

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

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934

Date of Report (Date of Earliest event Reported): June 23, 2010

LIGHTBRIDGE CORPORATION

(Exact name of small business issuer as specified in its charter)

Nevada	000-28535	91-1975651
(State or other jurisdiction of of incorporation)	(Commission File Number)	(I.R.S. Employer Identification No.)

1600 Tysons Boulevard, Suite 550, McLean, VA 22102
(Address of Principal Executive Offices)

571.730.1200
(Registrant's Telephone Number, Including Area Code)

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (*see* General Instruction A.2. below):

- ☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
 - ☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
 - ☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
 - ☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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Item 7.01. Regulation FD Disclosure.

On June 23, 2010, Lightbridge Corporation (the “Company”) made a slide presentation to various business and trade media outlets in Washington, DC. A copy of the Company’s presentation is furnished herewith as Exhibit 99.1.

The information contained in this current report on form 8-K and the exhibit attached hereto shall not be deemed to be “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), or otherwise subject to the liabilities of that section, nor shall such information or such exhibit be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as shall be expressly set forth by specific reference in such a filing. The information set forth in or exhibit to this form 8-K shall not be deemed an admission as to the materiality of any information in this report on form 8-K that is required to be disclosed solely to satisfy the requirements of Regulation FD.

Item 8.01. Other Events.

On June 23, 2010, the Company issued a press release announcing certain advances in the research and development activities related to the Company’s proprietary nuclear fuel technologies. A copy of the press release is furnished herewith as Exhibit 99.2.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

Exhibit <u>No.</u>	<u>Description</u>
99.1	Slide Presentation of Lightbridge Corporation
99.2	Press Release dated July 23, 2010

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

LIGHTBRIDGE CORPORATION

Date: June 23, 2010

By: /s/ Seth Grae

Seth Grae

President and Chief Executive Officer

EXHIBIT INDEX

Exhibit No.	<u>Description</u>
99.1	Slide Presentation of Lightbridge Corporation
99.2	Press Release dated July 23, 2010



Lightbridge Metallic Fuel Introduction

June 23, 2010

Safe Harbor Statement

This presentation includes or incorporates by reference statements that constitute forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Act of 1934, as amended. These statements relate to future events or to our future financial performance, and involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance, or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. These statements include, but are not limited to, information or assumptions about revenues, gross profit, expenses, income, capital and other expenditures, financing plans, capital structure, cash flow, liquidity, management's plans, goals and objectives for future operations and growth. In some cases, you can identify forward-looking statements by the use of words such as "may," "could," "expect," "intend," "plan," "seek," "anticipate," "believe," "estimate," "predict," "potential," "continue," or the negative of these terms or other comparable terminology. You should not place undue reliance on forward-looking statements since they involve known and unknown risks, uncertainties, and others factors which are, in some cases, beyond our control and which could materially affect actual results, levels of activity, performance or achievements. These risks and uncertainties include, but not limited to, the factors mentioned in the "Risk Factors" section of our Annual Report on Form 10-K for the year ended December 31, 2008, and other risks mentioned in our other reports filed with the Commission.

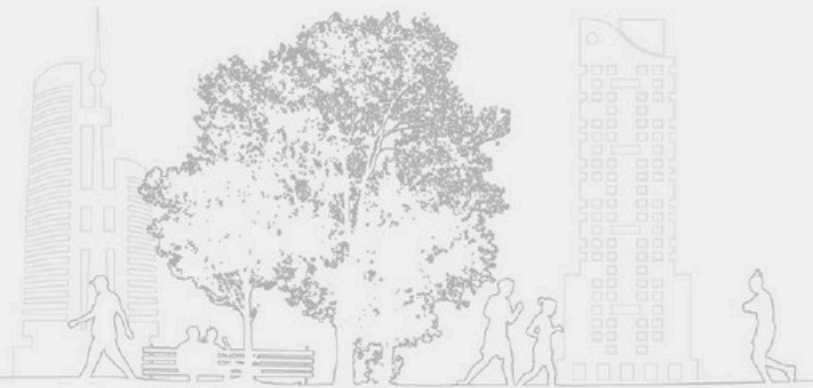
The forward-looking statements contained in this presentation are made only of this date, and Lightbridge Corporation is under no obligation to revise or update these forward-looking statements.

