LIGHTBRIDGE Corp
Form 10-K
February 22, 2012

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2011

OR

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

Commission file number: 000-28543

Lightbridge Corporation

(Exact name of registrant as specified in its charter)

Nevada	91-1975651
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

1600 Tysons Boulevard, Suite 550
Tysons Corner, Virginia 22102
(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: None

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

Title of each class
Common Stock, $0.001 par value

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

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[x]

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[x] No [ ]

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted 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 and post such files).

Yes[x] No [ ]

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of the registrant s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

[x]

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

Large accelerated filer [ ] Accelerated filer [ ] Non-accelerated filer [ ] Smaller reporting company [x]

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes [ ] No[x]

At June 30, 2011, 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, 2011) was $34,060,297.

At February 21, 2012, there were 12,427,220 shares of the registrant s common stock issued and outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant s Proxy Statement for the 2012 Annual Meeting of Stockholders are incorporated herein by reference in Part III of this Annual Report on Form 10-K to the extent stated herein. Such proxy statement will be filed with the Securities and Exchange Commission within 120 days of the registrant s fiscal year ended December 31, 2011.

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For the Fiscal Year Ended December 31, 2011
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FORWARD-LOOKING STATEMENTS

In addition to historical information, this report contains forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. We use words such as believe , expect , anticipate project , target , plan , optimistic , intend , aim , will or similar expressions which are intended to identify forw statements. Such statements include, among others, (1) those concerning market and business segment growth, demand and acceptance of our Nuclear Energy Consulting Services and Nuclear Fuel Technology Business, (2) any projections of sales, earnings, revenue, margins or other financial items, (3) any statements of the plans, strategies and objectives of management for future operations, (4) any statements regarding future economic conditions or performance, (5) uncertainties related to conducting business in foreign countries, as well as (6) all assumptions, expectations, predictions, intentions or beliefs about future events. You are cautioned that any such forward-looking statements are not guarantees of future performance and involve risks and uncertainties, 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 attract new customers,
- 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,
- general economic and business conditions in the local economies in which we regularly conduct business, which can affect demand for the Company s services,
- changes in laws, rules and regulations governing our business,
- development and utilization of our intellectual property,
- potential and contingent liabilities, and
- the risks identified in Item 1A. Risk Factors included herein.

All statements other than statements of historical fact are statements that could be deemed forward-looking statements. The Company assumes no obligation and does not intend to update these forward-looking statements, except as required by law.

PART I

Item 1. Description of Business

OVERVIEW ABOUT OUR TWO BUSINESS SEGMENTS

When used in this annual report, the terms Lightbridge , Company , we , our , and us refer to Lightbridge Corpo and its wholly-owned subsidiaries Thorium Power, Inc. (a Delaware corporation) and Lightbridge International Holding, LLC (a Delaware limited liability company).

Lightbridge is a leading nuclear fuel technology company and we participate in the nuclear power industry in the United States and internationally. Our mission is to be a world leader in the design and licensing of nuclear fuels that are economically attractive, proliferation resistant, and produce less waste than current generation fuels, and to provide world-class strategic advisory services to governments and utilities seeking to develop proliferation-resistant civil nuclear power programs.

Our business operations can be categorized into two segments: (1) nuclear fuel technology business segment - we are a developer of next generation nuclear fuel technology that has the potential to significantly increase the power output of commercial reactors, reducing the cost of generating nuclear energy and the amount of nuclear waste on a per-megawatt-hour basis and enhancing proliferation resistance of spent fuel, and (2) nuclear consulting business segment - we are a provider of nuclear power consulting and strategic advisory services to commercial and governmental entities worldwide.

Financial information about our business segments is included in Part II Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, and Note 12 Segment Information, of the Notes to the Consolidated Financial Statements, included in Item 8, Financial Statements of this Annual Report on Form 10-K.

NUCLEAR FUEL TECHNOLOGY BUSINESS SEGMENT

Since the founding of our company in 1992, we have been engaged in the design and development of proprietary innovative nuclear fuels. This effort has led us to the development of a metallic fuel rod design that is at the heart of each of our nuclear fuel products.

We are currently focusing our development efforts on three primary fuel product lines: (1) all-uranium seed and blanket fuel for existing plants, (2) all-metal fuel (i.e., non-oxide fuel) for new build reactors, and (3) thorium-based seed and blanket fuel for both existing and new build reactors. Each of the fuel designs utilizes our metallic fuel rod technology, and each design advances our mission to improve the safety, proliferation resistance, performance, and cost competitiveness of nuclear power generation.

In response to the challenges associated with conventional oxide fuels, our innovative, proprietary metallic fuels are capable of significantly higher burnup and power density compared to conventional oxide fuels. The fuel in a nuclear reactor generates heat energy. That heat is then converted into electricity that is sold. Burnup is the total amount of electricity generated per unit mass of nuclear fuel. Burnup is largely a function of the power density of a nuclear fuel. Power density is the amount of heat power generated per unit volume of nuclear fuel. Conventional oxide fuel used in existing commercial reactors is approaching the limits of its burnup and power density capability. As a result, further optimization to increase power output from the same core size and improve the economics of nuclear power generation using conventional oxide fuel technologies may be limited. As the industry prepares to meet the increasing global demand for electricity production, longer operating cycles and higher reactor power outputs will become a much sought-after solution for the current and future reactor fleet.

Our proprietary nuclear fuel designs have the potential to significantly enhance the nuclear power industry s economics and increase power output by: 1) extending the fuel cycle length from 18 to 24 months while simultaneously providing an increase in power output of up to 17% in existing pressurized water reactors (including Westinghouse 4-loop reactors, which are currently limited to an 18-month fuel cycle); 2) enabling increased reactor power output (up to 30% increase) without changing the core size in new build pressurized water reactors (PWRs); and 3) addressing the back-end of fuel cycle concerns related to the volume of used fuel per kilowatt-hour as well as proliferation of weapons-usable materials. For uprates up to 10%, only relatively minor plant modifications would be required. Hence, we believe that nuclear utilities with existing reactor fleets may find it economically attractive to initially start with a 10% power uprate fuel variant and switch to a 17% power uprate fuel variant at the time when steam generators and other expensive plant equipment are near the end of their service life and have to be replaced. In this case, nuclear utilities would only have to incur the incremental capital cost beyond and above the cost of standard plant equipment to accommodate a 17% power uprate in their existing PWR plants. There are significant technology synergies among our primary fuel products due to utilization of our proprietary metallic fuel rod technology that is inherent in all of our fuel designs. As a result, full-scale demonstration and qualification of the metallic fuel rod technology simultaneously advances all of our fuel product families currently in development. We believe our fuel designs will allow current and new build nuclear reactors to safely increase power production and reduce the initial capital investment and operations and maintenance costs on a per kilowatt-hour basis. In addition to the projected electricity production cost savings, we believe that our technology can result in utilities or countries needing to deploy fewer new reactors to generate the same amount of electricity. For utilities or countries that already have operating reactors, our technology could be utilized to increase the power output of those reactors as opposed to building new reactors. Further, we believe that the fuel fabrication or manufacturing process for this new fuel design is simpler, which we expect could lower fuel fabrication costs.

CONSULTING BUSINESS SEGMENT

We are engaged in the business of assisting commercial and governmental entities globally with developing and expanding their nuclear industry capabilities and infrastructure. We provide integrated strategic advice across a range of expertise areas including, for example, regulatory development, nuclear reactor site selection, procurement and deployment, reactor and fuel technology, international relations and regulatory affairs.

OUR BUSINESS STRATEGY NUCLEAR FUEL TECHNOLOGY BUSINESS SEGMENT

We intend to license our intellectual property for our nuclear fuel designs to existing major nuclear fuel fabricators that own and operate fuel fabrication facilities and have long-term fuel supply contracts with nuclear power plants. We believe that this partnering strategy will allow us to take advantage of the existing customer base of such major fuel fabricators, thus enabling our fuel products to achieve higher market penetration rates in a relatively short period of time. We are currently pursuing a research, development, and demonstration strategy aimed at generating sufficient interest and confidence in our fuel technology among major fuel fabricators with a view of entering into a commercial arrangement with one or more of them within the next 2-3 years. We believe that there may be opportunities for manufacturing technology licenses or manufacturing support fees from fuel fabricators.

We anticipate that the following factors will play a key role in structuring a technology license agreement with a major fuel supplier:

- Sharing of future fuel development costs;
- An upfront technology access fee payable to us;
- Ongoing royalty fees from future fuel product sales payable to us based on a cost sharing formula; and
- Potential training and consulting payments payable to us.

Our commercialization efforts are based on a multi-prong approach that we believe will increase the likelihood of success:

1. Approach major fuel fabricators (push marketing strategy to our direct licensing customers)

2. Early outreach to nuclear power utilities (pull marketing strategy to the customers of the fuel fabricators)

3. Generate public, industry and government awareness in our fuel technologies

We are putting a significant amount of effort into reaching out to major fuel fabricators. Our ultimate commercial success depends on how soon and what kind of a commercial arrangement we are able to negotiate with one or more of these potential partners. As a result, building relationships with these potential partners and keeping them up-to-date on our fuel technology progress through ongoing dialogue are the essential elements of our commercialization strategy.

KEY FUEL DEVELOPMENTS IN 2011

In 2010, we began working with Texas A&M University and Idaho National Laboratory, or INL, on the continued development of our technology. Following an extensive independent technical evaluation by INL of the Texas A&M University-led joint proposal for capsule irradiation testing of our metallic fuel samples in the Advanced Test Reactor, or ATR, at INL, the US Department of Energy, or DOE, approved the project in June 2010. During the second quarter of 2011, we were informed by INL that we may be able to skip capsule irradiation testing of our metallic fuel samples and proceed with direct fuel-coolant contact irradiation, which is a critical path item in our fuel development program schedule. In the third quarter of 2011, the team completed a preliminary scoping study confirming, in principle, the feasibility of performing irradiation of our metallic fuel samples in the ATR. As a result, INL has now begun performing a more detailed technical design of the experiment and specific operating conditions. This detailed analysis will provide input into a safety analysis report, which is a key prerequisite for the irradiation experiment. We expect the safety analysis to be completed in 2012.

