, in collaboration with the DOE, which statements set forth the initial scopes of work and funding commitments under the SPPA and CRADA umbrella agreements. Performance of work under these agreements may be terminated at any time by either party, without any liability, after the effective date of termination, upon thirty days' written notice under the SPPA and sixty days' written notice under the CRADA. In the event of termination, the Company shall be responsible for BEA's costs (including the closeout costs), through the effective date of termination, but in no event shall the Company's cost responsibility exceed the total estimated cost stated in each project task statement and any subsequent modification to the project task statement. As of December 31, 2025, the total remaining costs reimbursable from the Company to BEA, if and when incurred, would not exceed \$14.2 million.

**Cash Flow**

The following table provides detailed information about our net cash flows for the years ended December 31, 2025 and 2024 (rounded to millions):

	Year Ended December 31,	
	2025	2024
Net Cash Used in Operating Activities	\$ (14.3)	\$ (9.5)
Net Cash Used in Investing Activities	-	-
Net Cash Provided by Financing Activities	176.2	20.9
Net Increase in Cash and Cash Equivalents	<u>\$ 161.9</u>	<u>\$ 11.4</u>

Operating Activities

Cash used in operating activities increased by \$4.8 million in 2025 as compared to 2024. This increase was primarily due to increased cash expenditures on R&D and general and administrative expenses, partially offset by higher interest income, reflecting increased average cash balances following equity financings and higher short-term interest rates during the period. The changes in working capital in 2025, which included an increase in prepaid expenses and other assets of \$0.9 million, were partially offset by an increase in accounts payable and accrued liabilities of \$0.4 million.

Investing Activities

Net cash used in our investing activities was insignificant for the years ended December 31, 2025 and 2024.

Financing Activities

Cash provided by financing activities increased by \$155.3 million in 2025 as compared to 2024. This increase was due to a:

- \$154.5 million increase in net proceeds received from the issuance of common stock under our ATM programs; and
- \$2.3 million increase in net proceeds from the exercise of stock options;
- partially offset by a \$1.5 million increase in the payment of withholding taxes related to the net share settlement of equity awards.

Net cash provided by our ATM facility was \$176.0 million from the sale of approximately 12.6 million common shares and \$21.4 million from the sale of approximately 4.5 million common shares for the years 2025 and 2024, respectively.

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See Note 12. *Subsequent Events*, to our Consolidated Financial Statements included in Part II. Item 8. *Financial Statements and Supplementary Data* of this Annual Report on Form 10-K for information regarding cash provided by our ATM facility after December 31, 2025.

**Critical Accounting Estimates**

The preparation of our Consolidated Financial Statements, in conformity with accounting principles generally accepted in the United States of America, requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of expenses during the reporting period. Actual results could differ from those estimates and assumptions.

Estimates and assumptions are periodically reviewed and the effects of revisions are reflected in the consolidated financial statements in the period they are determined to be necessary. Our significant accounting policies are more fully described in Note 1. *Basis of Presentation, Summary of Significant Accounting Policies, and Nature of Operations*, to the Consolidated Financial Statements included in Part II. Item 8. *Financial Statements and Supplementary Data* of this Annual Report on Form 10-K.

Critical accounting estimates involve a significant level of estimation uncertainty and are estimates that have had or are reasonably likely to have a material impact on our financial condition or results of operations. As discussed in Note 8. *Stock-Based Compensation*, to our Consolidated Financial Statements, our Tranche-based PSAs will vest upon the achievement of certain operational and financial milestones, including the design and construction of an expandable fuel facility and securing a significant amount of fundraising before December 31, 2028. The total grant date fair value of these outstanding Tranche-based PSAs at December 31, 2025 was approximately \$13.3 million. The likelihood of achieving any milestone may change from period to period as there are many uncertainties that could impact its probability, which could materially impact our operating results.

If our estimated probability of achieving the applicable milestones were to increase or decrease, the related stock-based compensation expense could increase or decrease materially in the period of change and in future periods. In particular, an increase in the estimated probability of a milestone achievement would accelerate and increase stock-compensation expense, while a decrease could result in reduced or reversed stock-based compensation expense for amounts previously recognized. Because these estimates are inherently uncertain, actual results may differ materially from our current probability assumptions. Due to the early-stage nature of these operational and financial milestones, management does not believe it is practicable to estimate the quantitative impact of the reasonably possible changes in these probability assumptions due to the number of variables involved.

**Recent Accounting Standards and Pronouncements**

Refer to Note 1. *Basis of Presentation, Summary of Significant Accounting Policies, and Nature of Operations*, to our Consolidated Financial Statements in Part II. Item 8. *Financial Statements and Supplementary Data* of this Annual Report on Form 10-K for a discussion of recent accounting standards and pronouncements.

**ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

The Company is not required to provide the information required by this Item as it is a “smaller reporting company,” as defined in Rule 12b-2 of the Exchange Act.

**ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

The full text of our audited consolidated financial statements as of and for the years ended December 31, 2025 and 2024 begins on page F-1 of this Annual Report on Form 10-K.

**ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE**

None

**ITEM 9A. CONTROLS AND PROCEDURES**

**Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures**

Our management, with the participation of our CEO and CFO, has evaluated the effectiveness of the design and operation of our disclosure controls and procedures as of December 31, 2025 (as such term is defined in Rule 13a-15(e) under the Exchange Act). Our disclosure controls and procedures are designed to provide reasonable assurance that the information required to be disclosed in our reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to management, including our CEO and CFO, as appropriate to allow timely decisions regarding required disclosure. Any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives.

Based upon this evaluation as of December 31, 2025, our disclosure controls and procedures were effective.

**Management's Annual Report on Internal Control over Financial Reporting**

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) under the Exchange Act. Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP and includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of annual or interim financial statements will not be prevented or detected on a timely basis.

Management has assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2025, utilizing the criteria in the Committee of Sponsoring Organizations of the Treadway Commission's *Internal Control-Integrated Framework* (2013). Based on this assessment, management has concluded that the Company's internal control over financial reporting was effective as of December 31, 2025.

**Changes in Internal Control Over Financial Reporting**

There was no change in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) of the Exchange Act that occurred during the quarter ended December 31, 2025 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

**ITEM 9B. OTHER INFORMATION**

**Executive Compensation**

During the year ended December 31, 2025, our named executive officers received restricted stock awards (RSAs) with service conditions and performance-based restricted stock awards (PSAs) with both service-based and performance-based conditions. The number of awards granted and their aggregate grant date fair value were as follows:

	RSAs (1)	April 2025 PSAs (2)	August 2025 PSAs (3)
<b>Seth Grae</b> <i>Chief Executive Officer, President and Chairman</i>	153,582	87,249	218,123
<b>Andrey Mushakov</b> <i>Executive Vice President, Nuclear Operations</i>	95,789	54,417	136,042
<b>Larry Goldman</b> <i>Chief Financial Officer</i>	88,618	50,343	125,857

	RSA Grant Date Fair Value	April 2025 PSA Grant Date Fair Value (4)	August 2025 PSA Grant Date Fair Value (4)
<b>Seth Grae</b> <i>Chief Executive Officer, President and Chairman</i>	\$ 2,356,741	\$ 609,871	\$ 3,389,630
<b>Andrey Mushakov</b> <i>Executive Vice President, Nuclear Operations</i>	\$ 1,469,898	\$ 380,375	\$ 2,114,092
<b>Larry Goldman</b> <i>Chief Financial Officer</i>	\$ 1,359,857	\$ 351,898	\$ 1,955,818

- (1) The RSAs will vest in three equal annual installments beginning on the first anniversary of the grant date, contingent on the grantee's continued service with the Company on each applicable vesting date.
- (2) The April 2025 PSAs vest, if at all, based on the performance condition of the successful insertion of the Company's fuel material coupon samples into the Advanced Test Reactor (ATR) at INL by December 31, 2026 and certification by the Compensation Committee of the Board of Directors. The April 2025 PSAs are also subject to the participant's continuous service over a three-year period from the grant date. This performance condition was met in November 2025.
- (3) The August 2025 PSAs vest, if at all, based on specific R&D fuel milestones relating to key technical development and commercialization objectives of the Company's R&D fuel program and one specific financial milestone. Vesting occurs in unequal tranches depending on which milestone is certified. Each milestone applies only to a separate portion of the August 2025 PSAs. The respective portions of each tranche will vest upon the later of achievement and Board of Directors or Compensation Committee certification of the performance milestone and is subject to (i) the grantee's continued service through the certification date and (ii) the grantee having completed at least twelve months of continuous service with the Company as of the performance milestone achievement date. The performance period for achieving these milestones extends from the grant date to December 31, 2028.
- (4) The grant date fair value for the April 2025 PSAs and the August 2025 PSAs are based upon the probable outcome of the performance-based conditions as of the awards' grant date, which for these awards is also equivalent to the highest level of performance condition that may be achieved.

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During the year ended December 31, 2025, our named executive officers also received bonuses and non-equity incentive plan compensation, in addition to their base salaries, as follows:

	<b>Salary</b>	<b>Bonus (1)</b>	<b>Non-Equity Incentive Plan Compensation (1)</b>
<b>Seth Grae</b> <i>Chief Executive Officer, President and Chairman</i>	\$ 596,147	\$ 175,104	\$ 400,896
<b>Andrey Mushakov</b> <i>Executive Vice President, Nuclear Operations</i>	\$ 371,814	\$ 109,136	\$ 249,864
<b>Larry Goldman</b> <i>Chief Financial Officer</i>	\$ 343,980	\$ 100,928	\$ 231,072

(1) Consists of payments under our short-term incentive (STI) program for the year indicated, with payments relating to the achievement of individual goals set forth in the “bonus” column and payments relating to the achievement of all other performance criteria set forth in the “non-equity incentive plan compensation” column. The Company considers payments relating to the achievement of individual goals to qualify as bonus payments because of the holistic assessments used by the Compensation Committee in evaluating the progress of the NEOs towards their individual goals, as compared to achievement of definitive metrics for the other performance criteria under the STI program.