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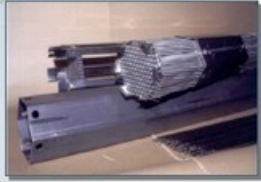


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Lightbridge Overview



Lightbridge at a Glance



NASDAQ Ticker:

LTBR

Headquarters:

McLean, VA

Branch Offices:

Abu Dhabi, UAE

Moscow, Russian Federation

London, UK

President and CEO:

Seth Grae

Shares Outstanding:

10 million



- Originally founded in 1992 as Radkowsky Thorium Power Corporation to develop thorium-based nuclear fuel technology invented by Dr. Alvin Radkowsky
 - Protégé of Dr. Edward Teller and Admiral Hyman G. Rickover
 - First Chief Scientist of the U.S. Naval Nuclear Propulsion Program
 - Team leader of first commercial nuclear power plant in the U.S.
 - Instrumental in creation of civilian nuclear energy industry – origins of GE and Westinghouse Nuclear
- Name change to Lightbridge Corporation in 2009, listed on the NASDAQ
- Currently engages in leading advisory roles in new nuclear power programs overseas, both on the generation and regulatory sides



Fuel Technology Development

Nuclear Fuel Development

- Leading developer of advanced nuclear fuel designs
- Addresses key nuclear concerns of proliferation, waste and supply



Advisory Services

Nuclear Generation

- Industry leading team
- Comprehensive advisory services for nuclear programs

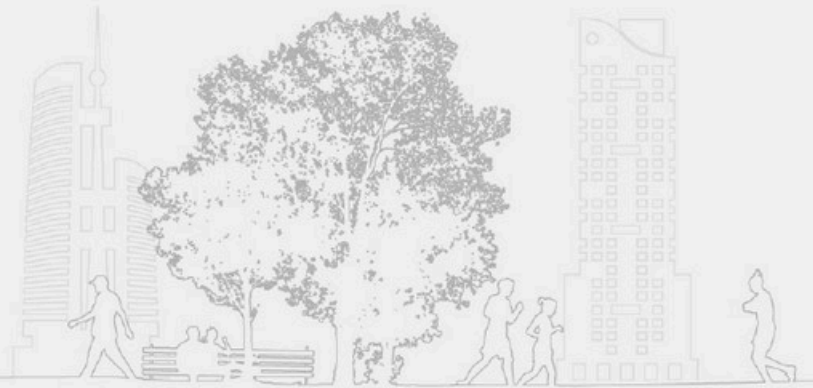


Nuclear Regulation

- Leading regulatory team
- Advisory services on design, development and management of nuclear energy programs according to highest int'l standards



Fuel Technology





- Lightbridge announces new all metal fuel assembly design:
 - **Increased power output per plant:** Up to 30% increase in power output per plant
 - **Reduced volume of used fuel per kWh:** Up to 23% reduction in used fuel volume per kWh of electricity generated
 - **Power uprate flexibility for existing plants:** Plant can choose optimal power uprate option from 5-10% to 10-20% to 20-30%
 - **Enhanced proliferation resistance:** No weapons-suitable material in used fuel
- On June 10, 2010, Idaho National Laboratory approved Lightbridge's joint proposal with Texas A&M University for irradiation testing of this type of metallic fuel in the Advanced Test Reactor National Scientific User Facility