We have made considerable progress toward execution of our technology development roadmap in 2011, including the following developments:

- Established a Nuclear Utility Fuel Advisory Board, or NUF Advisory Board, the objective and purpose of which is to further strengthen our dialogue with global nuclear utilities, consistent with U.S. export control laws, and provide their input into our nuclear fuel development and commercialization efforts. The initial NUF Advisory Board members include top nuclear fuel managers from Exelon, Duke Energy, Dominion, and Southern Company.
- Began negotiations with a US fuel fabrication partner relating to metal fuel fabrication process development and demonstration work in the United States. We are hopeful for negotiations to conclude in 2012.
- Signed a memorandum of understanding relating to loop irradiation testing and collaboration in other areas with the Research Institute of Atomic Reactors, or RIAR, in Dimitrovgrad, Russia, which houses the MIR loop-type research reactor. We expect to begin commercial negotiations with RIAR relating to loop irradiation in the second half of 2012.
- Completed thermal-hydraulic and vibration testing on a VVER seed and blanket fuel assembly mockup at Russian test facilities. In the third quarter of 2011, we completed our preliminary analysis of a significant amount of data that had been generated in that experiment. Our preliminary analysis indicates that the results are extremely positive and reaffirm the thermal-hydraulic performance advantages of our seed-and- blanket fuel assembly compared to standard fuel assembly. Results of this testing will be used to develop analytical models necessary for further safety analyses of our fuel.

- Submitted a technical article for publication in a peer-reviewed journal. We will provide an update once the article is published.
- Issued a white paper on the safety attributes of our metallic fuel technology which has been posted to our corporate website. The main conclusion of the white paper is that the inherent characteristics of our metal fuel technology, particularly the increased heat transfer capability resulting in lower fuel operating temperature and improved cladding integrity due to a metallurgical bond between the fuel and the cladding, are expected to contribute to increased safety margins during normal reactor operation and certain off- normal events.
- Granted a Eurasian patent which covers our thorium-based seed and blanket fuel assembly design for Russian-type VVER-1000 reactors. Countries that are signatories to the Eurasian Patent Convention include Russia, Kazakhstan, Belarus, Azerbaijan, Armenia, Turkmenistan, Tajikistan, Kyrgyz Republic, and Republic of Moldova. Of these countries, Russia and Kazakhstan are of key importance to Lightbridge and will be our top priority as far as patent maintenance is concerned. The new patent extends patent protection for our thorium-based seed and blanket fuel assembly design to 2027, which is well beyond the 2014-2015 when the original patents covering that fuel design are set to expire.
- Received a notice of allowance from the U.S. Patent and Trademark Office for a patent application covering a locking mechanism for our seed-and-blanket fuel assembly. The patent will issue on February 14, 2012 (US Patent No. 8,116,423) and will provide protection for the locking mechanism invention in the United States from its issuance until December 2028. We have also filed counterpart foreign patent applications for this invention, and will file an additional international PCT patent application for an improved locking mechanism in early 2012.
- Filed an international patent application under the Patent Cooperation Treaty for Lightbridge s all-uranium seed and blanket and all-metal fuel technologies as well as national phase patent applications in key countries based on the 2008 Patent Cooperation Treaty application that covers the thorium-based seed and blanket fuel technology for Western-type pressurized water reactors. Once granted, the new patents would extend patent protection for these fuel designs to 2028-2030.

NUCLEAR FUEL TECHNOLOGY BUSINESS SEGMENT OPERATIONS

Development of Our Three Nuclear Fuel Product Lines

The first nuclear fuel product line includes an all-uranium seed and blanket fuel that is particularly suitable for existing PWRs, although it can also be utilized in new build PWRs. We are developing two variants of this fuel technology for PWR reactors: (1) an all-uranium seed-and-blanket fuel for a power uprate up to 10% and a 24-month fuel cycle, and (2) an all-uranium seed-and-blanket fuel for a power uprate up to 17%, with a possibility of extending the fuel cycle length to 24 months. A power uprate, coupled with a 24-month fuel cycle, could be a particularly attractive option for existing Westinghouse-type 4-loop PWRs that are currently limited to an 18-month fuel cycle due to fuel performance constraints attributed to conventional uranium oxide fuels. For uprates up to 10%, only relatively minor modifications would be required. To accommodate power uprates between 10 and 17%, a number of plant modifications would be required, including upgrades to the primary and secondary systems.

The second nuclear fuel product line includes our all-metal fuel, which we expect will be able to provide up to a 30% increase in power output of new build PWRs, such as Westinghouse (U.S.)-designed AP-1000, AREVA (French)-designed EPR, Mitsubishi (Japanese)-designed APWR, KEPCO (Korean)-designed APR-1400 and others. We believe that this fuel technology may be able to extend the fuel cycle length up to 24 months. To accommodate up to a 30% power uprate, a number of plant design modifications would be required, including upgrades to the primary and secondary systems, as well as potential modifications to the reactor containment volume. These modifications would not likely be practical in existing plants, though such modifications could be more easily implemented for new build units prior to the start of construction.

The third nuclear fuel product line includes our thorium-based seed-and-blanket fuel, which we believe has several major benefits, including: (1) enhanced proliferation resistance of spent fuel, (2) significantly reduced volume (up to 40% reduction) and weight (up to 90% reduction) of spent fuel, and (3) reduced natural uranium requirements (up to 10% reduction) in a once-through fuel cycle. These benefits can be particularly appealing to those markets that either have significant domestic thorium reserves but lack natural uranium resources, or are concerned with the cost of long-term storage as a used fuel management option. Further, the economics of our thorium-based fuel can become more attractive as the price of natural uranium increases due to the projected reduction in natural uranium requirements per megawatt-day. Finally, the enhanced proliferation resistance aspects of the fuel can appeal to markets that put key emphasis on non-proliferation.

The development of our power uprate product lines provides diversity to our fuel offerings and synergistically advances the development of our thorium-based fuel product line. Research and development and related expenses paid by us totaled approximately $2.4 million and $1.6 million for the years ended December 31, 2011 and 2010, respectively.

COMPETITION, CURRENT STATUS AND CHALLENGES OF OUR NUCLEAR FUEL RESEARCH AND DEVELOPMENT WORK

COMPETITION

To our knowledge, our nuclear fuel development project is the only commercially viable program which could achieve the goal of increasing, in a safe and economically attractive way, power output by up to 17% in existing PWRs (with a possibility of simultaneously extending the fuel cycle length to 24 months) and up to 30% in new build PWRs. Due to the long-term product development timelines, significant nuclear regulatory requirements, and our comprehensive patent portfolio, we believe that the barriers to entry will likely prevent the emergence of a viable competitor in the foreseeable future.

Competition with respect to the design of commercially viable nuclear fuel products is limited to conventional uranium oxide fuels, which, as discussed above, are reaching the limits in terms of their capability to provide increased power output or longer fuel cycles. We believe that the industry needs fuel products that can provide these benefits. While we believe conventional uranium oxide fuel may be capable of achieving power uprates of up to 10% in existing PWRs, doing so would require uranium-235 enrichment levels above 5%, higher reload batch sizes, or a combination thereof. Fuel manufacturers may be reluctant to incur a significant upfront capital investment required to modify and re-license their existing manufacturing facilities for uranium enrichment levels above 5% as the potential economic upside is limited to a 10% power uprate with conventional uranium oxide fuel. At the same time, fuel manufacturers may have more flexibility to incorporate relevant processes and procedures in the design of a new fuel manufacturing facility necessary for fabrication of our metallic fuel to ensure it can be licensed for operation with uranium enrichment levels above 5% required for our fuel designs. The potential economic upside with our fuel design that could further justify the fuel manufacturer s upfront investment could be as high as a 17% power uprate in existing PWRs and a 30% power uprate in new build PWRs. The alternative route of increasing reload batch sizes while keeping uranium enrichment levels below 5% for power uprates up to 10% using conventional uranium oxide fuel raises the cost of each fuel reload, resulting in a significant fuel cycle cost penalty to the nuclear utility. The cost penalty could have a dramatic adverse impact on the economics of existing plants whose original capital cost has already been written off (e.g., most of US nuclear power plants fall into this category). Due to poor economics, nuclear utilities may be reluctant to embrace that route as a way to increase power output by up to 10%, which could lead to greater opportunities for use of Lightbridge s nuclear fuel technology.

There are several major companies that collectively fabricate a large majority of the fuel used in the world s commercial nuclear power plants, including both Western-type PWRs and boiling water reactors, or BWRs, as well as Russian-type VVERs. To the extent that these companies currently own and may in the future develop new nuclear fuel designs that can be used in the same types of reactors as those targeted by us, they can be viewed as potential

competitors. However, our commercialization strategy is not to compete with these major fuel fabricators, but rather to partner with one or more of these companies through technology license arrangements. For this reason, we consider these companies as potential partners or licensees as opposed to our competitors.

CURRENT STATUS

Research and Development Project Schedule

We currently anticipate that we, working in collaboration with our development partners/vendors, will be able to complete the demonstration of the full-scale fabrication process for our metallic fuel rods by mid-2013, perform in-reactor and out-of-reactor experiments and develop analytical models for our metallic fuel technology required for regulatory licensing, and begin lead test assembly, or LTA, operation in a full-size commercial light water reactor, which involves testing a limited number of our full-scale fuel assemblies in the core of a commercial nuclear power plant over three 18-month cycles, by the end of 2017. Accordingly, based on our current estimated schedule, final qualification of our fuel for 10-17% power uprates in a commercial reactor is expected in 2021 (at the end of three 18-month cycles of LTA operation). We expect final demonstration of the all-metal fuel design for power uprates of up to 30% in new-build plants and thorium-based seed and blanket fuel assembly design to occur approximately 2-3 years thereafter.