Additional information regarding executive compensation will be included in our definitive proxy statement for the 2026 annual meeting of stockholders, which will be filed with the SEC within 120 days of the end of the fiscal year ended December 31, 2025.

**Rule 10b5-1 Information**

During the three months ended December 31, 2025, no director or officer of the Company adopted or terminated a Rule 10b5-1 trading arrangement or non-Rule 10b5-1 trading arrangement, as each term is defined in Item 408(a) of Regulation S-K.

**ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS**

Not applicable.

**PART III**

**ITEM 10. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE**

The information required by Item 10 of Part III will be included in our Proxy Statement relating to the 2026 Annual Meeting of Stockholders and is incorporated herein by reference.

**ITEM 11. EXECUTIVE COMPENSATION**

Information required by Item 11 of Part III will be included in our Proxy Statement relating to the 2026 Annual Meeting of Stockholders and is incorporated herein by reference.

**ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS**

Information required by Item 12 of Part III will be included in our Proxy Statement relating to the 2026 Annual Meeting of Stockholders and is incorporated herein by reference.

**ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE**

Information required by Item 13 of Part III will be included in our Proxy Statement relating to the 2026 Annual Meeting of Stockholders and is incorporated herein by reference.

**ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES**

Information required by Item 14 of Part III will be included in our Proxy Statement relating to the 2026 Annual Meeting of Stockholders and is incorporated herein by reference.

**PART IV**

**ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES**

(a) Documents filed as part of this Annual Report on Form 10-K.

- (1) The following financial statements of Lightbridge Corporation and report of independent registered public accounting firm are included in this Annual Report on Form 10-K:
  - Consolidated Balance Sheets at December 31, 2025 and 2024
  - Consolidated Statements of Operations for the Years Ended December 31, 2025 and 2024
  - Consolidated Statements of Changes in Stockholders' Equity for the Years Ended December 31, 2025 and 2024
  - Consolidated Statements of Cash Flows for the Years Ended December 31, 2025 and 2024
  - Notes to Consolidated Financial Statements
  - Report of BDO USA, P.C. dated February 26, 2026 on the Company's financial statements filed as a part hereof for the fiscal years ended December 31, 2025 and 2024. The independent registered public accounting firm's consent with respect to this report appears in Exhibit 23 of this Annual Report on Form 10-K.
- (2) All schedules have been omitted because they are not required, not applicable or the information is otherwise included.
- (3) Exhibits - See "Exhibit Index" set forth on page 52.

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<b>Exhibit Number</b>	<b>Description</b>
<a href="#">1.1</a>	<a href="#">Open Market Sale Agreement<sup>SM</sup>, dated June 5, 2025, by and between Lightbridge Corporation and Jefferies LLC (incorporated by reference to Exhibit 1.1 to the Form 8-K filed by the Company on June 5, 2025).</a>
<a href="#">3.1</a>	<a href="#">Articles of Incorporation of the Company, as amended through May 8, 2025 (incorporated by reference to Exhibit 3.3 to the Form 10-Q filed by the Company on May 12, 2025).</a>
<a href="#">3.2</a>	<a href="#">Second Amended &amp; Restated Bylaws of Lightbridge Corporation, effective August 11, 2025 (incorporated by reference to Exhibit 3.2 to the Form 10-Q filed by the Company on August 13, 2025).</a>
<a href="#">4.1*</a>	<a href="#">Description of Securities.</a>
<a href="#">4.2</a>	<a href="#">Specimen Certificate for Company's Common Stock (incorporated by reference to Exhibit 4.1 to the Company's registration statement on Form S-3 filed on April 1, 2013, File No. 333-187659).</a>
<a href="#">10.1**</a>	<a href="#">Lightbridge Corporation 2015 Equity Incentive Plan, as amended (incorporated by reference to Appendix A to the definitive proxy statement filed on March 29, 2018, File No. 001-34487).</a>
<a href="#">10.2**</a>	<a href="#">Form of Incentive Stock Option Agreement for Employees under the 2015 Equity Incentive Plan (incorporated by reference to Exhibit 99.2 to the Company's Registration Statement on Form S-8, File No. 333-218796, filed on June 16, 2017).</a>
<a href="#">10.3**</a>	<a href="#">Form of Non-Qualified Stock Option Agreement for Employees under the 2015 Equity Incentive Plan (incorporated by reference to Exhibit 99.3 to the Company's Registration Statement on Form S-8, File No. 333-218796, filed on June 16, 2017).</a>
<a href="#">10.4**</a>	<a href="#">Form of Non-Qualified Stock Option Agreement for Non-Employee Directors under the 2015 Equity Incentive Plan (incorporated by reference to Exhibit 99.4 to the Company's Registration Statement on Form S-8, File No. 333-218796, filed on June 16, 2017).</a>
<a href="#">10.5**</a>	<a href="#">Amended Lightbridge Corporation 2020 Omnibus Incentive Plan (incorporated by reference to Appendix A to the definitive proxy statement filed on April 3, 2023).</a>
<a href="#">10.6**</a>	<a href="#">Lightbridge Corporation 2020 Omnibus Incentive Plan, as amended on May 8, 2025 (incorporated by reference to Exhibit 10.1 to the Form 8-K filed by the Company on May 9, 2025).</a>
<a href="#">10.7**</a>	<a href="#">Form of Non-Statutory Stock Option Agreement for Employees under the 2020 Omnibus Incentive Plan. (incorporated by reference to Exhibit 10.12 to the Form 10-K filed by the Company on March 25, 2021).</a>
<a href="#">10.8**</a>	<a href="#">Form of Restricted Stock Unit Award Agreement for Employees under the 2020 Omnibus Incentive Plan. (incorporated by reference to Exhibit 10.13 to the Form 10-K filed by the Company on March 25, 2021).</a>
<a href="#">10.9**</a>	<a href="#">Form of Restricted Stock Unit Award Agreement for Non-Employee Directors under the 2020 Omnibus Incentive Plan. (incorporated by reference to Exhibit 10.14 to the Form 10-K filed by the Company on March 25, 2021).</a>
<a href="#">10.10**</a>	<a href="#">Form of Restricted Stock Award Agreement under the 2020 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.14 to the Form 10-K filed by the Company on March 31, 2022).</a>
<a href="#">10.11**</a>	<a href="#">Form of Performance-Based Restricted Stock Award Agreement (incorporated by reference to Exhibit 10.4 to the Form 10-Q filed by the Company on May 12, 2025).</a>

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<a href="#"><u>10.12**</u></a>	<a href="#"><u>Form of Performance-Based Restricted Stock Award Agreement (incorporated by reference to Exhibit 10.1 to the Form 8-K filed by the Company on August 29, 2025).</u></a>
<a href="#"><u>10.13**</u></a>	<a href="#"><u>Employment Agreement, dated August 8, 2018, between the Company and Seth Grae (incorporated by reference to Exhibit 10.2 to the Form 10-Q filed by the Company on August 9, 2018).</u></a>
<a href="#"><u>10.14**</u></a>	<a href="#"><u>Employment Agreement, dated August 8, 2018, between the Company and Andrey Mushakov (incorporated by reference to Exhibit 10.3 to the Form 10-Q filed by the Company on August 9, 2018).</u></a>
<a href="#"><u>10.15**</u></a>	<a href="#"><u>Employment Agreement, dated August 8, 2018, between the Company and Larry Goldman (incorporated by reference to Exhibit 10.4 to the Form 10-Q filed by the Company on August 9, 2018).</u></a>
<a href="#"><u>10.16**</u></a>	<a href="#"><u>Form of Indemnification Agreement (August 2018) (incorporated by reference to Exhibit 10.5 to the Form 10-Q filed by the Company on August 9, 2018).</u></a>
<a href="#"><u>10.17▲</u></a>	<a href="#"><u>Strategic Partnership Project Agreement, dated September 27, 2022, between the Company and Battelle Energy Alliance, LLC (incorporated by reference to Exhibit 10.15 to the Form 10-K filed by the Company on March 30, 2023).</u></a>
<a href="#"><u>10.18▲</u></a>	<a href="#"><u>Project Task Statement No. 1 under the Strategic Partnership Project Agreement, dated December 9, 2022, between the Company and Battelle Energy Alliance, LLC (incorporated by reference to Exhibit 10.16 to the Form 10-K filed by the Company on March 30, 2023).</u></a>
<a href="#"><u>10.19▲</u></a>	<a href="#"><u>Cooperative Research and Development Agreement, dated September 27, 2022, between the Company and Battelle Energy Alliance, LLC (incorporated by reference to Exhibit 10.17 to the Form 10-K filed by the Company on March 30, 2023).</u></a>
<a href="#"><u>10.20▲</u></a>	<a href="#"><u>Project Task Statement No. 1 under the Cooperative Research and Development Agreement, dated December 9, 2022, between the Company and Battelle Energy Alliance, LLC (incorporated by reference to Exhibit 10.18 to the Form 10-K filed by the Company on March 30, 2023).</u></a>
<a href="#"><u>10.21▲</u></a>	<a href="#"><u>Modification No. 2 to the Project Task Statement No. 1, dated March 25, 2024, under the Strategic Partnership Project Agreement, dated December 9, 2022, as amended on May 23, 2023, by and between Lightbridge Corporation and Battelle Energy Alliance, LLC (incorporated by reference to Exhibit 10.1 to the Form 10-Q filed by the Company on May 10, 2024).</u></a>
<a href="#"><u>10.22▲</u></a>	<a href="#"><u>Modification No. 3 to the Project Task Statement No. 1, dated October 24, 2024, under the Strategic Partnership Project Agreement, dated December 9, 2022, as amended on May 23, 2023 and March 26, 2024, by and between Lightbridge Corporation and Battelle Energy Alliance, LLC (incorporated by reference to Exhibit 1.01 to the Form 8-K filed by the Company on October 25, 2024).</u></a>
<a href="#"><u>10.23▲</u></a>	<a href="#"><u>Modification No. 3 to the Project Task Statement No. 1, dated January 16, 2025, under the Cooperative Research and Development Agreement, dated December 9, 2022, by and between Lightbridge Corporation and Battelle Energy Alliance, LLC (incorporated by reference to Exhibit 10.1 to the Form 8-K filed by the Company on January 17, 2025).</u></a>
<a href="#"><u>10.24▲</u></a>	<a href="#"><u>Modification No. 4 to the Project Task Statement No. 1, dated March 18, 2025, under the Strategic Partnership Project Agreement, dated December 9, 2022, as amended on May 23, 2023, March 26, 2024 and October 24, 2024, by and between Lightbridge Corporation and Battelle Energy Alliance, LLC (incorporated by reference to Exhibit 10.2 to the Form 10-Q filed by the Company on May 12, 2025).</u></a>
<a href="#"><u>10.25▲</u></a>	<a href="#"><u>Modification No. 2 to the Strategic Partnership Project Agreement, dated August 1, 2025, by and between the Company and Battelle Energy Alliance, LLC (incorporated by reference to Exhibit 10.2 to the Form 10-Q filed the Company on August 13, 2025).</u></a>