Lightbridge Metallic Fuel History



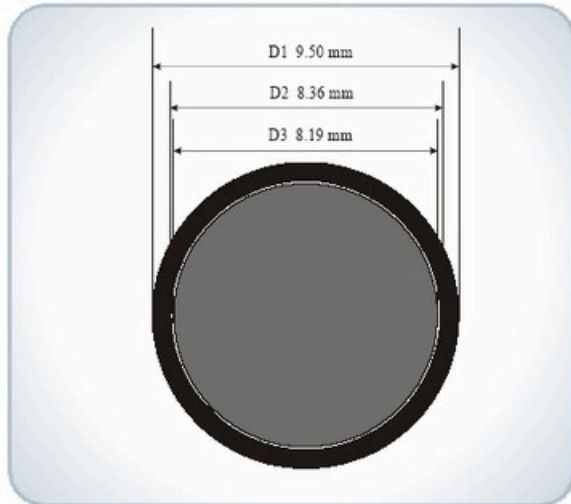
- Lightbridge's new metallic fuel design synergistically came out of the extensive fuel development and testing effort over the past 15 years on the seed fuel used in Lightbridge's seed-and-blanket fuel assembly
- There is extensive prior experience in the United States with metallic fuel for fast reactors that is applicable to the Lightbridge development program
- Lightbridge-designed all-metal fuel builds upon Russian icebreaker fuel
- Russian icebreaker reactors have successfully operated for over two decades on similar type of metallic fuel
- On June 10, 2010, Idaho National Laboratory approved a Texas A&M University-led joint proposal with Lightbridge for irradiation testing of this type of metallic fuel in the Advanced Test Reactor National Scientific User Facility

Key Attributes of Lightbridge's Metallic Fuel Technology Compared to Conventional UO_2 Fuel



- One-to-one replacement for conventional UO_2 fuel assemblies
- Higher achievable burnups and higher power density
- Lower fuel operating temperature to melting temperature ratio
- Improved fuel operation:
 - Improved thermal-hydraulic characteristics provide safe operation during normal operation and accident scenarios
 - Increased surface area and thermal conductivity allow lower fuel operating temperature at higher power density
 - Improved fuel stability at high burnups
 - Fuel forms a self-protective barrier in the event of cladding breach

Comparison to Standard Fuel Rod



Standard Cylindrical Oxide Fuel Rod Cross-Section



Lightbridge metallic fuel rod cross-section

Key Fuel Technology Development Personnel



Key US & Russian Personnel:

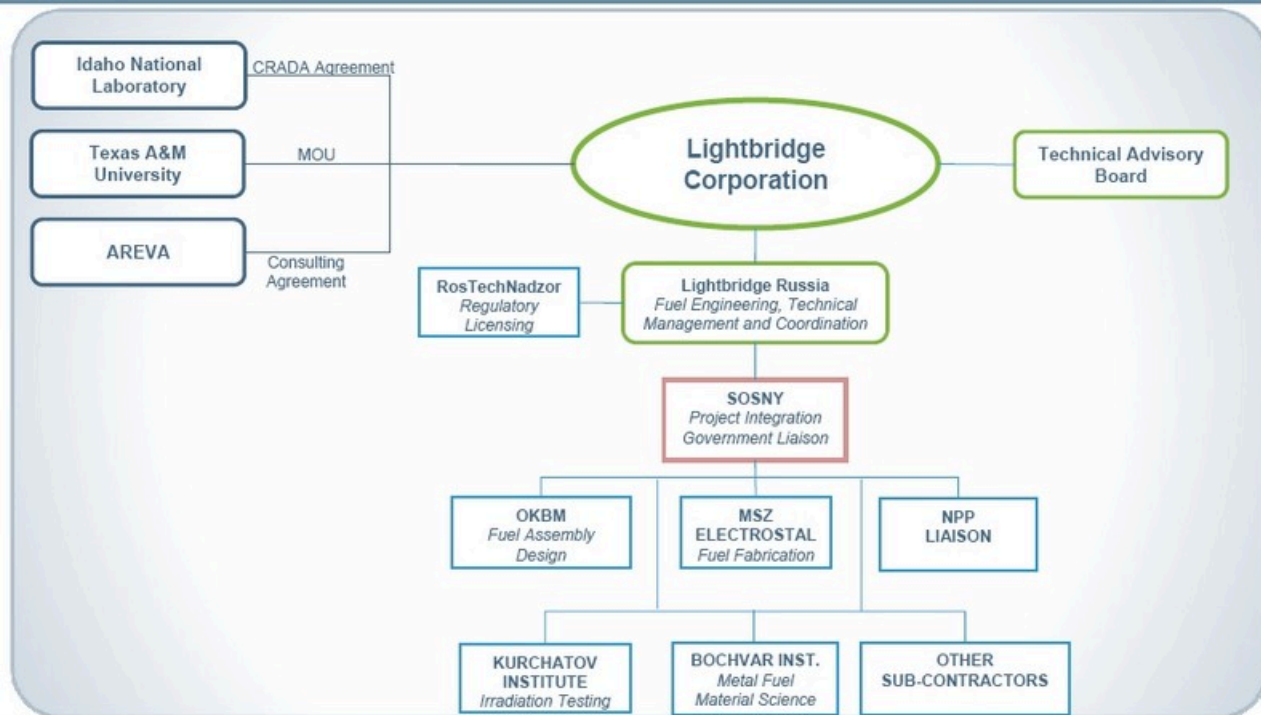
•**Andrey Mushakov, EVP, International Nuclear Ops** - Dr. Mushakov heads Lightbridge's Fuel Technology organization and is the primary liaison between Lightbridge and the Russian nuclear organizations. Expert in nuclear fuel cycle cost modeling and economics. Recipient of the prestigious Russian President's scholarship award that is given each year to the top 30 Russian students for their exceptional academic achievement.