Government Approvals and Relationships with Critical Development Partners/Vendors

The sales and marketing of our services and 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 services or technology or collaborate with foreign entities. If authorizations are required and not granted, our international business plans could be materially affected. Furthermore, 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.

In July 2011, we submitted to the DOE a Part 810 export authorization request relating to our proposed collaboration with the Russian State Atomic Energy Corporation Rosatom , or Rosatom, and its subsidiary companies. DOE is currently finalizing its review of our application. Obtaining this US export authorization is a necessary prerequisite in order for us to be able to enter into commercial agreements with Rosatom and its entities relating to the planned irradiation testing at the MIR research reactor in Dimitrovgrad, Russia and the ATR test reactor at Idaho National Laboratory.

Some of our planned critical path research, development, and demonstration activities to be performed by Russian entities under contract with us will require formal authorization from Rosatom, which owns those entities and is the main Russian government agency that oversees Russia s civil nuclear power industry. Rosatom requires that all collaborative projects with U.S. entities fall into one of the collaboration areas outlined in a government-to-government agreement that was entered into by and between the United States and Russia soon after the 123 Agreement on peaceful nuclear cooperation between the two countries came into force in late 2010. Rosatom requires that DOE issue an official endorsement of each commercial project proposed for collaboration between a U.S. entity and Rosatom. Without such DOE endorsement and designation of the project by DOE as consistent with one of the collaboration areas outlined in the above-mentioned government-to-government agreement, Rosatom is unlikely to cooperate and participate in the proposed project. Lightbridge has recently received a letter from DOE confirming that our proposed collaborative projects with Rosatom fall under the 123 agreement, which we understand has satisfied the Rosatom requirements. Until commercial negotiations with Rosatom and/or its subsidiary companies are concluded and a legally binding agreement is entered into between the parties, a risk of development program schedule delays or a lack of sufficient interest from Rosatom or its entities in proposed collaboration still remains. We believe that we will continue to be able to conduct our operations in this regulatory environment and obtain the necessary approvals.

No safety regulatory approval is required to design nuclear fuels, although certain technology transfers may be subject to national and international export controls. The testing, fabrication and use of nuclear fuels by our future partners, licensees and nuclear power generators, are 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 certain necessary regulatory approvals will lie with our research and development contractors that conduct such tests and experiments. Nuclear fuel fabricators, which will ultimately fabricate fuel using our technology under commercial licenses from us, are similarly regulated. 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.

Separately, some of planned critical path research, development, and demonstration activities require access to certain highly specialized technical expertise and licensed facilities where such development and demonstration work can be carried out. There are a limited number of commercial entities or government research laboratories in the world that possess this kind of technical expertise and have an operating licensed facility, including a limited number in the United States. We are currently focusing our fuel development efforts with both Russian and domestic development partners/vendors. A domestic partner/vendor may eliminate the need to seek a separate US export license authorization for this work. If we proceed with a US national laboratory, any agreement will be subject to DOE s review and approval. Any delay in such approval of our proposed agreement by DOE could cause program schedule slippage. If we proceed with a US commercial entity, some aspects of the development and demonstration work may still require certain US regulatory approvals (e.g., 19.7 percent enriched uranium). Any delay in such regulatory approvals could have an adverse impact on our program schedule and future financial results.

CHALLENGES

The LTA operation will have to be conducted in collaboration with a major fuel fabricator that can fabricate the LTAs and a nuclear utility that can accept and put the LTAs in a commercial reactor for irradiation. The fabricator and the utility will be primarily responsible for securing necessary regulatory licensing approvals for the LTA operation. To this end, in November 2011, we established our NUF Advisory Board to further strengthen dialogue with global nuclear utilities, consistent with U.S. export control laws, and provide their input into our nuclear fuel development and commercialization efforts. The initial NUF Advisory Board members include top nuclear fuel managers from Exelon, Duke Energy, Dominion, and Southern Company. Separately, we are also pursuing discussions with major fuel fabricators relating to collaboration on our nuclear fuel designs.

Various industry efforts currently underway to meet the growing demand for more electric power output from the same reactor core size, and to create a more efficient fuel cycle, with improved safety, reliability and extended fuel cycle length, are largely focused on stretching the limits of conventional oxide fuels. While this strategy has worked well in the past, now almost all of the available fuel performance margins with conventional oxide fuels have been utilized. Due to the risk-averse nature of the major industry players and a significant capital investment made in existing infrastructure supporting conventional oxide fuels, major fuel vendors are reluctant to take on early risks associated with fuel development programs on next generation nuclear fuel designs. We believe that we are well positioned to take advantage of this market opportunity by developing next generation fuel designs that can meet the needs of the power generators.

As discussed above, our commercialization strategy is not to compete with the major fuel fabricators that collectively fabricate a large majority of the fuel used in the world s nuclear power plants. Instead, we are pursuing a commercialization strategy aimed at generating interest in our nuclear fuel designs from one or more of these major nuclear fuel fabricators that could lead to a technology licensing or other teaming arrangement within the next two to three years. Our ultimate commercial success depends on the timing and the terms of any commercial arrangements we are able to negotiate with one or more of these potential partner companies.

We recognize that a successful commercialization strategy is highly dependent upon the interest in our nuclear fuel designs from nuclear power plants, which are the ultimate fuel product users. If we are successful in generating sufficient interest from one or more nuclear power plants in evaluating our fuel technology for potential use, we believe it would make it easier to find a major fuel fabricator that would be willing to partner with us in order to offer our fuel products to the nuclear power generator. The establishment of our NUF Advisory Board, consisting of top fuel managers of major nuclear utilities, assists us in obtaining their input and meeting their nuclear fuel needs.

It is also important for us to generate public, industry and government awareness of our nuclear fuel technology, through product demonstration which could help build confidence in our technology and increase credibility among fuel fabricators and nuclear power plants. We are pursuing a public outreach effort by seeking publication of technical papers highlighting progress on our fuel designs in peer-reviewed technical journals and presentations at major international nuclear conferences.

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 fuel technology. If prices or production costs of non-nuclear energy increase, there may be increased demand for the deployment of new build nuclear power plants.

SOURCES AND AVAILABILITY OF RAW MATERIALS

Our fuel technology development business is a licensing business, as we intend to license our fuel technology to fuel fabricators. We do not plan to utilize any raw materials in the conduct of our operations. The fuel fabricators which will ultimately fabricate our fuel products will require zirconium, uranium and/or thorium, and additional raw materials that are required for the production of nuclear fuel assemblies that go into the reactor core.

Uranium and zirconium are available to the fuel fabricators from various suppliers at market-driven prices. The current demand for thorium is very low. Thorium is sometimes used in government flares, camping lantern wicks and in other products in small quantities. If thorium-based fuels become commercially accepted in the nuclear power industry, there would be a significant increase in the demand for thorium. According to the International Atomic Energy Agency (IAEA), thorium is over three times more abundant in nature than uranium, and is found in large quantities in monazite sands in many countries, including, Australia, India, the United States of America, and China.

OVERVIEW OF THE NUCLEAR POWER INDUSTRY

Potential Market

Presently, nuclear power provides approximately 7% of the world s energy, including approximately 14% of the world s electricity. According to the World Nuclear Association, as of August 2011, there were approximately 433 nuclear power plants in operation worldwide, mostly light water reactors, with the most common types being PWRs, BWRs, and VVER reactors (a Russian equivalent of PWRs). Nuclear power provides a non-fossil, low-carbon energy solution that can meet baseload electricity needs.

A majority of currently operating commercial reactors around the world were built over 20 years ago. Many of these reactors have a licensed operating life of 40 years. Unless there is a significant increase in new build activity over the next two decades, it is possible that the majority of reactors that will be in operation in 2030 are already in use today.

Due to substantial project risks and the significant upfront capital commitment associated with new build, many nuclear utilities in deregulated markets choose to optimize their existing generating capacity through increasing their capacity utilization factor, power uprates and plant life extensions. We expect this trend to continue, particularly in the mature nuclear markets with significant existing nuclear capacity. We expect most of the new build activity to occur in emerging nuclear markets.

Of the world s existing reactors currently in operation, PWRs (including Russian-designed VVERs) account for more than half of the net operating capacity, with BWRs being second accounting for another 20%.

Of the nuclear reactors currently under construction, over 80% are either PWRs or VVERs with a rated power output of 1,000 MWe or greater.

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Utilities have utilized power uprates since the 1970s as a way to increase the power output of their nuclear plants. Typically more highly enriched uranium fuel and/or more fresh fuel is needed to increase power output. This enables the reactor to produce more thermal energy and therefore more steam to drive the turbine generator and produce electricity. In order to accomplish this, components such as pipes, valves, pumps, heat exchangers, electrical transformers and generators, must be able to accommodate the conditions that would exist at the higher power level. For example, a higher power level usually involves higher steam and water flow through the systems used to convert thermal power into electric power. These systems must be capable of accommodating the higher flows.

In some instances, utilities will modify and/or replace components in order to accommodate a higher power level. Technical analyses must demonstrate that the proposed plant configuration remains safe and that measures to protect the health and safety of the public continue to be effective. These analyses, which span many technical disciplines, are reviewed and approved by the regulator before a power uprate can be performed.

The utility will conduct an economic analysis to evaluate the potential financial benefits of the proposed uprate. Typically, power uprates enable utilities to increase their generating capacity at a cost significantly less than the cost of building a new plant. In many cases, power uprates can be completed in months as opposed to the several years required for new build, thus the invested dollars begin producing revenue shortly after they are spent. Power uprates, therefore, represent an efficient use of capital.

Utilities have embraced power uprates as a cost effective way to increase their generation capacity. While the efforts thus far have occurred mostly in the United States, there is a large, untapped worldwide market for power uprates. There are about 150 PWRs operating outside the United States. If all of these plants had their power increased by 10% the generating capacity would increase by about 14,500 MW. This is equivalent to about 12 new 1,200 MW reactors. The incentive to proceed with power uprates at the 10% level is significant since there are few changes required to implement the power uprate and the changes are relatively inexpensive. The limiting factor at the moment is the fuel. We believe that our metallic fuel rod technology enables the 10% increase in power along with extending the fuel cycle to 24 months, and can be used to support even greater power increases up to 30%.