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<a href="#"><u>10.26▲</u></a>	<a href="#"><u>Modification No. 3 to the Strategic Partnership Project, dated October 6, 2025, by and between the Company and Battelle Energy Alliance, LLC (incorporated by reference to Exhibit 10.2 to the Form 10-Q filed by the Company on November 6, 2025).</u></a>
<a href="#"><u>10.27▲*</u></a>	<a href="#"><u>Modification No. 1 to the Cooperative Research and Development Agreement, dated November 5, 2025, by and between the Company and Battelle Energy Alliance, LLC.</u></a>
<a href="#"><u>10.28▲*</u></a>	<a href="#"><u>Project Task Statement No. 2, dated November 20, 2025, under the Strategic Partnership Project Agreement, dated September 27, 2022, as amended, by and between Lightbridge Corporation and Battelle Energy Alliance, LLC.</u></a>
<a href="#"><u>10.29▲*</u></a>	<a href="#"><u>Project Task Statement No. 3, dated December 9, 2025, under the Strategic Partnership Project Agreement, dated September 27, 2022, as amended, by and between Lightbridge Corporation and Battelle Energy Alliance, LLC.</u></a>
<a href="#"><u>10.30▲*</u></a>	<a href="#"><u>Project Task Statement No. 4, dated December 10, 2025, under the Strategic Partnership Project Agreement, dated September 27, 2022, as amended, by and between Lightbridge Corporation and Battelle Energy Alliance, LLC.</u></a>
<a href="#"><u>10.31▲*</u></a>	<a href="#"><u>Project Task Statement No. 5, dated December 9, 2025, under the Strategic Partnership Project Agreement, dated September 27, 2022, as amended, by and between Lightbridge Corporation and Battelle Energy Alliance, LLC.</u></a>
<a href="#"><u>10.32▲*</u></a>	<a href="#"><u>Modification No. 5 to the Project Task Statement No. 1, dated January 19, 2026, under the Strategic Partnership Project Agreement, dated December 9, 2022, as amended on May 23, 2023, March 26, 2024 October 24, 2024, and January 15, 2025, by and between Lightbridge Corporation and Battelle Energy Alliance, LLC.</u></a>
<a href="#"><u>19.1*</u></a>	<a href="#"><u>Insider Trading Policy, as amended February 24, 2026.</u></a>
<a href="#"><u>21.1*</u></a>	<a href="#"><u>Subsidiaries of the Company.</u></a>
<a href="#"><u>23.1*</u></a>	<a href="#"><u>Consent of Independent Registered Public Accounting Firm.</u></a>
<a href="#"><u>24.1*</u></a>	<a href="#"><u>Power of Attorney (Included on the signature page hereto).</u></a>
<a href="#"><u>31.1*</u></a>	<a href="#"><u>Rule 13a-14(a)/15d-14(a) Certification - Principal Executive Officer.</u></a>
<a href="#"><u>31.2*</u></a>	<a href="#"><u>Rule 13a-14(a)/15d-14(a) Certification - Principal Financial Officer and Principal Accounting Officer.</u></a>
<a href="#"><u>32*</u></a>	<a href="#"><u>Section 1350 Certifications.</u></a>
<a href="#"><u>97.1**</u></a>	<a href="#"><u>Incentive Compensation Recovery Policy (incorporated by reference to Exhibit 97.1 to the Form 10-K filed by the Company on March 4, 2024).</u></a>

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101	The following materials from Lightbridge Corporation's Annual Report on Form 10-K for the year ended December 31, 2025, formatted in Inline eXtensible Business Reporting Language (XBRL): (i) the Consolidated Balance Sheets; (ii) Consolidated Statement of Operations; (iii) Consolidated Statement of Cash Flows; (iv) Consolidated Statement of Changes in Stockholders' Equity; and (v) Notes to Consolidated Financial Statements.
101.INS	Inline XBRL Instance Document (the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document).
101.SCH	Inline XBRL Taxonomy Extension Schema Document.
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	Inline XBRL Taxonomy Extension Labels Linkbase Document.
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
104*	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).

\* Filed or furnished herewith

\*\* Indicates management contract or compensatory plan or arrangement.

▲ Certain portions of this Exhibit have been redacted pursuant to Item 601(b)(10)(iv) of Regulation S-K. The Company agrees to furnish supplementally an unredacted copy of this Exhibit to the SEC upon request.

**ITEM 16. FORM 10-K SUMMARY**

None.

**LIGHTBRIDGE CORPORATION**  
**DECEMBER 31, 2025 and 2024**

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**Report of Independent Registered Public Accounting Firm**

Shareholders and Board of Directors  
Lightbridge Corporation  
Reston, Virginia

**Opinion on the Consolidated Financial Statements**

We have audited the accompanying consolidated balance sheets of Lightbridge Corporation (the “Company”) as of December 31, 2025 and 2024, the related consolidated statements of operations, changes in stockholders’ equity, and cash flows for each of the years then ended, and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2025 and 2024, and the results of its operations and its cash flows for each of the years then ended, in conformity with accounting principles generally accepted in the United States of America.

**Basis for Opinion**

These consolidated financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company’s internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

**Critical Audit Matter**

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

**Research and Development Expenses**

As described in Note 1 to the consolidated financial statements, the Company records research and development expenses as incurred, which consist primarily of wages and related payroll benefits, non-cash stock-based compensation, materials, testing, consulting and other outside research and development services, related to the development of the Company’s nuclear fuel technology. During the year ended December 31, 2025, the Company recorded approximately \$9.2 million of research and development expenses.

We identified the evaluation of research and development expenses as a critical audit matter due to the management judgment involved in determining whether expenses incurred are related to the research and development activities. Auditing these elements was especially challenging due to the nature of audit evidence and extent of audit effort required to address the matter.

The primary procedures we performed to address this critical audit matter included:

- Testing a sample of research and development expenses by: (i) inspecting underlying supporting documents and comparing to the recorded expense for accuracy and classification, and (ii) inquiring of project managers to determine whether expenses incurred are related to research and development activities.
- Testing management’s allocation of wages, payroll benefits, and non-cash stock-based compensation by: (i) performing substantive analytical procedures by developing an independent expectation and comparing such expectation to the recorded amount, and (ii) testing the completeness and accuracy of relevant underlying data used in our substantive analytical procedures.

/s/ BDO USA, P.C.

We have served as the Company’s auditor since 2015.

Philadelphia, Pennsylvania  
February 26, 2026

**LIGHTBRIDGE CORPORATION**  
**CONSOLIDATED BALANCE SHEETS**

	<b>December 31,</b>	<b>December 31,</b>
	<b>2025</b>	<b>2024</b>
<b>ASSETS</b>		
Current Assets		
Cash and cash equivalents	\$ 201,862,421	\$ 39,990,827
Prepaid expenses and other current assets	712,983	324,378
Total Current Assets	<u>202,575,404</u>	<u>40,315,205</u>
Other Assets		
Prepaid project costs and other long-term assets	1,140,000	528,805
Trademarks	119,391	108,865
Total Assets	<u>\$ 203,834,795</u>	<u>\$ 40,952,875</u>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current Liabilities		
Accounts payable and accrued liabilities	\$ 847,451	\$ 424,585
Total Current Liabilities	<u>847,451</u>	<u>424,585</u>
Commitments and contingencies – Note 5		
Stockholders' Equity		
Preferred stock, \$0.001 par value, 10,000,000 authorized shares, no shares issued and outstanding at December 31, 2025 and 2024	—	—
Common stock, \$0.001 par value, 100,000,000 authorized shares, 33,407,495 shares and 18,783,912 shares issued and outstanding at December 31, 2025 and 2024, respectively	33,407	18,784
Additional paid-in capital	386,719,120	204,694,348
Accumulated deficit	(183,765,183)	(164,184,842)
Total Stockholders' Equity	<u>202,987,344</u>	<u>40,528,290</u>
Total Liabilities and Stockholders' Equity	<u>\$ 203,834,795</u>	<u>\$ 40,952,875</u>

The accompanying notes are an integral part of these consolidated financial statements.