•**Mike Montgomery, VP of Fuel Technology** – Mr. Montgomery provides technical oversight over R&D activities and serves as key technical advisor to the head of Fuel Technology organization. Prior to joining Lightbridge, Mr. Montgomery held fuel R&D management positions at Babcock & Wilcox, United Nuclear Corporation and GE.

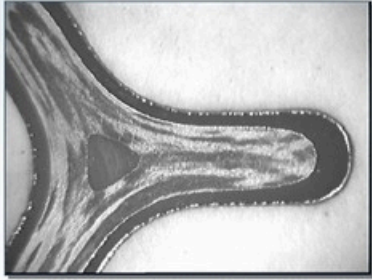
•**Aaron Totemeier, Director of Fuel Cycle Technology & Fuel Fabrication** – Mr. Totemeier provides technical oversight over R&D activities and is the lead project manager for the metal fuel irradiation testing program at Idaho National Laboratory.

•**Russian Nuclear Engineering Staff** - Moscow office is staffed by four PhD's with over 120 years of combined experience in the Russian nuclear program.

Lightbridge Fuel Technology Organization



Lightbridge Metal Fuel Photos



Lightbridge Corporation – Key Contacts



Lightbridge Key Contact Information

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FOR IMMEDIATE RELEASE

Lightbridge Invents New Transformational Nuclear Fuel Technology

Company's Proprietary All-Metal Fuel Assembly to Significantly Advance Expansion and Increase Competitiveness of Nuclear Power Versus Fossil Energy Sources for Carbon Free Electricity Generation

MCLEAN, VA. – June 23, 2010 - Lightbridge Corporation (NASDAQ: LTBR), the leading developer of non-proliferative nuclear fuel technology and provider of comprehensive advisory services for civil nuclear energy programs, today announced a major technological breakthrough that has the potential to transform the nuclear power industry. Lightbridge's new fuel technology based on a proprietary all-metal fuel assembly design could reduce both initial capital costs per megawatt and annual operating costs per kilowatt-hour of nuclear power, making it more competitive with other forms of electricity generation while contributing to a significant reduction of CO2 emissions.

It is expected that Lightbridge's all-metal fuel technology could be applied to currently operating or new light water reactors as well as small modular reactors which provide the same benefits as in larger commercial nuclear power plants. It is also highly synergistic with fast reactor fuel designs.