Most nuclear power plants originally had a licensed lifetime of 25 to 40 years, but engineering assessments have established that many can operate much longer. In the U.S. approximately 60 reactors have been granted license extensions to continue operating for a total of 60 years. Most of the plants that have not already requested a license extension are expected to apply in the near future. A license extension at about the 30-year mark justifies additional capital expenditure for the replacement of worn equipment and outdated control systems.

The technical and economic feasibility of replacing major reactor components, such as steam generators in PWRs, has been demonstrated. The increased revenue generated from extending the lifetime of existing plants is attractive to utilities, especially in view of the difficulties in obtaining public acceptance of constructing replacement nuclear capacity.

The loss of generating capacity by old plants being retired is balanced by new plants coming on line. There are no firm projections for retirements over the next two decades, however the World Nuclear Association (WNA), estimates that at least 60 of those now operating will close by 2030, most being small plants. Using conservative assumptions about license renewal, the 2009 WNA Market Report anticipates that approximately 143 reactors will be decommissioned by 2030.

Almost all of the new build reactor designs are either Generation III or Generation III+ type reactors. The primary difference from second-generation designs is that many incorporate passive or inherent safety features which require no active controls or operational intervention to avoid accidents in the event of malfunction. Many of these passive systems rely on gravity, natural convection or resistance to high temperatures.

Influence of Natural Gas Prices in the United States

Natural gas is currently the cheapest option for power generation, which is causing some utilities to abandon plans for nuclear and wind power sources. The abundance of natural gas may adversely affect the markets for nuclear power uprates.

Influence of the Accident at Fukushima, Japan and New International Nuclear Build

The major nuclear accident at the Fukushima nuclear power plant in Japan following the massive tsunami and strong earthquake that occurred 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 and an early shut down of existing power plants in select countries.

Our Target Market

Presently, we are targeting Western-type PWR reactors with a net capacity of 900 MWe or more that will be under 40 years of age by 2021. These reactors represent the largest market segment, both in terms of operating reactors and new build units under construction or planned. Our technology is applicable to many more reactors than those included in our target market. The current target market was selected as we believe that it represents the largest commercial market segment with the highest potential for return on investment in the near-term.

Based on the WNA s reactor database, we estimate that the current size of our target market is approximately 148 gigawatts electric, or GWe, of net generating capacity that is expected to grow to 184 GWe by 2020 if all of the reactor units currently under construction are completed. The projected size of the target market is expected to expand to 222 GWe by 2020 and 269 GWe by 2030 if all of the currently planned new build and half of the proposed reactor units are completed.

Within the identified potential target market, France, China, United States and Korea represent the largest market segment, accounting for over 80% of the total projected target market size in 2030. We believe that it is important for us, through technology license arrangements with major fuel vendors, to ultimately secure a footing in one or more of these countries in order to achieve meaningful market penetration rates.

Our Intellectual Property

Our nuclear fuel technologies are protected by multiple U.S. and international patents. Our current patent portfolio is comprised of the following patents:

Granted U.S. Patents:

- Patent No. 6,026,136 for a seed-blanket unit fuel assembly for a nuclear reactor;
- Patent No. 5,949,837 for a nuclear reactor having a core including a plurality of seed-blanket units;
- Patent No. 5,864,593 for a method for operating a nuclear reactor core comprised of at least first and second groups of seed-blanket units; and
- Patent No. 5,737,375 for a nuclear reactor having a core including a plurality of seed-blanket units.
- These U.S. patents are in force and will expire on August 16, 2014. We have also filed new US and international patent applications relating to these fuel technologies that will extend our patent protection through 2027-2028 when and if these applications are allowed and granted as patents (see below for more information).

Granted International Patents:

- Russian Patent No. 2,176,826 (expires August 16, 2014);

- Russian Patent No. 2,222,837 (expires August 16, 2014);
- South Korean Patent No. 301,339 (expires August 16, 2014);
- South Korean Patent No. 336,214 (expires August 16, 2014);
- Chinese Patent No. ZL 96196267.4 (expires August 16, 2014);
- Eurasian Patent No. EA015019 (B1), based on PCT Patent Application No. PCT/RU2007/000732, filed December 26, 2007, titled NUCLEAR REACTOR (ALTERNATIVES), FUEL ASSEMBLY OF SEED-BLANKET SUBASSEMBLIES FOR NUCLEAR REACTOR (ALTERNATIVES), AND FUEL ELEMENT FOR FUEL ASSEMBLY (expires December 26, 2027).

Pending Patent Applications:

- Patent Applications Based On PCT Patent Application No. PCT/RU2007/000732, filed December 26, 2007, titled NUCLEAR REACTOR (ALTERNATIVES), FUEL ASSEMBLY OF SEED-BLANKET SUBASSEMBLIES FOR NUCLEAR REACTOR (ALTERNATIVES), AND FUEL ELEMENT FOR FUEL ASSEMBLY:

- Japanese Application No. JP2010-540611;
- Australian Application No. 2007 363 064;
- S. Korean Application No. 10-2010-7016627;
- Canadian Application No. 2,710,432;
- Chinese Application No. CN20078102099.4;
- Indian Application No. 5244/DELNP/2010 ;
- European Application No. 8142834.7;
- European Application No. 10166457.1;
- U.S. Application No. 12/340,833 (allowed and will issue on February 14, 2012); and
- U.S. Application No. 13/047,168
- When and if these applications are allowed and grant as patents, they are expected to expire on December 26, 2027.

- Patent Applications Based on PCT patent application No. PCT/RU2008/000801 filed on December 25, 2008 entitled A Light Water Reactor Fuel Assembly (Alternatives), A Light Water Reactor and A Fuel Assembly Fuel Element:

- Japanese Application No. JP 2011-543460;
- Australian Application No. AU20080365658;
- S. Korean Application No. 10-2011-7016736;
- Canadian Application No. CA20082748367;
- Chinese Application No. CN20088132741;
- Indian Application No. 5521/DELNP/2011;
- Eurasian Application No. 201100729;

- European Application No. EP20080879222; and
- U.S. Application No. 13/139,677.
- When and if these applications are allowed and grant as patents, they are expected to expire on December 25, 2028.

- PCT International Patent Application No. PCT/US2011/036034, filed May 11, 2011, titled Fuel Assembly (Metal).
- PCT International Patent Application No. PCT/US2012/02878, filed January 11, 2012, titled Locking Device For Nuclear Fuel Assemblies.

In addition to our patent portfolio, we also own the following trademarks:

Registered US Trademarks:

- LIGHTBRIDGE corporate name (Registration No. 3933449)
- Lightbridge s corporate logo (Registration No. 3933450)
- THORIUM POWER corporate name (Registration No. 3791726)

Registered International Trademarks:

- LIGHTBRIDGE corporate name:

- European Union (Registration No. 8773988)
- France (Registration No. (08)3573606)
- United Kingdom (Registration No. 2486858)
- Russia (Registration No. 434229)

- Lightbridge s corporate logo:

- European Union (Registration No. 8771875)
- Russia (Registration No. 434228)

- THORIUM POWER corporate name:

- Russia (Registration No. 426009)

Pending Trademark Applications:

- LIGHTBRIDGE corporate name (US Application No. 77896036 Notice of Allowance issued on January 18, 2011)
- Lightbridge s corporate logo (US Application No. 77896051 Notice of Allowance issued on January 18, 2011)

We are continually executing a strategy aimed at further expanding our intellectual property portfolio.

Our Consulting Business Segment

The Nature of Our Consulting Services

We are primarily engaged in the business of assisting commercial and governmental entities globally with developing and expanding their nuclear industry capabilities and infrastructure. We provide integrated strategic advice across a range of expertise areas including, for example, regulatory development, nuclear reactor site selection, procurement and deployment, reactor and fuel technology, international relations and regulatory affairs.

Due to the relatively limited growth in the nuclear energy industry during the 1980 s and 1990 s, and corresponding limited recruitment into the industry, the cadre of engineers, managers and other nuclear energy industry experts is aging. In any nuclear renaissance, we believe that the industry will be challenged in acquiring and retaining sufficient qualified expertise. In countries studying the potential of establishing new nuclear energy programs, the number of qualified nuclear energy personnel is limited, and we believe that those countries will need to rely on significant support from non-domestic service providers and experts to ensure success in those programs.

Our emergence in the field of nuclear energy consulting is in direct response to the need for independent assessments and highly qualified technical consulting services from countries looking to establish nuclear energy programs, by providing a blueprint for safe, secure, efficient and cost-effective nuclear power. We offer full-scope strategic planning and advisory services for new and growing existing markets. Furthermore, we only engage with commercial entities and governments that are dedicated to non-proliferative and transparent nuclear programs.

Our consulting services are expert and relationship based, with particular emphasis on key decision makers in senior positions within governments or companies, as well as focus on overall management of nuclear energy programs. To date, substantially all of our revenues are derived from our consulting and strategic advisory services business segment, which primarily provides nuclear consulting services to entities within the United Arab Emirates, our first significant consulting and strategic advisory client. In April 2010 and December 2010 we began to provide consulting services in additional countries, including the member states of the Gulf Cooperation Council and Kuwait. We have also provided nuclear safety consulting advice to U.S. nuclear utilities.

Competition in Nuclear Industry Consulting

In general, the market for nuclear industry consulting services is competitive, fragmented and subject to rapid change. The market includes a large number of participants with a variety of skills and industry expertise, including local, regional, national and international firms that specialize in political assessment, nuclear technology or program implementation. Some of these companies are global in scope and have greater personnel, financial, technical, and marketing resources than we do. The larger companies offering similar services as we do typically are also active in the delivery of nuclear power plant equipment and/or provision of engineering design services. We believe that our independence, experience, expertise, reputation and segment focus, enable us to compete effectively in this marketplace.