**LIGHTBRIDGE CORPORATION**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**

	<b>Year Ended December 31,</b>	
	<b>2025</b>	<b>2024</b>
Revenue	\$ —	\$ —
Operating Expenses		
General and administrative	14,016,573	8,460,519
Research and development	9,210,499	4,598,978
Total Operating Expenses	<u>23,227,072</u>	<u>13,059,497</u>
Operating Loss	<u>(23,227,072)</u>	<u>(13,059,497)</u>
Other Income		
Interest income	3,646,731	1,272,431
Total Other Income	<u>3,646,731</u>	<u>1,272,431</u>
Net Loss Before Income Taxes	(19,580,341)	(11,787,066)
Income taxes	—	—
Net Loss	<u>\$ (19,580,341)</u>	<u>\$ (11,787,066)</u>
Net Loss Per Common Share		
Basic and diluted	\$ (0.80)	\$ (0.81)
Weighted Average Number of Common Shares Outstanding	24,517,972	14,487,834

The accompanying notes are an integral part of these consolidated financial statements.

**LIGHTBRIDGE CORPORATION**  
**CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY**  
**FOR THE YEARS ENDED DECEMBER 31, 2025 and 2024**

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Equity
	Shares	Amount			
Balance - January 1, 2024	13,698,274	\$ 13,698	\$ 181,295,125	\$ (152,397,776)	\$ 28,911,047
Issuance of restricted share awards	484,269	484	(484)	—	—
Shares settlement for withholding taxes paid upon vesting of restricted stock awards	(100,514)	(100)	(568,248)	—	(568,348)
Shares issued - registered offerings - net of offering costs of \$1,128,284	4,547,207	4,548	21,407,957	—	21,412,505
Shares issued through the exercise of options	10,974	11	41,910	—	41,921
Stock-based compensation for shares issued to consultants and directors	143,702	143	479,857	—	480,000
Stock-based compensation for equity awards	—	—	2,038,231	—	2,038,231
Net loss	—	—	—	(11,787,066)	(11,787,066)
Balance - December 31, 2024	<u>18,783,912</u>	<u>\$ 18,784</u>	<u>\$ 204,694,348</u>	<u>\$ (164,184,842)</u>	<u>\$ 40,528,290</u>
Issuance of restricted share awards	1,770,157	1,770	(1,770)	—	—
Shares settlement for withholding taxes paid upon vesting of restricted stock awards	(149,025)	(149)	(2,158,672)	—	(2,158,821)
Shares issued - registered offerings - net of offering costs of \$6,015,819	12,595,595	12,595	175,939,986	—	175,952,581
Shares issued through the exercise of options	294,104	294	2,369,544	—	2,369,838
Stock-based compensation for shares issued to consultants and directors	112,752	113	359,887	—	360,000
Stock-based compensation for equity awards	—	—	5,515,797	—	5,515,797
Net loss	—	—	—	(19,580,341)	(19,580,341)
Balance - December 31, 2025	<u>33,407,495</u>	<u>\$ 33,407</u>	<u>\$ 386,719,120</u>	<u>\$ (183,765,183)</u>	<u>\$ 202,987,344</u>

The accompanying notes are an integral part of these consolidated financial statements.

**LIGHTBRIDGE CORPORATION**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

	Year Ended December 31,	
	2025	2024
<b>Operating Activities</b>		
Net loss	\$ (19,580,341)	\$ (11,787,066)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation	5,789,991	2,149,037
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(302,799)	(3,121)
Prepaid project costs and other long-term assets	(611,195)	(45,805)
Accounts payable and accrued liabilities	422,866	193,259
<b>Net Cash Used in Operating Activities</b>	<b>(14,281,478)</b>	<b>(9,493,696)</b>
<b>Investing Activities</b>		
Trademarks	(10,526)	—
<b>Net Cash Used in Investing Activities</b>	<b>(10,526)</b>	<b>—</b>
<b>Financing Activities</b>		
Proceeds from sale of common stock in public offerings	181,968,400	22,540,789
Issuance costs paid related to sale of common stock in public offerings	(6,015,819)	(1,128,284)
Net proceeds from the exercise of stock options	2,369,838	41,921
Payments for taxes related to net share settlement of equity awards	(2,158,821)	(568,348)
<b>Net Cash Provided by Financing Activities</b>	<b>176,163,598</b>	<b>20,886,078</b>
<b>Net Increase in Cash and Cash Equivalents</b>	<b>161,871,594</b>	<b>11,392,382</b>
Cash and Cash Equivalents, Beginning of Year	39,990,827	28,598,445
<b>Cash and Cash Equivalents, End of Year</b>	<b>\$ 201,862,421</b>	<b>\$ 39,990,827</b>
<b>Supplemental Disclosure of Cash Flow Information</b>		
<b>Cash paid during the year:</b>		
Interest paid	\$ —	\$ —
Income taxes paid	\$ —	\$ —
<b>Non-Cash Financing Activities:</b>		
Payment of accrued liabilities with common stock	\$ 15,000	\$ 15,000
Common stock issued for prepaid consulting services	\$ 300,000	\$ 180,000

The accompanying notes are an integral part of these consolidated financial statements.

**LIGHTBRIDGE CORPORATION**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 1. Basis of Presentation, Summary of Significant Accounting Policies, and Nature of Operations**

The Company was formed on October 6, 2006, when Thorium Power, Ltd., which was incorporated in the state of Nevada on February 2, 1999, merged with Thorium Power, Inc. (TPI), which was incorporated in the state of Delaware on January 8, 1992. On September 29, 2009, the Company changed its name from Thorium Power, Ltd. to Lightbridge Corporation and began its focus on developing and commercializing metallic nuclear fuels. The Company is a nuclear fuel technology company focused on developing and commercializing its metallic nuclear fuel, Lightbridge Fuel™.

***Basis of Consolidation***

These consolidated financial statements included the accounts of Lightbridge, a Nevada corporation, and the Company's wholly-owned subsidiaries, TPI and Lightbridge International Holding LLC, a Delaware limited liability company. These wholly-owned subsidiaries are inactive. All intercompany transactions and balances have been eliminated in consolidation. In January 2026, Lightbridge International Holding LLC was formally dissolved.

***Basis of Presentation and Use of Estimates and Assumptions***

The preparation of consolidated financial statements, in conformity with accounting principles generally accepted in the United States of America (GAAP), requires management to make estimates and assumptions that affected the reported amounts of assets and liabilities and disclosure of contingent assets, liabilities, and equity at the date of the financial statements, and the reported amounts of expenses during the reporting period. Actual results could differ from those estimates. Estimates and assumptions were periodically reviewed and the effects of revisions were reflected in the consolidated financial statements in the period they are determined to be necessary. These estimates include, but are not limited to, valuation of intangible assets, fair value measurements, deferred tax assets and liabilities, and stock-based compensation.

Certain amounts in the prior year have been reclassified to conform with the current year presentation. These reclassifications had no impact on the previously reported statement of financial position, results of operations, changes in stockholders' equity, or changes in net cash provided by (used in) operating, investing, or financing activities on the statement of cash flows.

***Certain Risks and Uncertainties***

Based on the Company's cash position as of December 31, 2025 and current operating plans, management believes the Company has sufficient capital to fund operations for at least 12 months from the issuance of these financial statements.

Beyond this period, the Company will need additional funding and/or in-kind support via a combination of strategic alliances, government grants, further offerings of equity securities, or an offering of debt securities in order to support its future research and development (R&D) activities required to further enhance and complete the development and commercialization of its fuel products.

There can be no assurance that the Company will be able to successfully continue to conduct its operations if there is a lack of financial resources available in the future to continue its fuel development activities, and a failure to do so would have a material adverse effect on the Company's future R&D activities, financial position, results of operations, and cash flows. Also, the success of the Company's operations is subject to other numerous contingencies, some of which are beyond management's control. These contingencies include general and regional economic conditions, contingent liabilities, potential competition with other nuclear fuel developers, including those entities developing accident tolerant fuels (ATFs), changes in government regulations, risks related to the R&D of our nuclear fuel, regulatory approval of the Company's fuel, support for nuclear power, changes in accounting and taxation standards, inability to achieve overall short-term and long-term R&D milestones toward commercialization, future impairment charges to the Company's assets, and global or regional catastrophic events. The Company may also be subject to various additional political, economic, and other uncertainties.

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The Company is engaged in significant R&D activities to advance its nuclear fuel technology at Idaho National Laboratory (INL). For the year ended December 31, 2025, R&D expenses associated with activities conducted at INL accounted for approximately 31% of the Company's total R&D expenditure. The Company currently primarily relies on INL for developing, testing and evaluating its nuclear fuel. Any disruption in access to INL's resources, including changes in government policies, facility downtime, regulatory constraints, or unforeseen operational challenges could have a material adverse effect on the Company's current ability to advance its R&D activities.

### ***Fair Value of Financial Instruments***

The Company determines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between unaffiliated market participants at the measurement date.

The Company has established a fair value hierarchy that prioritizes the inputs used to measure fair value. Assets and liabilities measured at fair value are categorized based on whether the inputs are observable in the market and the degree that the inputs are observable. The hierarchy gives the highest priority to active markets for identical assets and liabilities (Level 1 measurement) and the lowest priority to unobservable inputs (Level 3 measurement). The categorization of financial instruments within the valuation hierarchy is based on the lowest level of input that is significant to the fair value measurement. The three levels of the fair value hierarchy were as follows:

Level 1 - Observable inputs such as quoted prices in active markets for identical assets or liabilities;

Level 2 - Inputs other than quoted prices that were observable for the asset or liability, either directly or indirectly. These include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that were not active and inputs other than quoted prices that were observable for the asset or liability; and

Level 3 - Unobservable inputs that reflect management's assumptions.

For disclosure purposes, assets and liabilities are classified in their entirety in the fair value hierarchy level based on the lowest level of input that was significant to the overall fair value measurement. The Company's assessment of the significance of a particular input to the fair value measurement requires judgment and may have affected the placement within the fair value hierarchy levels. See Note 2, *Fair Value Measurements*, to the Consolidated Financial Statements for further detail.