One of the key benefits of the Lightbridge-designed all-metal fuel technology is a potential 30% increase in power output per reactor compared to reactors using standard oxide nuclear fuel. This could translate into additional revenue for a 1,600-MWe light water reactor of up to \$250 million or more per year, or nearly \$16 billion over a 60-year expected lifetime of such reactors. This increased power output is expected to lower operating costs on a per kilowatt-hour basis and strengthen the economics of nuclear power versus other forms of power generation. In addition, currently operating light water reactors could also take advantage of this power uprate by switching to Lightbridge's all-metal fuel design.

The Lightbridge-designed all-metal fuel design would provide enhanced proliferation resistance and result in up to 23% less volume of used fuel per kilowatt-hour of electricity generated and is expected to have improved fuel operation compared to standard oxide fuel.

"When it comes to meeting the ever increasing global demand for power generation, innovation will be the key to a sustainable and safe solution for industry and governments worldwide," said Seth Grae CEO Lightbridge. "Our breakthrough all-metal fuel technology builds upon over a decade of research and development effort that has been underway on our seed-and-blanket fuel assembly design. This transformational fuel technology also helps advance our seed-and-blanket fuel assembly designs due to the synergies between the seed fuel rods and the fuel rods used in the all-metal fuel assembly design. We expect that our all-metal nuclear fuel technology will provide significant economic incentives to nuclear utilities that make it economically attractive to adopt this advanced fuel product."

As was previously announced, on June 10, 2010, Idaho National Laboratory approved a Texas A&M University-led joint proposal with Lightbridge for irradiation testing of this kind of metallic fuel in the Advanced Test Reactor. The fuel demonstration in a test reactor environment is a key stepping stone to demonstration and deployment of this fuel in commercial Western-type light water reactors.

Sam Vaidyanathan, a member of Lightbridge's Technical Advisory Board with more than 30 years of experience with the development, testing, and engineering of nuclear fuels, materials, and core components at major nuclear companies, added, "Simply stated this development is a very significant one for the nuclear power industry. For those of us who have been in this business for the last few decades, this development without a doubt is transformational. The tangible benefits are clear, measurable, and will likely have a substantive impact on the future of the nuclear power industry. We're very pleased and excited about this technological breakthrough."

Over the past decade, Lightbridge has completed significant development and testing relating to this all-metal fuel technology. In particular, Lightbridge has evaluated key operating parameters under various operating conditions. Some of the key parameters that were evaluated include: melting point, fission gas retention, surface heat flux, fuel swelling, moderator-to-fuel ratio, cladding corrosion, and others. The results of the evaluation performed to-date indicate that the fuel performance would meet applicable criteria for safe operation.

About Lightbridge Corporation

Lightbridge is a U.S. nuclear energy company based in McLean, VA. with operations in Abu Dhabi, Moscow and London. The Company develops non-proliferative nuclear fuel technology and provides comprehensive advisory services for established and emerging nuclear programs based on a philosophy of transparency, non-proliferation, safety and operational excellence. Lightbridge's breakthrough fuel technology is establishing new global standards for safe and clean nuclear power and leading the way towards a sustainable energy future. Lightbridge consultants provide integrated strategic advice and expertise across a range of disciplines including regulatory affairs, nuclear reactor procurement and deployment, reactor and fuel technology and international relations. It leverages those broad and integrated capabilities by offering their services to commercial entities and governments with a need to establish or expand nuclear industry capabilities and infrastructure.

Safe Harbor Statement

This press release may include certain statements that are not descriptions of historical facts, but are forward-looking statements. Forward-looking statements can be identified by the use of forward-looking terminology such as 'will,' 'believes,' 'expects' or similar expressions. Such information is based upon expectations of our management that were reasonable when made but may prove to be incorrect. All of such assumptions are inherently subject to uncertainties and contingencies beyond our control and based upon premises with respect to future business decisions, which are subject to change. We do not undertake to update the forward-looking statements contained in this press release. For a description of the risks and uncertainties that may cause actual results to differ from the forward-looking statements contained in this press release, see our most recent Annual Report on Form 10-K filed with the Securities and Exchange Commission ('SEC'), and our subsequent SEC filings. Copies of filings made with the SEC are available through the SEC's electronic data gathering analysis retrieval system at <http://www.sec.gov> ..