Our major challenge in pursuing our business is that the decision making process for nuclear power programs typically involves careful consideration by many parties and therefore requires significant time. Many of the potential clients that could benefit from our services are in regions of the world where tensions surrounding nuclear energy are high, or in countries where public opinion plays an important role. Domestic and international political pressure and public opposition to nuclear power may hinder our efforts to provide nuclear energy consulting services, regardless of our focus on non-proliferative nuclear power.

Employees

Our business model is to limit the number of our full-time employees and to rely on consultants, outside agencies and technical facilities with specific skills to assist with various business functions including, but not limited to: corporate governance, research and development, and government relations. This model limits overhead costs and allows us to

draw upon resources that are specifically tailored to our internal and external (client) needs. As of December 31, 2011, we had 15 full-time employees. We utilize a network of over 150+ contract employees available for deployment for specialized consulting assignments. We believe that our relationship with our employees and contractors is satisfactory.

History and Corporate Structure

We were incorporated under the laws of the State of Nevada on February 2, 1999. During the period from inception until October 6, 2006, we were engaged in businesses other than our current business. On October 6, 2006, we acquired our wholly-owned subsidiary Thorium Power, Inc. in a merger transaction and changed our name to Thorium Power, Ltd. Thorium Power, Inc. was incorporated on January 8, 1992. The merger was accounted for as a reverse merger and Thorium Power, Inc. was treated as the accounting acquirer. In 2008 we formed Lightbridge International Holding, LLC (a Delaware limited liability company). We formed a branch office in England in 2008 called Lightbridge Advisors Limited, a branch office in Moscow, Russia in July 2009 and a branch office in the United Arab Emirates in January 2010. On September 21, 2009, we changed our name from Thorium Power Ltd. to Lightbridge Corporation to more accurately reflect the varied nature of our business operations. Thorium Power, Inc. remains a wholly-owned subsidiary of Lightbridge Corporation.

Available Information

Our Annual Report 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 Exchange Act, are available free of charge on our website at *www.ltbridge.com* as soon as reasonably practicable after such reports are electronically filed with, or furnished to, the Securities and Exchange Commission. Copies of these reports may also be obtained free of charge by sending written requests to Investor Relations, Lightbridge Corporation, 1600 Tysons Blvd, Suite 550 Tysons Corner, VA 22102 USA. The information posted on our web site is not incorporated into this Annual Report.

Item 1A. Risk Factors

General Business Risks

If the price of non-nuclear energy sources falls, there could be an adverse impact on new build nuclear reactor activities in certain markets, 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 both our fuel technology and our consulting services.

We may be adversely affected by uncertainty in the global financial markets and worldwide economic downturn.

Our future results may be impacted by the worldwide economic downturn, continued volatility or further deterioration in the debt and equity capital markets, inflation, deflation, or other adverse economic conditions that may negatively affect us. Even with the net proceeds of our July 2010 financing, we will likely require additional capital in the near future. Due to the above listed factors, we cannot be certain that additional funding will be available on terms that are acceptable to us, or at all.

We may be adversely affected by public opposition to nuclear energy as a result of the major nuclear accident at Fukushima, Japan.

The major nuclear accident at the Fukushima nuclear power plant in Japan following the massive tsunami and strong earthquake that occurred on March 11, 2011, increased public opposition to nuclear power in some countries, resulting in a slowdown in, or a complete halt to, new construction of nuclear power plants and an early shut down of existing power plants in select countries.

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Our limited operating history makes it difficult to judge our prospects.

Prior to 2008 we were a development stage company. We have only recently commenced the provision of nuclear consulting services and currently have only a limited number of clients in this area of our business. Similarly, our fuel design patents and technology have not been commercially used and we have not received any royalty or sales revenue from this area of our business. We are subject to the risks, expenses and problems frequently encountered by companies in the early stages of development.

We rely upon certain members of our senior management, including Seth Grae, and the loss of Mr. Grae or any of our senior management would have an adverse effect on the Company.

Our success depends upon certain members of our senior management, including Seth Grae, Chief Executive Officer of the Company. Mr. Grae s knowledge of the nuclear power industry, his network of key contacts within that industry and in governments and, in particular, his expertise in the potential markets for the Company s technologies, is critical to the implementation of our business model. Mr. Grae is likely to be a significant factor in our future growth and success. The loss of the service of Mr. Grae would likely have a material adverse effect on our Company.

Competition for highly skilled professionals could have a material adverse effect on our success.

We rely heavily on our contractor staff and management team. Our success depends, in large part, on our ability to hire, retain, develop and motivate highly skilled professionals. Competition for these skilled professionals is intense and our inability to hire, retain and motivate adequate numbers of consultants and managers could have a serious effect on our ability to meet client needs and to continue the development of our fuel designs. A loss of a significant number of our employees could have a serious negative effect on us. Any significant volatility or sustained decline in the market price of our common stock could impair our ability to use equity-based compensation to attract, retain and motivate key employees and consultants.

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. A major nuclear accident that occurred at the Fukushima nuclear power plant in Japan that is believed to have been caused by a major tsunami wave produced by a strong earthquake that hit Japan on March 11, 2011, could have a significant adverse effect on public opinion about nuclear power and the favorable regulatory climate needed to introduce new nuclear technologies. Strong public opposition could hinder the construction of new nuclear power plants and lead to early shut-down of the existing nuclear power plants. Furthermore, nuclear fuel fabrication and the use of new nuclear fuels in reactors must be licensed by the U.S. Nuclear Regulatory Commission and equivalent governmental authorities around the world. In many countries, the licensing process includes public hearings in which opponents of the use of nuclear power might be able to cause the issuance of required licenses to be delayed or denied. Following the Fukushima nuclear accident, some countries have announced their plans to delay, scale down or cancel deployment of new nuclear power plants while others, such as Germany, have decided to completely phase out nuclear power over the coming years.

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

The sales and marketing of our services and 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 services or technology. If authorizations are required and not granted, our international business plans 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.

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The DOE is currently finalizing its review of our Part 810 export authorization request which is required in order for us to be able to enter into an agreement relating to our proposed collaboration with Rosatom or its subsidiary companies.

Risks Associated with our Fuel Technology Business

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 be fabricated, tested and licensed before they can be offered for sale in commercial markets. 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 test facilities. Furthermore, the fuel technology has yet to be demonstrated in an existing commercial reactor. Until we are able to successfully demonstrate operation of our fuel designs in an actual commercial reactor, we will not be certain about the ability of the fuel we design to perform as expected. In addition, there is also a risk that suitable testing facilities may not be available to us on a timely basis, which could cause development program schedule delays.

We will also have to enter into a commercial arrangement with a fuel fabricator to actually produce fuel using our designs. If our fuel designs do not perform as anticipated in commercial use, we will not realize revenues from licensing or other use of our fuel designs.

We serve 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 our fuels may be delayed and made more costly, and industry acceptance of our fuels may be hampered.

The nuclear power industry is a highly regulated industry. All entities that operate nuclear facilities and transport nuclear materials are subject to the jurisdiction of the U.S. Nuclear Regulatory Commission, or its counterparts around the world.

Our fuel designs differ significantly in some aspects from the fuel licensed and used today by commercial nuclear power plants. These differences will likely result in more prolonged and extensive review by the U.S. Nuclear Regulatory Commission or its counterparts around the world that could cause development program schedule delays. Entities within the nuclear industry may be hesitant to be the first to use our fuel, which has little or no history of successful commercial use. Furthermore, our research and development program schedule relies on the transferability and applicability of the operating experience of the Russian icebreakers with metallic fuels for regulatory licensing purposes outside of Russia. There is a risk that if this fuel performance operating experience is found by the regulatory authority not to be transferable, more extensive experiments will be required which could cause program schedule delays and require more research and development funding.

Existing commercial nuclear infrastructure in many countries is limited to uranium material enrichments up to 5%. Our metallic fuel is enriched to higher levels which would require modifications to existing commercial nuclear infrastructure and could impede commercialization of our technology.

Existing commercial nuclear infrastructure, including conversion facilities, enrichment 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 currently licensed to handle uranium enrichment up to 5%. Our fuel designs are expected to have enrichment levels up to 19.7% 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 go through a regulatory licensing process and obtain regulatory approvals to be able to handle uranium with enrichment levels up to 19.7% and operate commercial reactors using our fuel. There is a 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 handle our fuel or operate commercial reactors using our fuel.

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 oxide is packed into small pellets that are stacked and sealed inside metallic tubes. The co-extrusion fabrication technology involves extrusion of a single-piece solid fuel rod from a metallic matrix containing uranium and zirconium alloy. Fabrication of full-length (approximately 3.5 to 4.5 meters) metallic fuel rods has yet to be demonstrated. There is a risk that the fuel fabrication process required to produce one meter long metallic fuel rods may not be adaptable to the fabrication of full-length metallic fuel rods used in commercial reactors.

Our plans to develop our fuel designs depend on us acquiring rights to the designs, data, processes and methodologies that are used or may be used in our business in the future. If we are unable to obtain such rights on reasonable terms in the future, our ability to exploit our intellectual property may be limited.

We are currently conducting fuel assembly design and testing work in Russia through our Moscow office personnel as well as Russian research institutes and other nuclear entities that are owned or are closely affiliated with the government of the Russian Federation. We do not currently have all of the necessary licensing or other rights to acquire or utilize certain designs, data, methodologies or processes required for the fabrication of our fuel assemblies. If we, or a fuel fabricator to whom we license our fuel technology, desire to utilize such processes or methodologies in the future, a license or other right to use such technologies from the Russian entities that previously developed and own such technologies would be required. Nuclear operators typically seek diversity of fuel supply and may be hesitant to use a fuel product that is only available from a single supplier. If we are unable to obtain a license or other right to acquire or utilize certain know-how required for the fabrication of our fuel assemblies on terms that the Russian entities deem to be reasonable, or there is only a single supplier of our fuel assemblies, then we may not be able to fully exploit our intellectual property and may be hindered in the sale of our fuel products and services.