### ***Cash and Cash Equivalents***

The Company may at times invest its excess cash in interest bearing accounts and U.S. treasury bills. It classifies all highly liquid investments with original stated maturities of three months or less from date of purchase as cash equivalents and all highly liquid investments with stated maturities of greater than three months as marketable securities. At December 31, 2025 and 2024, the Company held cash balances totaling \$199.5 million and \$39.7 million, respectively, in excess of the federally insured limits of \$250,000. The Company deemed this credit risk not to be significant as cash was held by two prominent financial institutions during these periods.

### ***Deferred Issuance Costs***

The Company capitalizes incremental and direct costs incurred in connection with equity offerings, including legal, accounting, registration, and other professional fees. These costs are recorded as prepaid assets until the related securities are issued. Upon issuance, the deferred costs are charged against additional paid-in capital on a pro-rata basis in the period in which the shares are sold. If an offering is abandoned, the related deferred costs are expensed in the period of termination.

### **Trademarks**

Costs for filing and legal fees for trademark applications are capitalized. Trademarks are considered intangible assets with an indefinite useful life and therefore are not amortized. The Company performs an impairment test in the fourth quarter of each year or more frequently if events or circumstances indicate that an impairment loss may have been incurred. For the fourth quarter of 2025, based on qualitative assessments performed, the Company concluded that it was more likely than not that the fair value of the Trademarks substantially exceeded its carrying value and therefore, further quantitative analysis was not required. As a result, no impairment was recorded. As of December 31, 2025 and 2024, the carrying value of trademarks was approximately \$0.1 million.

### **Leases**

The Company recognizes operating lease right of use assets and liabilities at commencement date based on the present value of the future minimum lease payments over the lease term. However, leases with an initial term of 12 months or less are not recorded on the consolidated balance sheet in accordance with the short-term lease recognition exemption. The Company also applies the practical expedient to not separate non-lease components for all leases that qualify. The Company has only one short-term lease for office space for which lease expense is recognized on a straight-line basis over the lease term.

### **Income Taxes**

The Company accounts for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, the Company determines deferred tax assets and liabilities on the basis of the differences between the financial statement and tax bases of assets and liabilities by using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date.

The Company recognizes deferred tax assets to the extent that we believe that these assets are more likely than not to be realized. In making such a determination, it considers all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies, and results of recent operations. If the Company determines that it would be able to realize its deferred tax assets in the future in excess of its net recorded amount, it would make an adjustment to the deferred tax asset valuation allowance, which would reduce the provision for income taxes.

In July 2025, the One Big Beautiful Bill Act (the Act) was signed into law. Among other provisions, the Act enacted new Section 174A of the Internal Revenue Code, which permanently allows an immediate deduction for domestic research and development expenditures for tax years beginning after December 31, 2024. The Act also provides transition rules permitting taxpayers to deduct unamortized domestic R&E expenditures paid or incurred in 2022 through 2024. As the Company maintains a full valuation allowance against its net deferred tax assets, the enactment of the Act did not have a material impact on the Company's consolidated financial statements as of December 31, 2025.

The Company records uncertain tax positions in accordance with ASC 740, Accounting for Income Taxes, on the basis of a two-step process in which (1) it determines whether it is more likely than not that the tax positions will be sustained on the basis of the technical merits of the position and (2) for those tax positions that meet the more-likely-than-not recognition threshold, it recognizes the largest amount of tax benefit that is more than 50 percent likely to be realized upon ultimate settlement with the related tax authority.

The Company recognizes interest and penalties related to unrecognized tax benefits, if any, on the income tax expense line in the accompanying consolidated statement of operations.

### **Research and Development Expenses**

The Company conducts significant R&D activities related to the design, testing, and commercialization of its proprietary nuclear fuel technology. R&D costs include salaries and benefits for R&D personnel, stock-based compensation, consulting and engineering services, materials consumed in R&D activities, facility and equipment usage costs, external testing and analysis, and certain travel expenses. The Company also incurs costs for the purchase of a high-performance computer (HPC), development of specialized engineering models, computer simulations, and software code used solely to support specific R&D programs. A significant portion of the Company's R&D activities is conducted through third-party research institutions, national laboratories, and engineering service providers.

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R&D costs are expensed as incurred. Expenditures for materials, equipment, facilities, and software that are acquired or constructed for a particular R&D project and that have no alternative future use in other projects or operations are expensed in the period in which the costs are incurred (generally when paid). However, third-party consulting or engineering services paid for in advance of performance are recorded as prepaid assets and recognized as R&D expense as the services are rendered. Equipment or other assets acquired for R&D activities that have future alternative uses are capitalized and depreciated over their estimated useful lives in accordance with ASC 360, *Property, Plant, and Equipment*. The Company does not currently have any assets acquired for R&D with future alternative use.

During the years ended December 31, 2025 and 2024, the Company incurred \$9.2 million and \$4.6 million, respectively, in R&D expenses.

***Stock-Based Compensation***

The Company grants options to purchase shares of the Company's common stock, common stock awards, restricted stock awards (RSAs), and performance-based restricted stock awards (PSAs) to employees and directors. The Company also grants stock-based awards or common stock to consultants for services performed, which are accounted for in the same manner as stock-based awards and common stock issued to employees.

Stock-based compensation expense is based on the fair value of the awards measured at their grant dates. The Company uses a Black-Scholes pricing model to determine the fair value of stock options, as further described in Note 8. *Stock-Based Compensation*, to the Consolidated Financial Statements. For common stock awards, RSAs and PSAs, the fair value of the awards is based on the fair value of the Company's common stock on the date of grant.

The Company has elected to account for forfeitures as they occur and has recorded compensation cost assuming all option holders will have completed the requisite service period. If an employee forfeits an award because they fail to complete the requisite service period, the Company reverses compensation expense previously recognized in the period the award was forfeited.

Awards with service-based vesting conditions only are expensed on a straight-line basis over the requisite service period of the award. Awards with performance-based vesting conditions are assessed each reporting period and expensed using a graded attribution method through the estimated date of achievement, only when achievement of the performance-based condition is deemed probable. If achievement of the performance-based condition is no longer probable, previously recorded compensation expense is reversed. Stock-based compensation expense is allocated to G&A or R&D in the Consolidated Statement of Operations based on the proportion of participant hours recorded to each function.

Shares that are issued to employees upon the exercise of stock options or upon the vesting of RSAs and PSAs are issued net of the number of shares with a fair value equal to the amount required to satisfy applicable tax withholding requirements. As a result, the actual number of shares issued with tax withholding obligations are less than the actual number of shares exercised under the stock option or vested under the RSA or PSA. The Company uses a "net settlement" approach for settling restricted stock awards. Under a "net settlement" approach, the Company withholds shares equal in value to the statutory withholding obligations and pays the tax withholding amount from its own cash reserves. The tax payment under the "net settlement" approach is reflected as a financing activity on the Consolidated Statements of Cash Flows. The shares withheld become available for reissuance under the related stock incentive plan.

***Related Party Transactions***

Related party transactions are approved by the Board of Directors or designated committee. During 2025 and 2024, the cash retainers paid to one independent director totaling \$70,000 and \$65,000, respectively, were paid to an entity controlled by such director, at the director's election. The terms and conditions of this cash payment were the same as quarterly retainer fees paid to the other independent directors.

**Recent Adopted Pronouncements**

Income Tax Disclosures

In December 2023, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2023-09, *Income Taxes (Topic 740): Improvements to Income Tax Disclosures*, which focuses on the rate reconciliation and income taxes paid (ASU 2023-09). ASU 2023-09 requires a public business entity (PBE) to disclose, on an annual basis, a tabular rate reconciliation using both percentages and currency amounts, broken out into specified categories with certain reconciling items further broken out by nature and jurisdiction to the extent those items exceed a specified threshold equal to or greater than 5% of the amount computed by multiplying pretax income or loss by the applicable statutory income tax rate. In addition, all entities are required to disclose income taxes paid, net of refunds received disaggregated by federal, state/local, and foreign taxes and by jurisdiction if the amount is at least 5% of total income tax payments, net of refunds received. The Company has adopted ASU 2023-09 for the year ended December 31, 2025 and has retrospectively adjusted disclosures for the year ended December 31, 2025. Otherwise, the adoption of ASU 2023-09 had no impact on the Company's consolidated balance sheets, statements of operations, or statements of cash flows.

**Recent Accounting Pronouncements**

Disaggregation of Income Statement Expenses

In November 2024, the FASB issued ASU No. 2024-03, *Income Statement - Reporting Comprehensive Income - Expense Disaggregation Disclosures (Subtopic 220-40): Disaggregation of Income Statement Expenses* ("ASU 2024-03"), which required disclosure of certain costs and expenses on an interim and annual basis in the notes to the consolidated financial statements. The guidance is effective for annual reporting periods beginning after December 15, 2026 and interim periods within annual reporting periods beginning after December 15, 2027. Early adoption is permitted. The guidance is to be applied either (1) prospectively to financial statements issued for reporting periods after the effective date or (2) retrospectively to any or all prior periods presented in the financial statements. The Company is currently evaluating the potential impact of adopting this new guidance on the consolidated financial statements and related disclosures.

The Company has evaluated other recently issued, but not yet effective, accounting standards that have been issued or proposed by the FASB or other standards-setting bodies through the filing date of these consolidated financial statements and does not believe the future adoption of any such standards will have a material impact on the consolidated financial statements and related disclosures.

**Note 2. Fair Value Measurements**

The Company's financial instruments consist principally of cash and cash equivalents, accounts payable and accrued liabilities. The carrying amounts of cash, accounts payable, and accrued liabilities are considered to be a Level 1 measurement, because of the short-term nature of those instruments. Cash equivalents are primarily composed of U.S. Treasury instruments having maturity dates of 30-90 days. At December 31, 2025, the Company held U.S. Treasury bills with an amortized cost basis of \$2.0 million on its balance sheet. The Company did not hold any cash equivalents at December 31, 2024.

The Company reviewed its U.S. treasury instruments held at the end of each reporting period to determine whether the securities were of the most recent issuance of that security with the same maturity (referred to as "on-the-run," which is the most liquid version of the maturity band). If a U.S. treasury instrument held at the end of the reporting period is from the most recent issuance it is classified as Level 1. Otherwise, it is referred to as "off-the-run" and is classified as Level 2. As of December 31, 2025, the Company held \$2.0 million in fair value of U.S. treasury bills classified as Level 2.

The following table summarizes the valuation of the Company's cash equivalents within the fair value hierarchy (in millions) at December 31, 2025:

	Level 1	Level 2	Level 3
Cash equivalents	\$ —	\$ 2.0	\$ —

**Note 3. Prepaid and Other Assets**

In 2022, the Company entered into two agreements with Battelle Energy Alliance, LLC (BEA), the Department of Energy's (DOE) operating contractor for INL to support the development of Lightbridge Fuel™. Under these agreements, as modified from time to time, the Company may make advance payments to support specific contracted project work. These advance payments are recorded as prepaid assets on the balance sheet, and classified as short-term or long-term, depending on the associated performance period remaining. As of December 31, 2025, \$0.1 million in advance payments were reported in prepaid expenses and other current assets on the Consolidated Balance Sheet. No advance payments were classified as short-term as of December 31, 2024. As of December 31, 2025 and 2024, \$1.1 million and \$0.5 million, respectively, in advance payments were reported as prepaid project costs and other long-term assets on the Consolidated Balance Sheet.

**Note 4. Accounts Payable and Accrued Liabilities**

Accounts payable and accrued liabilities consisted of the following (rounded in millions):

	December 31, 2025	December 31, 2024
Trade payables	\$ 0.6	\$ 0.2
Accrued research and development expenses	0.1	0.1
Accrued legal and consulting expenses	0.1	0.1
Total	<u>\$ 0.8</u>	<u>\$ 0.4</u>

**Note 5. Commitments and Contingencies**

The Company has entered into initial project task statements (PTS) with BEA related to R&D work being conducted under the Strategic Partnership Project Agreement (SPPA) and Cooperative Research and Development Agreement (CRADA) at INL. Performance of work under these agreements may be terminated at any time by either party, without any liability, after the effective date of termination, upon giving a thirty-day written notice under the SPPA and a sixty-day written notice under the CRADA. In the event of termination, the Company shall be responsible for BEA's costs (including the closeout costs), through the effective date of termination, but in no event shall the Company's cost responsibility exceed the total estimated cost stated in each PTS and any subsequent modification to the PTS. As of December 31, 2025, the total remaining costs reimbursable from the Company to BEA, if and when incurred, would not exceed \$14.2 million.

**Note 6. Income Taxes**

The components of net loss before income tax expense are as follows (in thousands):

	<u>Year Ended December 31</u>	
	<u>2025</u>	<u>2024</u>
Domestic	\$ (19,580)	\$ (11,787)
Foreign	-	-
Total	<u>\$ (19,580)</u>	<u>\$ (11,787)</u>

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The Company has not recorded a provision for federal or state income taxes during the years ended December 31, 2025 and 2024, as the Company incurred operating losses and maintains a full valuation allowance against its net deferred tax assets.

The reconciliation of the Company's statutory tax rate and effective tax rate is as follows (in thousands):

	Year Ended December 31, 2025		Year Ended December 31, 2024	
	Amount	Percent	Amount	Percent
Pretax Income (Loss)	\$ (19,580)		\$ (11,787)	
US Federal Statutory Tax Rate	\$ (4,112)	21.00%	\$ (2,475)	21.00%
Change in valuation allowance	3,421	(17.47)%	631	(5.35)%
Non-taxable or Non-deductible Items:				
Other	43	(0.22)%	(64)	0.54%
Stock-based Compensation	648	(3.31)%	1,908	(16.19)%
Total Income Tax Expense	\$ -	0.00%	\$ -	0.00%

The components of the Company's deferred tax assets and liabilities are as follows (in thousands):

	December 31, 2025	December 31, 2024
Deferred tax assets:		
Stock-based compensation	\$ 606	\$ 1,488
Patent impairment provision	273	304
Net operating loss carryforwards	22,618	17,109
Research and development expenses - capitalized for tax purposes	1,044	1,394
Accruals and other assets	10	10
Research and development tax credits	285	285
Total deferred tax assets before valuation allowance	24,836	20,590
Less: valuation allowance	(24,836)	(20,590)
Net deferred tax asset (liabilities)	\$ -	\$ -

As of December 31, 2025, the Company had \$89.5 million of U.S. federal net operating loss carryforwards, all of which have an unlimited carryforward period. As of December 31, 2025, the Company had \$81.3 million of state net operating loss carryforwards, which includes \$0.2 million that begin to expire at various dates from 2043 through 2045 and \$81.1 million that have an unlimited carryforward period.

As of December 31, 2025, the Company had \$0.3 million of U.S. federal research and development tax credits that expire in 2036 through 2040.

The future realization of the tax benefits from existing temporary differences and tax attributes ultimately depends on the existence of sufficient taxable income. The Company assesses the realizability of its deferred tax assets at each balance sheet date. In assessing the realization of its deferred tax assets, the Company considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The Company considers the projected future taxable income, expected reversal of existing deferred tax liabilities, and tax planning strategies in making this assessment. After consideration of all available evidence, both positive and negative, the Company determined that it is not more likely than not that its net deferred tax assets will be realized in the foreseeable future. As a result, the Company increased its valuation allowance by \$4.2 million as of December 31, 2025.

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The future realization of the Company's net operating loss carryforwards and other tax attributes may also be limited by the change in ownership rules under the U.S. Internal Revenue Code (the Code) Section 382. Under Section 382, if a corporation undergoes an ownership change, the corporation's ability to utilize its net operating loss carryforwards and other tax attributes to offset income may be limited. In general, an "ownership change," as defined by Section 382 of the Code, results from a transaction or series of transactions over a three-year period resulting in an ownership change of more than 50 percent of the outstanding stock of a company by certain stockholders or public groups. The Company has not completed a study to assess whether an ownership change has occurred or whether there have been multiple ownership changes.

The Company records uncertain tax positions as liabilities in accordance with ASC 740-10, *Income Taxes*, and adjusts these liabilities when judgment changes as a result of the evaluation of new information not previously available. Since there is complexity in some of these uncertainties, the ultimate resolution may result in a payment that is materially different from the current estimate of the unrecognized tax benefit liabilities. These differences will be reflected as increases or decreases to income tax expense in the period in which new information is available.

The Company files income tax returns in the U.S. where it is subject to tax examination by U.S. federal and state tax authorities. The Company is not currently under examination for income taxes and is not aware of any issues under review that could result in significant payments, accruals or material deviation from its tax positions. To the extent the Company has tax attribute carryforwards, the tax years in which the attribute was generated may still be adjusted upon examination by local tax authorities to the extent utilized in a future period. The statute of limitations for the Company has expired for tax years prior to 2022.

As of December 31, 2025, the Company has not recorded an unrecognized tax benefit. As of December 31, 2025, the Company has not recorded any accrued interest and penalties.

For the years ended December 31, 2025 and 2024 there were no income taxes paid (net of refunds received).

### **Note 7. Stockholders' Equity**

On May 8, 2025, the Company held the 2025 annual meeting of stockholders at which the Company's stockholders approved an increase in the number of authorized shares of common stock from 25,000,000 shares to 100,000,000 shares. The increase became effective upon the filing of the Amended and Restated Certificate of Incorporation with the Secretary of State of Nevada on May 8, 2025.

At December 31, 2025 and 2024, the Company had 33,407,495 and 18,783,912 common shares outstanding, respectively (including outstanding RSAs and PSAs totaling 2,090,946 and 781,864 shares, respectively). No preferred shares were outstanding at December 31, 2025 and 2024.

### **Issuance and Redemption of Series X Preferred Stock**

During 2025, the Company issued and subsequently redeemed one share of a Series X of preferred stock for nominal consideration. The transaction did not have a material impact on the Company's consolidated financial statements.

### **Common Stock Equity Offerings**

#### ***At-the-Market (ATM) Offerings***

The Company has entered into sales agreements with agents pursuant to which the Company may issue and sell shares of its common stock in "at-the-market" (ATM) equity offerings as defined in Rule 415 promulgated under the Securities Act of 1933, as amended. The Company records its ATM sales on a settlement date basis. The sales commissions and expenses related to each ATM program are considered direct and incremental costs and are charged against "Additional paid-in capital" on the Consolidated Balance Sheet in the period in which the corresponding shares are issued and sold.

#### **Sales Agreement with Stifel, Nicolaus & Company, Incorporated (Stifel)**

On May 28, 2019, the Company entered into an at-the-market equity offering sales agreement with Stifel, which was amended on April 9, 2021 and May 8, 2024 (the Stifel ATM Agreement), pursuant to which the Company may issue and sell shares of its common stock from time to time through Stifel as the Company's sales agent. Under this amended agreement, the Company paid Stifel a commission equal to 3.0% of the aggregate gross proceeds of any sales of common stock under the agreement.

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The Company filed a shelf registration statement on Form S-3 with the Securities and Exchange Commission (SEC) on March 29, 2024, registering the sale of up to \$75.0 million of the Company's securities that was declared effective on April 19, 2024. On May 10, 2024, the Company filed a prospectus supplement, which was further supplemented on July 19, 2024 and August 9, 2024 (collectively, the "First Prospectus Supplement"), pursuant to which the Company may offer and sell shares of common stock having an aggregate offering price of up to \$12.6 million from time to time through the Stifel ATM Agreement. On November 22, 2024, the Company filed a prospectus supplement (the "Second Prospectus Supplement") to which the Company may offer and sell shares of common stock having an aggregate offering price of up to \$45.0 million from time to time through the Stifel ATM Agreement. The Company exhausted all sales under both prospectus supplements during 2025, issuing 4,261,384 shares of common stock for \$36.4 million in net proceeds, less commissions and expenses. The Company sold 4,547,207 shares under the Stifel ATM Agreement for the year ended December 31, 2024 resulting in net proceeds (less sales commissions and expenses) of \$21.4 million. The Stifel ATM Agreement was terminated on May 30, 2025.