Our research operations are conducted primarily in Russia, making them subject to political uncertainties relating to Russia and U.S.-Russian relations.

Much of our present research activities are being conducted in Russia. Our research operations conducted in Russia are subject to various political risks and uncertainties inherent in the country of Russia. If U.S.-Russia relations deteriorate, the Russian government may decide to scale back or even cease completely its cooperation with the United States on various international projects, including nuclear power technology development programs. If this should happen, our research and development program in Russia could be scaled back or shut down, which could cause development program schedule delays and may require additional funding to access alternative testing facilities outside of Russia. The Russian institutes or nuclear entities engaged in our project are highly regulated and, in many instances, are controlled by the Russian government. The Russian government could decide that the nuclear scientists engaged in our project in Russia or testing facilities employed in our project should be redirected to other high priority national projects in the nuclear sector which could lead to development program schedule delays. Certain future research and development activities to be performed by Russian entities under contract with us will require formal authorization from the Russian State Atomic Energy Corporation, or Rosatom , which owns those entities and is the main Russian government agency that oversees Russia s civil nuclear power industry. Rosatom requires that all collaborative projects with U.S. entities fall into one of the collaboration areas outlined in a government-to-government agreement that was entered into by and between the United States and Russia soon after the 123 Agreement on peaceful nuclear cooperation between the two countries came into force (which occurred in late 2010). Rosatom requires that the DOE issue an official endorsement of each commercial project proposed for collaboration between a U.S. entity and Rosatom. Without such DOE endorsement and designation of the project by DOE as consistent with one of the collaboration areas outlined in the above-mentioned government-to-government agreement, Rosatom is unlikely to cooperate and participate in the proposed project. Lightbridge has recently received a letter from DOE confirming that our proposed collaborative projects with Rosatom fall under the 123 agreement, which we understand has satisfied the Rosatom requirements. Until commercial negotiations with Rosatom and/or its

subsidiary companies are concluded and a legally binding agreement is entered into between the parties, a risk of development program schedule delays or a lack of sufficient interest from Rosatom or its entities in proposed collaboration still remains.

Applicable Russian intellectual property law may be inadequate to protect our intellectual property, which could have a material adverse effect on our business.

Intellectual property rights are evolving in Russia, trending towards international norms, but are by no means fully developed. While we are continuing to diversify our research and development activities with associated intellectual property, historically, we have worked closely with our Russian branch office employees and other Russian contractors and entities to develop a significant portion of our material intellectual property. Our rights in this intellectual property, therefore, derive, or are affected by, Russian intellectual property laws. If the application of these laws to our intellectual property rights proves inadequate, then we may not be able to fully avail ourselves of our intellectual property and our business model may fail or be significantly impeded.

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 would become compromised and our business model could fail or 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 might gain an ownership interest in such an invention outside of the Russian Federation and our intellectual property rights in that claimed invention would become compromised and our business model may then fail or be significantly impeded.

If we are unable to obtain or maintain intellectual property rights 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. We do not know how successful we would be should we choose to assert our patents 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 either 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.

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 the 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 aspect 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.

Our nuclear fuel process is dependent on outside suppliers of nuclear and other materials and any difficulty by a fuel fabricator in obtaining these materials could be detrimental to our ability to eventually market our fuel through a fuel fabricator.

Production of fuel assemblies using our nuclear fuel designs is dependent on the ability of fuel fabricators to obtain supplies of nuclear material utilized in our fuel assembly design. Fabricators 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 by fuel fabricators could have a material adverse effect on their ability to market fuel based on our technology.

Risks Associated With Our Consulting Activities.

Our inability to attract business from new clients or the loss of any of our existing clients could have a material adverse effect on us.

We expect that many of our future client engagement agreements will be terminable by our clients with little or no notice and without penalty. Some of our work will involve multiple engagements or stages. In those engagements, there is a risk that a client may choose not to retain us for additional stages of an engagement or that a client will cancel or delay additional planned engagements. In addition, a small number of existing clients account for a majority of our consulting revenues, the loss of any one of which would have a material adverse effect on our results of operations.

Our future profitability will suffer if we are not able to maintain current pricing and utilization rates.

Our revenue, and our profitability, will be largely based on the billing rates charged to clients and the number of hours our professionals will work on client engagements, which we define as the utilization of our professionals. Accordingly, if we are not able to maintain the pricing for our services or an appropriate utilization rate for our professionals, revenues, project profit margins and our future profitability will suffer. Bill rates and utilization rates are affected by a number of factors, including:

- our ability to predict future demand for services and maintain the appropriate headcount and minimize the number of underutilized personnel;
- our clients perceptions of our ability to add value through our services;
- our competitors pricing for similar services;
- the market demand for our services; and
- our ability to manage significantly larger and more diverse workforces as we increase the number of our professionals and execute our growth strategies.

Unsuccessful future client engagements could result in damage to our professional reputation or legal liability, which could have a material adverse effect on us.

Our professional reputation and that of our personnel is critical to our ability to successfully compete for new client engagements and attract or retain professionals. Any factors that damage our professional reputation could have a material adverse effect on our business.

Any client engagements that we obtain will be subject to the risk of legal liability. Any public assertion or litigation alleging that our services were negligent or that we breached any of our obligations to a client could expose us to significant legal liabilities, could distract our management and could damage our reputation. We carry professional liability insurance, but our insurance may not cover every type of claim or liability that could potentially arise from our engagements. The limits of our insurance coverage may not be enough to cover a particular claim or a group of claims, and the costs of defense.

Our results of operations could be adversely affected by disruptions in the marketplace caused by economic and political conditions.

Global economic and political conditions affect our clients businesses and the markets they serve. A severe and/or prolonged economic downturn or a negative or uncertain political climate could adversely affect our clients financial condition and the levels of business activity engaged in by our clients and the industries we serve. Clients could determine that discretionary projects are no longer viable or that new projects are not advisable. This may reduce demand for our services, depress pricing for our services or render certain services obsolete, all of which could have a material adverse effect on our results of operations. Changes in global economic conditions or the regulatory or legislative landscape could also shift demand to services for which we do not have competitive advantages, and this could negatively affect the amount of business that we are able to obtain. Although we have implemented cost management measures, if we are unable to appropriately manage costs or if we are unable to successfully anticipate changing economic and political conditions, we may be unable to effectively plan for and respond to those changes, and our business could be negatively affected.

Risks Relating to the Ownership of Our Securities

There may be volatility in our stock price, which could negatively affect investments, and 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 may fluctuate significantly in response to a number of factors, some of which are beyond our control, including:

- quarterly variations in operating results;
- changes in financial estimates by securities analysts;
- changes in market valuations of other similar companies;
- announcements by us or our competitors of new products or of significant technical innovations, contracts, receipt of (or failure to obtain) government funding or support, acquisitions, strategic partnerships or joint ventures;
- additions or departures of key personnel;
- any deviations in net sales or in losses from levels expected by securities analysts, or any reduction in political support from levels expected by securities analysts;
- future sales of common stock; and
- nuclear accidents or other adverse nuclear industry events.

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 its performance.

Item 1B. Unresolved Staff Comments

Not applicable.

Item 2. Description of Property

We are obligated to pay approximately $43,000 per month for office rent and approximately another $2,000 per month for other fees for the rented office space located at 1600 Tysons Boulevard, Suite 550, Tysons Corner, Virginia 22102. The space is used by our executives, employees and contractors for administrative purposes. The term of the lease for our offices expires on December 31, 2013 and is renewable for additional one-year terms.

We are obligated to pay approximately US$9,000 per month for office rent and approximately another US$1,500 per month for other fees for the rented office space located at Zemlyanoi Val, 9, Moscow, Russia, 105064. The space is used by our Moscow staff for administrative purposes. The term of the lease for our offices expires on April 30, 2012 and is renewable for additional one-year terms.

Our branch offices in London and Abu Dhabi are maintained via corporate agents, and fees that we pay our agents include rental expense. The address for our branch in London is Lightbridge Advisors Limited, High Street Partners, 83 Victoria Street, London, SW1H OHW.

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. We are currently not aware of any such legal proceedings or claims that we believe will have a material adverse affect on our business, financial condition or operating results.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Market Information

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

The following table sets forth, for the periods indicated, the high and low sales prices of our common stock. These prices reflect inter-dealer prices, without retail mark-up, mark-down or commission, and may not represent actual transactions.

Fiscal Year	Quarter Ending	High	Low
2011	December 31	$ 3.24	$ 1.96
	September 30	$ 3.70	$ 1.72
	June 30	$ 5.80	$ 3.53
	March 31	$ 7.22	$ 5.10
2010	December 31	$ 6.23	$ 5.00
	September 30	$ 8.31	$ 5.31
	June 30	$ 11.15	$ 5.26
	March 31	$ 9.00	$ 5.99

Holders

As of February 21, 2012, our common stock was held by 144 stockholders of record. This number excludes the shares of our common stock owned by stockholders holding stock under nominee security position listings.

Reports to Stockholders

We plan to furnish our stockholders with an annual report for each fiscal year ending December 31, containing financial statements audited by our independent certified public accountants. We may in our sole discretion, issue unaudited quarterly or other interim reports to our stockholders as we deem appropriate. We intend to maintain compliance with the periodic reporting requirements of the Exchange Act.

Dividends

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

Transfer Agent

Our transfer agent and registrar for our common stock is Computershare Trust Company, 350 Indiana Street, Suite 800, Golden, Colorado, 80401. Its telephone number is 800.962.4284 and facsimile is 303.262.0604.

Recent Sales of Unregistered Securities

Except for sales previously disclosed in quarterly reports on Form 10-Q or in a current report on Form 8-K filed by us with the Securities and Exchange Commission, we have not sold any securities without registration under the Securities Act of 1933.

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Securities Authorized for Issuance Under Equity Compensation Plans

The information under the heading Equity Compensation Plan Information in our definitive proxy statement for the annual meeting of shareholders to be filed with the SEC is incorporated herein by reference.

Item 6. Selected Financial Information.

Not applicable

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 contained in Item 8. Financial Statements and Supplementary Data of this report. This overview summarizes the MD&A, which includes the following sections:

- *Our Business* a general overview of our two business segments, the material opportunities and challenges of our business;
- *Critical Accounting Policies and Estimates* a discussion of accounting policies that require critical judgments and estimates;
- *Operations Review* an analysis of our Company s consolidated results of operations for the two years presented in our consolidated financial statements. Except to the extent that differences among our operating segments are material to an understanding of our business as a whole, we present the discussion in the MD&A on a consolidated basis; and
- *Liquidity, Capital Resources and Financial Position* an analysis of our cash flows; an overview of our financial position.

As discussed in more detail at the beginning of this Annual Report, the following discussion contains forward-looking statements that involve risks, uncertainties, and assumptions such as statements of our plans, objectives, expectations, and intentions. Our actual results may differ materially from those discussed in these forward-looking statements because of the risks and uncertainties inherent in future events.

Our Business

We are a leading nuclear fuel technology company, and participate in the nuclear power industry in the U.S. and internationally. Our business operations can be categorized into two segments: (i) we are a developer of next generation nuclear fuel technology that has the potential to significantly uprate the power output of reactors, reducing the per-megawatt-hourly cost of generating nuclear energy, and reducing nuclear waste and proliferation, and (ii) we are a provider of nuclear power consulting and strategic advisory services to commercial and governmental entities worldwide.

Our Nuclear Fuel Technology Business Segment

We are developing innovative, proprietary nuclear fuel designs that can significantly enhance the nuclear power industry s economics and increase power output by: 1) Extending the fuel cycle length to 24 months while simultaneously providing an increase in power output of up to 17% in existing pressurized water reactors (including Westinghouse 4-loop reactors, which are currently limited to an 18-month fuel cycle); 2) Enabling increased reactor power output (up to 30% increase) without changing the core size in new build PWRs; and 3) Addressing the back-end of fuel cycle concerns related to the volume of used fuel per kilowatt-hour as well as proliferation of weapons-usable materials. For uprates up to 10%, only relatively minor reactor system modifications would be

required.

Hence, we believe that nuclear utilities with existing reactor fleets may find it economically attractive to initially start with a 10% power uprate fuel variant and switch to a 17% power uprate fuel variant at the time when steam generators and other expensive plant equipment reach their lifetime limit and have to be replaced. In that case, nuclear utilities would only have to incur the incremental capital cost beyond and above the cost of standard plant equipment being replaced to accommodate a 17% power uprate in their existing PWR plants.

We believe that a major opportunity for us is the possibility that our advanced nuclear fuel designs, which are currently in the research and development stage, will be used in many existing and new light water nuclear reactors. Light water reactors are the dominant reactor type currently used in the world, and fuels for such reactors constitute the majority of the commercial market for nuclear fuel.

Consulting Business Segment

We are primarily engaged in the business of assisting commercial and governmental entities with developing and expanding their nuclear industry capabilities and infrastructure. We provide integrated strategic advice across a range of expertise areas including, for example, regulatory development, nuclear reactor site selection, procurement and deployment, reactor and fuel technology, international relations and regulatory affairs. Our consulting services are expert and relationship based, with particular emphasis on key decision makers in senior positions within governments or companies, as well as focus on overall management of nuclear energy programs. To date, substantially all of our revenues are derived from our consulting and strategic advisory services business segment, which primarily provides nuclear consulting services to entities within the United Arab Emirates, our first significant consulting and strategic advisory client. In April 2010 and December 2010, we began to provide consulting services in additional countries, including the member states of the Gulf Cooperation Council (The GCC, a political and economic union that comprises the Gulf states of the Kingdom of Bahrain, State of Kuwait, Sultanate of Oman, State of Qatar, Kingdom of Saudi Arabia and United Arab Emirates) and Kuwait. We have also provided nuclear safety consulting advice to U.S. nuclear utilities.

Factors Affecting Our Financial Performance

Economics of Nuclear Power

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 fuel technology. If prices or production costs of non-nuclear energy increase, there may be increased demand for the deployment of new build nuclear power plants.

Consulting and Strategic Advisory Services

Our primary challenge in pursuing our business is that the decision making process for nuclear power programs typically involves careful consideration by many parties and therefore requires significant time. Many of the potential clients that could benefit from our services are in regions of the world where tensions surrounding nuclear energy are high, or in countries where public opinion plays an important role. Domestic and international political pressure may hinder our efforts to provide nuclear energy services, regardless of our focus on non-proliferative nuclear power.

Critical Accounting Policies and Estimates

The SEC issued Financial Reporting Release No. 60, *Cautionary Advice Regarding Disclosure About Critical Accounting Policies* suggesting that companies provide additional disclosure and commentary on their most critical accounting policies. In Financial Reporting Release No. 60, the SEC has defined the most critical accounting policies as the ones that are most important to the portrayal of a company s financial condition and operating results, and

require management to make its most difficult and subjective judgments, often as a result of the need to make estimates of matters that are inherently uncertain. Based on this definition, we have identified the following significant policies as critical to the understanding of our financial statements.

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make a variety of estimates and assumptions that affect (i) the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the financial statements and (ii) the reported amounts of revenues and expenses during the reporting periods covered by the financial statements.

Our management expects to make judgments and estimates about the effect of matters that are inherently uncertain. As the number of variables and assumptions affecting the future resolution of the uncertainties increase, these judgments become even more subjective and complex. Although we believe that our estimates and assumptions are reasonable, actual results may differ significantly from these estimates. Changes in estimates and assumptions based upon actual results may have a material impact on our results of operation and/or financial condition. We have identified certain accounting policies that we believe are most important to the portrayal of our current financial condition and results of operations.

Accounting for Stock Based Compensation, Stock Options and Stock Granted to Employees and Non-employees

We adopted the requirements for stock-based compensation, where all forms of share-based payments to employees or non-employees, including stock options and stock purchase plans, are treated the same as any other form of compensation by recognizing the related cost in the statement of income.

Under these requirements, stock-based compensation expense for employees is measured at the grant date based on the fair value of the award, and the expense is recognized ratably over the award s vesting period.

The stock-based compensation expense incurred by Lightbridge in connection with its employees is based on the employee model of ASC 718. Under ASC 718 employee is defined as An individual over whom the grantor of a share-based compensation award exercises or has the right to exercise sufficient control to establish an employer-employee relationship based on common law as illustrated in case law and currently under U.S. tax regulations. Our advisory board members and consultants do not meet the employer-employee relationship as defined by the IRS and therefore are accounted for under ASC 505-50. Under these requirements, stock-based compensation expense for non-employees is based on the fair value of the award on the measurement date which is the earlier of the date at which a commitment for performance by the counterparty to earn the equity instruments is reached (a performance commitment), or the date at which the counterparty s performance is complete. For all grants made, we recognize compensation cost under the straight-line method.

We measure the fair value of stock options on the date of grant using a Black-Scholes option-pricing model which requires the use of several estimates, including:

- the volatility of our stock price;
- the expected life of the option;
- risk free interest rates; and
- expected dividend yield.

Prior to the completion of our merger in October 2006, we had limited historical information on the price of our stock as well as employees stock option exercise behavior for stock options issued prior to the merger. We could not rely on historical experience alone to develop assumptions for stock price volatility and the expected life of options. As such, our stock price volatility was estimated with reference to our historical stock price for the time period before the merger, from the date the announcement of the merger was made. We utilized the closing prices of our publicly-traded stock from the announcement date in January 2006 to determine our volatility and we have continued to use our historical stock price closing prices to determine our volatility.

The expected life of options is based on internal studies of historical experience and projected exercise behavior. We estimate expected forfeitures of stock-based awards at the grant date and recognize compensation cost only for those awards expected to vest. The forfeiture assumption is ultimately adjusted to the actual forfeiture rate. Estimated forfeitures are reassessed in subsequent periods and may change based on new facts and circumstances. We utilize a risk-free interest rate, which is based on the yield of U.S. treasury securities with a maturity equal to the expected life of the options. We have not and do not expect to pay dividends on our common shares.

Income Taxes

We account for income taxes using the liability method in accordance with the accounting pronouncement *Accounting for Income Taxes* , which requires the recognition of deferred tax assets or liabilities for the tax-effected temporary differences between the financial reporting and tax bases of our assets and liabilities, and for net operating loss and tax credit carry forwards. The tax expense or benefit for unusual items, prior year tax exposure items, or certain adjustments to valuation allowances are treated as discrete items in the interim period in which the events occur.

On January 1, 2007, we adopted Accounting Interpretation *Accounting for Uncertainty in Income Taxes* , which addresses the determination of whether tax benefits claimed or expected to be claimed on a tax return should be recorded in the financial statements. Under this requirement, we may recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. As a result of the implementation of this standard, we did not recognize any current tax liability for unrecognized tax benefits. We do not believe that there are any unrecognized tax positions that would have a material effect on the net operating losses disclosed.

Revenue Recognition from Consulting Contracts

We believe one of our critical accounting policies is revenue recognition from our consulting contracts. We are currently primarily deriving our revenue from fees by offering consulting and strategic advisory services to commercial and government owned entities outside the U.S. planning to create or expand electricity generation capabilities, using nuclear power plants. Our fee type and structure for each client engagement depend on a number of variables, including the size of the client, the complexity, the level of the opportunity for us to improve the client s electricity generation capabilities using nuclear power plants, and other factors.

The two consulting agreements that we entered into in August 2008 with the Emirates Nuclear Energy Corporation (ENEC) and the Federal Authority for Nuclear Regulation (FANR) were fixed-fee service contracts, but were subsequently changed to time and expense contracts. We recognize revenue associated with these contracts in accordance with the time and expense billed to our customer, which is subject to their review and approval. When a loss is anticipated on a contract, the full amount of the anticipated loss is recognized immediately. Our management uses its judgment concerning the chargeable number of hours to bill under each contract considering a number of factors, including the experience of the personnel that are performing the services, the value of the services provided and the overall complexity of the project. Should changes in management s estimates be required, due to business conditions that cause the actual financial results to differ significantly from management s present estimates, revenue recognized in future periods could be adversely affected.