### Sales Agreement with Jefferies, LLC (Jefferies)

On May 23, 2025, the Company filed a shelf registration statement on Form S-3, which was declared effective on June 4, 2025. On June 5, 2025, the Company entered into an Open Market Sale Agreement with Jefferies (the Jefferies ATM Agreement) to offer and sell the Company's common stock from time to time in one or more ATM offerings and also filed a prospectus supplement to the base prospectus forming a part of the Company's shelf registration statement registering \$75.0 million of common stock for sale under the Jefferies ATM Agreement. Under the Jefferies ATM Agreement, the Company pays Jefferies a commission equal to 3.0% of the aggregate gross proceeds of any sales of common stock under the agreement. On September 26, 2025, the Company filed a prospectus supplement to the base prospectus forming a part of the Company's shelf registration statement registering an additional \$75.0 million of common stock for sale under the Jefferies ATM Agreement.

On November 28, 2025, the Company filed a new automatic shelf registration statement on Form S-3, which included a new prospectus supplement (the November 2025 Prospectus Supplement) pursuant to which the Company may issue and sell from time to time an additional \$150 million of its shares of common stock under the Jefferies ATM Agreement.

During 2025, the Company sold and issued 8,334,211 shares of common stock for \$139.6 million in net proceeds (less sales commissions and expenses), under the Jefferies ATM Agreement pursuant to these shelf registration statements and related prospectuses and prospectus supplements. As of December 31, 2025, approximately \$ 142.1 million of the Company's common stock remained available for issuance and sale pursuant to the November 2025 Prospectus Supplement.

The Company sold an aggregate of 12,595,595 shares under the ATM agreements with Stifel and with Jefferies for the year ended December 31, 2025, resulting in aggregate net proceeds of \$176.0 million. The Company sold 4,547,207 shares under the ATM agreement with Stifel for the year ended December 31, 2024 resulting in net proceeds of \$21.4 million.

## **Note 8. Stock-Based Compensation**

### **2020 Omnibus Incentive Plan**

The Company maintains the 2020 Omnibus Incentive Plan (the 2020 Plan), under which eligible participants may be awarded various types of stock-based compensation, including stock options, restricted stock awards, and other stock-based and cash-based awards. On April 19, 2024 and May 8, 2025, the shareholders approved increases of 700,000 and 2,500,000 shares, respectively, to the authorized number of shares under the 2020 Plan, bringing the total authorized shares for issuance to 5,000,000. As of December 31, 2025, there were 1,825,729 shares of common stock reserved and available for issuance under the 2020 Plan. Any shares issued under the 2020 Plan may consist in whole or in part of authorized but unissued shares or treasury shares.

**Stock Options**

Stock options granted under the 2020 Plan must have an exercise price equal to at least the fair market value of the Company's common stock on the date of grant, become exercisable as established by the Board of Directors or the Compensation Committee, and expire no later than 10 years following the date of grant. The Company recognizes stock-based compensation expense associated with such stock option awards on a straight-line basis over the award's requisite service period, which is generally 3 years for employees and directors, or upon grant for certain consultants with immediate vesting (unless accelerated in connection with a change in control event under specified conditions as set forth in accordance with provisions of the 2020 Plan).

Stock options issued to the Company's employees, directors and consultants are summarized as follows for the year ended December 31, 2025:

	<u>Number of Options</u>	<u>Weighted Average Exercise Price</u>	<u>Weighted- Average Remaining Contractual Term (Years)</u>	<u>Aggregate Intrinsic Value</u>
Outstanding, December 31, 2024	464,940	\$ 16.24		
Granted	12,418	10.33		
Exercised	(294,104)	8.06		\$ 3,279,077
Forfeited	—	—		
Expired	(63,069)	60.98		
Outstanding, December 31, 2025	<u>120,185</u>	<u>\$ 12.16</u>	2.72	\$ 294,185
Vested and expected to vest, December 31, 2025	<u>120,185</u>	<u>\$ 12.16</u>	2.72	\$ 294,185
Options exercisable, December 31, 2025	<u>107,102</u>	<u>\$ 13.07</u>	2.00	\$ 185,911

Net proceeds received from the exercise of stock options are presented as financing activities in the Company's Statement of Cash Flows. During the year ended December 31, 2025, the Company received approximately \$2.4 million of net proceeds from the exercise of stock options. Net proceeds from the exercise of stock options in 2024 were not material.

The weighted-average grant-date fair value per share of the stock options granted for the years ended December 31, 2025 and 2024, was \$6.85 and \$2.91, respectively. The fair value was determined using the Black-Scholes pricing model, which requires the input of certain assumptions, including the expected term, expected stock price volatility, risk free interest rate, and expected dividend yield. The Company estimates the term over which participants are expected to hold their awards by using the simplified method allowed for "plain-vanilla" stock options. For expected volatility, the Company concluded that historical volatility using a simple average calculation over the award's expected holding term was appropriate, given insufficient or unreliable implied volatility estimates. For the risk-free interest rate, the Company used U.S. Treasury Note rates maturing at approximately the same time as the award's expected term. The expected dividend yield is zero, as the Company has not, and does not intend to, declare dividends in the foreseeable future.

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The following assumptions were used in the Black-Scholes pricing model to determine the fair value of stock options granted during the years ended December 31, 2025 and 2024:

	Year Ended December 31,	
	2025	2024
Expected volatility	109.24% - 117.44%	75.36%-92.89%
Risk free interest rate	3.80% - 3.95%	3.76%-4.54%
Dividend yield rate	—	—
Weighted average years	2-6 years	2 - 6 years
Closing price per share - common stock	\$9.42 - \$15.13	\$2.49 - \$2.62

An aggregate of 19,000 and 64,275 stock options, each with an aggregate grant date fair value of \$0.1 million, vested during the years ended December 31, 2025 and 2024, respectively. For each of the years ended December 31, 2025 and 2024, the Company recognized approximately \$0.1 million in stock-based compensation expense from stock options. As of December 31, 2025, total unrecognized compensation cost related to option awards was not material.

**Common Stock Awards**

From time to time, the Company grants equity in the form of common stock issuances to certain consultants and to members of its Board of Directors. The fair value of the shares issued is valued based on the closing market price of the Company's stock on the date of grant. Stock-based compensation is generally recognized over the respective service period (generally one year) on a straight-lined basis, or immediately for services already rendered.

During the years ended December 31, 2025 and 2024, the Company awarded 26,837 common shares and 89,914 common shares, respectively, to consultants at a weighted average fair value of \$13.41 per share and \$2.67 per share, respectively. These shares were issued and are not forfeitable. The aggregate grant date fair value of these awards was \$0.4 million and \$0.2 million during the years ended December 31, 2025 and 2024, respectively, but may in part relate to future services. During December 31, 2025 and 2024, the Company recognized \$0.3 million and \$0.1 million, respectively, in stock-based compensation expense related to these equity awards. As of December 31, 2025, approximately \$0.2 million was recorded under "Prepaid Expense and other current assets" on the Consolidated Balance Sheet and is expected to be recognized over a remaining service period of 0.7 years.

During the year ended December 31, 2024, the Company awarded 85,915 shares of common stock to its directors at a weighted average fair value of \$5.82 per share. These shares vested immediately, with an aggregate grant date fair value of \$0.5 million vested during the year ended December 31, 2024. During the year ended December 31, 2024, the Company recognized \$0.5 million in stock-based compensation related to these director equity awards. The shares awarded to the directors for the year ended December 31, 2024 were settled in January 2025 and reflected under the year ended December 31, 2025 in the Company's Statement of Stockholders' Equity. No shares of common stock were awarded to directors during the year ended December 31, 2025.

**Restricted Stock Awards**

A restricted stock award (RSA) is an award of the Company's common stock that is legally issued and outstanding. However, it is subject to time-based restrictions on transfer and unvested portions are generally subject to a risk of forfeiture if the award recipient ceases providing services to the Company prior to the lapse of the restrictions or, in the case of performance-based restricted stock awards (PSAs, as separately disclosed further below), if certain performance conditions are not met. Stock-based compensation expense related to RSAs is based on the closing market price of the Company's common stock on the date of grant. The Company recognizes stock-based compensation expense associated with RSAs with only service conditions on a straight-line basis over the award's requisite service period, which is generally 3 years (unless accelerated in connection with a change in control event under specified conditions as set forth in accordance with provisions of the 2020 Plan).

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The following summarizes the Company's RSA activity (limited to those with only service conditions) for the year ended December 31, 2025:

	Number of Shares	Weighted Average Grant Date Fair Value
Outstanding, December 31, 2024	781,864	\$ 5.19
Awards granted	623,931	\$ 14.75
Awards vested	(461,075)	\$ 5.52
Awards forfeited	—	—
Outstanding, December 31, 2025	<u>944,720</u>	<u>\$ 11.35</u>

The weighted-average grant-date fair value per share of RSAs granted for the years ended December 31, 2025 and 2024 was \$14.75 and \$5.82, respectively. During the year ended December 31, 2025, 461,075 RSAs with an aggregate fair value of \$6.5 million vested, and the Company withheld 149,025 shares to satisfy tax obligations, resulting in 312,050 net shares issued. During the year ended December 31, 2024, 253,425 RSAs with an aggregate fair value of \$1.4 million vested, and the Company withheld 100,514 shares to satisfy tax obligations, resulting in 152,911 net shares issued.

In March 2025, the Company accelerated the vesting of 70,710 RSAs in connection with a separation agreement with a former employee, resulting in approximately \$0.5 million of stock-based compensation expense, including \$0.3 million of incremental fair value. For the years ended December 31, 2025 and 2024, the Company recognized approximately \$3.4 million and \$1.4 million, respectively, in total stock-based compensation expense from RSAs. As of December 31, 2025, total unrecognized compensation cost related to RSAs was \$10.0 million, which is expected to be recognized over a remaining weighted-average vesting period of 2.6 years.

**Performance-based Restricted Stock Awards**

In 2025, the Company began granting PSAs under the 2020 Plan. A PSA is a restricted stock award that is subject to both service-based and performance-based vesting conditions. Stock-based compensation expense related to PSAs is based on the closing market price of the Company's common stock on the date of grant and recognized over the period in which the service-based and performance-based conditions are expected to be achieved.

The following summarizes the Company's PSA activity for the year ended December 31, 2025:

	Number of Shares	Weighted Average Grant Date Fair Value
Outstanding, December 31, 2024	—	—
Awards granted	1,146,226	\$ 13.40
Awards vested	—	—
Awards forfeited	—	—
Outstanding, December 31, 2025	<u>1,146,226</u>	<u>\$ 13.40</u>

The weighted-average grant-date fair value per share of PSAs granted for the year ended December 31, 2025 was \$13.40. During the year ended December 31, 2025, no PSAs vested. For the year ended December 31, 2025, the Company recognized approximately \$2.0 million in stock-based compensation expense from PSAs. As of December 31, 2025, total unrecognized compensation cost related to PSAs was \$7.2 million, which is expected to be recognized over a remaining weighted-average vesting period of 1.9 years.

In April 2025, the Company granted 300,000 PSAs (the April 2025 PSAs) to certain executives, key employees, and consultants with a related performance condition requiring the successful insertion of the Company's fuel material coupon samples into the Advanced Test Reactor (ATR) at INL by December 31, 2026 and certification by the Compensation Committee of the Board of Directors. The April 2025 PSAs are also subject to the participant's continuous service over a three-year period from the grant date. In November 2025, the Company announced the start of irradiation testing of the Company's enriched uranium-zirconium alloy fuel material coupon samples in the ATR at INL, marking the achievement of the April 2025 PSAs' performance condition. Therefore, stock-based compensation expense shall continue to be recorded over the remaining service period. During the year ended December 31, 2025, the Company recognized \$1.0 million in stock-based compensation expense related to the April 2025 PSAs.

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Since August 2025, the Company has also granted 846,226 PSAs to certain executives, directors, and employees, having three specific R&D fuel milestones relating to key technical development and commercialization objectives of the Company's R&D fuel program and one specific financial milestone. Vesting occurs in unequal tranches depending on which milestone is certified (the Tranche-based PSAs). Each milestone applies only to a separate portion of the Tranche-based PSAs. The respective portions of each tranche will vest upon the later of achievement and Board of Directors or Compensation Committee certification of the performance milestone and is subject to (i) the grantee's continued service through the certification date and (ii) the grantee having completed at least twelve months of continuous service with the Company as of the performance milestone achievement date. The performance period for achieving these milestones extends from the grant date to December 31, 2028. As of December 31, 2025, management concluded that only certain performance milestones were probable of achievement. During the year ended December 31, 2025, the Company recognized \$1.0 million in stock-based compensation expense related to those milestones under the Tranche-based PSAs that were deemed probable of achievement.

**Stock-Based Compensation Expense**

Total non-cash stock-based compensation expense recorded related to stock options, common stock awards, RSAs and PSAs for the years ended December 31, 2025 and 2024 are as follows (rounded in millions):

	Years Ended December 31,	
	2025	2024
Stock options	\$ 0.1	\$ 0.1
Common stock awards	0.3	0.6
RSAs	3.4	1.4
PSAs	2.0	-
Total stock-based compensation expense	<u>\$ 5.8</u>	<u>\$ 2.1</u>

The total stock-based compensation expense recorded in R&D and general and administrative expenses in the Company's consolidated statements of operations for the years ended December 31, 2025 and 2024 are as follows (rounded in millions):

	Years Ended December 31,	
	2025	2024
Research and development expenses	\$ 1.4	\$ 0.3
General and administrative expenses	4.4	1.8
Total stock-based compensation expense	<u>\$ 5.8</u>	<u>\$ 2.1</u>

**Note 9. Net Loss Per Share**

Basic net loss per share is computed using the weighted-average number of common shares outstanding during the reporting period, except that it does not include unvested common shares subject to repurchase or cancellation, such as the Company's RSAs and PSAs. The participants receiving RSAs have all rights as a shareholder with respect to these shares, whether vested or unvested, including, without limitation, rights to vote the shares, receive dividends, etc. The outstanding RSAs and PSAs are included in common stock issued and outstanding, but are considered contingently issuable in the calculation of weighted-average shares outstanding for purposes of calculating basic and diluted earnings per share.

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Diluted net loss per share is computed using the weighted-average number of common shares and, if dilutive, potential common shares outstanding during the period. Potential common shares consist of the incremental common shares issuable upon the exercise of stock options and unvested RSAs and PSAs. For the years ended December 31, 2025 and 2024, there was no difference in the number of shares used to calculate basic and diluted shares outstanding as the inclusion of the potentially dilutive securities would be antidilutive.

The outstanding securities in the table below have been excluded from the computation of diluted weighted shares outstanding for the years noted below, as they would have been anti-dilutive due to the Company's losses at December 31, 2025 and 2024 and also because the exercise price of certain of these outstanding securities was greater than the average closing price of the Company's common stock.

	Years Ended December 31,	
	2025	2024
Stock options outstanding	120,185	464,940
Restricted stock awards outstanding	944,720	781,864
Performance-based restricted stock awards outstanding	1,146,226	—
Total	<u>2,211,131</u>	<u>1,246,804</u>

### Note 10. Defined Contribution 401K Retirement Plan

The Company has an established 401k retirement plan for its employees. The Company matches employee contributions to the plan 100%, with immediate vesting. The Company contributed approximately \$0.3 million to the 401k plan for each of the years ended December 31, 2025 and 2024.

### Note 11. Segment Reporting

Operating segments are defined as components of an enterprise for which separate discrete information is available for evaluation by the chief operating decision maker, or decision-making group, in deciding how to allocate resources and assessing performance. The Company has one reportable business segment: nuclear fuel technology. This segment consists of the research and development and commercialization of its nuclear fuel. The Company's chief operating decision maker ("CODM") is the chief executive officer.

The accounting policies of the segment are the same as those described in the summary of significant accounting policies. The CODM assesses performance for the segment based on net loss as reported on the consolidated statement of operations. The Company expects to continue to incur significant expenses and operating losses for the foreseeable future as it advances its nuclear fuel through all the stages of its development and commercialization. In addition, the measure of segment assets is reported on the consolidated balance sheet as total assets.

The CODM uses segment net loss to allocate resources in the annual budget and forecasting process and uses that measure as a basis for evaluating progress toward R&D milestones. The CODM uses cash forecast models in deciding how to invest into the segment. Research and development expenses and general and administrative expenses are included in segment net loss and used to monitor budget versus actual results. Budgeted versus actual results are used in assessing both the performance of the segment and establishing management's incentive compensation.

The table below summarizes the significant expense categories regularly provided to the CODM for the years ended December 31, 2025 and 2024 (rounded in millions):

	Year Ended December 31,	
	2025	2024
Revenue	\$ —	\$ —
General and administrative	14.0	8.5
Research and development:		
INL Project (1)	2.9	1.7
IT expenses (2)	2.0	0.1
Allocated employee compensation and stock-based compensation	3.6	1.8
Other outside R&D expenses	0.7	1.0
Other segment item (3)	(3.6)	(1.3)
Net loss	<u>\$ (19.6)</u>	<u>\$ (11.8)</u>

- (1) These expenses relate to cost reimbursable work performed during the reporting period by BEA, the DOE's operating contractor for INL, to support the development of Lightbridge Fuel™.
- (2) During the year ended December 2025, the Company purchased a HPC specifically configured for advanced nuclear modeling to support the continued development of the Company's nuclear fuel technology. It also purchased nuclear simulation software and additional hardware and software management services in support of the HPC.
- (3) Other segment items include interest income from the Company's cash and cash equivalents.

### Note 12. Subsequent Events

#### ATM Sales

From January 1, 2026 to February 26, 2026, sales of common stock under the Jefferies ATM Agreement totaled 664,189 shares, which resulted in total net proceeds of approximately \$10.9 million.

**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

**LIGHTBRIDGE CORPORATION**

Date: February 26, 2026

By: /s/ Seth Grae  
Seth Grae  
Chief Executive Officer,  
President and Chairman

## POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Seth Grae and Larry Goldman, jointly and severally, his or her attorney-in-fact, with the power of substitution, for him or her in any and all capacities, to sign any amendments to this Annual Report on Form 10-K and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact, or his or her substitute or substitutes, may do or cause to be done by virtue hereof.

In accordance with the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities on the dates indicated.

<b>Signature</b>	<b>Title</b>	<b>Date</b>
<u>/s/ Seth Grae</u> Seth Grae	Chief Executive Officer, President, and Chairman (Principal Executive Officer)	February 26, 2026
<u>/s/ Larry Goldman</u> Larry Goldman	Chief Financial Officer, and Treasurer (Principal Financial and Accounting Officer)	February 26, 2026
<u>/s/ Sweta Chakraborty</u> Sweta Chakraborty	Director	February 26, 2026
<u>/s/ Jesse Funches</u> Jesse Funches	Director	February 26, 2026
<u>/s/ Sherri Goodman</u> Sherri Goodman	Director	February 26, 2026
<u>/s/ Daniel Magraw</u> Daniel B. Magraw	Director	February 26, 2026
<u>/s/ Mark Tobin</u> Mark Tobin	Director	February 26, 2026



# Lightbridge

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