The revenue recognition from two other governments contracts entered into April 2010 and December 2010 were based on the completion and acceptance of contractual milestones. All contractual milestones were completed in 2011.

We recognize revenue in accordance with SEC Staff Accounting Bulletin or SAB, No. 104, *Revenue Recognition* . We recognize revenue when all of the following conditions are met:

(1) There is persuasive evidence of an arrangement;
(2) The service has been provided to the customer;

(3) The collection of the fees is reasonably assured; and

(4) The amount of fees to be paid by the customer is fixed or determinable.

In situations where contracts include client acceptance provisions, we do not recognize revenue until such time as the client has confirmed its acceptance.

Intangibles

As presented on the accompanying balance sheet, we had patents with a net book value of approximately $537,000 as of December 31, 2011. There are many assumptions and estimates that may directly impact the results of impairment testing, including an estimate of future expected revenues, earnings and cash flows, and discount rates applied to such expected cash flows in order to estimate fair value. We have the ability to influence the outcome and ultimate results based on the assumptions and estimates we choose for testing. To mitigate undue influence, we set criteria that are reviewed and approved by various levels of management. The determination of whether or not intangible assets have become impaired involves a significant level of judgment in the assumptions. Changes in our strategy or market conditions could significantly impact these judgments and require adjustments to recorded amounts of intangible assets.

Contingencies

Management assesses the probability of loss for certain contingencies and accrues a liability and/or discloses the relevant circumstances, as appropriate. Management discloses any liability which, taken as a whole, may have a material adverse effect on the financial condition of the Company. Refer to Note 9 to the Notes to Consolidated Financial Statements.

Recent Accounting Standards and Pronouncements

Refer to Note 1 of Notes to Consolidated Financial Statements for a discussion of recent accounting standards and pronouncements.

Operations Review

Business Segments and Periods Presented

We have provided a discussion of our results of operations on a consolidated basis and have also provided certain detailed segment information for each of our business segments below for the years ended December 31, 2011 and 2010, in order to provide a meaningful discussion of our business segments. We have organized our operations into two principal segments: Consulting and Nuclear Fuel Technology. We present our segment information along the same lines that our chief executives review our operating results in assessing performance and allocating resources.

BUSINESS SEGMENT RESULTS YEAR ENDED DECEMBER 31, 2011 AND 2010

	Consulting		Technology		Corporate and Eliminations		Total	
	2011	2010	2011	2010	2011	2010	2011	2010
Revenue	6,356,424	7,244,158	0	342,550	0	0	6,356,424	7,586,70
Segment Profit Pre Tax	1,411,615	1,703,301	(2,349,749)	(1,522,275)	(4,930,873)	(7,744,507)	(5,669,007)	(7,563,48
Total Assets	277,211	990,563	483,849	329,640	9,757,727	13,990,609	10,518,787	15,310,81
Property Additions	0	0	0	0	1,297	1,620	1,297	1,62
Interest Expense	0	0	0	0	0	0	0	
Depreciation Expense	0	0	2,120	786	24,842	26,214	26,962	27,00

Technology Business

Over the next 12 to 15 months, we expect to incur approximately $5-6 million in research and development expenses related to the development of our proprietary nuclear fuel designs. We spent approximately $2.3 million and $1.6 million for research and development during the years ended December 31, 2011 and 2010, respectively.

Over the next 2-3 years, we expect that our research and development activities will increase and will be primarily focused on testing and demonstration of our metallic fuel technology for Western-type pressurized water reactors. The main objective of this research and development phase is to prepare for full-scale demonstration of our fuel technology in an operating commercial PWR. As discussed above, we believe the testing and demonstration work on our all-uranium seed-and-blanket fuel technology will also benefit and advance our thorium-based seed-and-blanket fuel assembly design due to the similarities and synergies between the two fuel assembly designs.

Consulting Services Business

At the present time, substantially all of our revenue for the years ended December 31, 2011 and 2010, from our consulting and strategic advisory services business segment is derived by offering services to governments outside of the U.S. planning to create or expand electricity generation capabilities using nuclear power plants. The fee type and structure that we offer for each client engagement is dependent on a number of variables, including the complexity of the services, the level of the opportunity for us to improve the client s electricity generation capabilities using nuclear power plants, and other factors.

Consolidated Results of Operations

The following table presents our historical operating results as a percentage of revenues for the periods indicated:

	Year Ended December 31,	
	2011	2010
Consolidated Statements of Income Data:		
Revenues	100 %	100 %
Costs and expenses:		
Cost of revenues	63	65
Gross Profit	37	35
Research and development	37	21
General and administrative	99	114
Total costs and expenses	136	135
Loss from operations	(99)	(100)
Interest income and other, net	7	1
Loss before income taxes	(92)	(99)
Provision for income taxes	0	0
Net loss	(92)%	(99)%

Revenue

The following table presents our revenues, by business segment, for the periods presented (in millions):

	Year Ended December 31, 2011	2010
Consulting Segment Revenues:		
ENEC and FANR (UAE)	$ 4.7	$ 6.4
Other (GCC and other countries)	1.7	0.8
Total	6.4	7.2
Technology Segment Revenues	0.0	0.4
Total Revenues	$ 6.4	$ 7.6

The decrease in our revenues from 2010 to 2011 of $1.2 million resulted from the decrease in the work performed for our ENEC, Kuwait and AREVA projects, which was partially offset by the increase in revenues that we have earned on our GCC and FANR project. Our consulting projects with ENEC and FANR are being performed pursuant to ongoing requests to work on specific projects on a time and expense basis as needed. The future revenue to be earned and recognized under both the ENEC and FANR agreements will depend upon agreed upon work plans which can differ from the revenue amounts initially planned to be earned under these agreements.

We believe that in 2012 we may obtain contracts from other governments interested in deploying nuclear power in their countries, based on our commitment to providing consulting services that are relevant and objective in exploring the use of nuclear power, which in turn could increase our future consulting revenues.

See Note 1 and Note 3 of the Notes to our Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K for additional information about our revenue.

Costs and Expenses

The following table presents our cost of services provided, by business segment, for the periods presented (in millions):

	Year Ended December 31, 2011	2010
Consulting	$ 4.0	$ 4.7
Technology	0.0	0.3
Total	$ 4.0	$ 5.0

Cost of Services Provided

These expenses related to the consulting, professional, administrative and other support costs allocated to our technology and consulting projects, which were incurred to perform and support the work done for our consulting projects with ENEC, FANR and our other contracts. The billing rates to us from our consultants who provide services under our consulting contracts predominantly remained the same in 2011 and 2010. The decrease in the consulting costs of $1 million was a result of the decrease of the work we performed for our consulting projects, as mentioned above in the revenue section.

If consulting revenues increase in future periods, we expect cost of services provided will increase in dollar amount and may increase as a percentage of revenues.

See Note 1 and Note 3 of the Notes to our Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K for additional information about our cost of services provided.

Research and Development

The following table presents our research and development expenses, (in millions):

	Year Ended December 31,	
	2011	2010
Research and development expenses	$ 2.3	$ 1.6

Research and development expenses consist mostly of compensation and related costs for personnel responsible for the research and development of our fuel. The increase of $0.7 million in 2011 was primarily due to the redirection of some of our employees to our research and development efforts. Most of our research and development activities are conducted in Russia. We expense research and development costs as they are incurred.

Research and development expenses will increase in dollar amount and may increase as a percentage of revenues in future periods because we expect to continue to invest in the development of our nuclear fuel products.

See Note 10 of the Notes to our Consolidated Financial Statements included in Item 8 of this Annual Report Form on 10-K for additional information about our research and development costs.

General and Administrative Expenses

The following table presents our general and administrative expenses, (dollars in millions):

	Year Ended December 31,	
	2011	2010
General and administrative expenses	$ 6.3	$ 8.7

General and administrative expenses consist mostly of compensation and related costs for personnel and facilities, stock-based compensation, finance, human resources, information technology, and fees for consulting and other professional services. Professional services are principally comprised of outside legal, audit, strategic advisory services and outsourcing services.

The general and administrative expenses decrease of $2.4 million was mostly related to the decrease in stock-based compensation expense of $1.2 million as a result of a significant amount of equity awards which fully vested in 2010, and the reduction in payroll expenses and payroll benefits of approximately $1.1million, which reduction was partially due to the redirection of work performed by some of our employees to our research and development efforts. The remainder was due to general cost cutting measures.

See Note 11 of the Notes to our Consolidated Financial Statements included in this Annual Report on Form 10-K for information regarding our stock-based compensation.

Interest Income and Other, Net

Interest income and other income and expenses, net, increased by approximately $0.4 million during the year ended December 31, 2011 as compared to the year ended December 31, 2010. This increase was driven by an increase in investment income due to our higher cash equivalents and marketable securities balances during the period resulting from our July 2010 fundraise.

Provision for Income Taxes

The following table presents our provision for income taxes. Our effective tax rate for the periods presented is 40%.

	Year Ended December 31,	
	2011	2010
Provision for income taxes	$ 0.0	$ 0.0

We incurred a net loss for both 2011 and 2010 and took a 100% valuation allowance against all deferred tax assets. Therefore we did not have a provision for taxes for both 2011 and 2010.

See Note 8 of the Notes to our Consolidated Financial Statements included in this Annual Report on Form 10-K for information regarding our Income Taxes.

Liquidity and Capital Resources

As of December 31, 2011, we had total cash and cash equivalents and restricted cash of approximately $4.2 million and marketable securities of $5.1 million, both totaling $9.3 million. The following table provides detailed information about our net cash flow for all financial statements periods presented in this Report.

Cash Flow

	December 31,	
	2011	**2010**
Net cash provided by (used in) operating activities	$ (4,050,098)	$ (2,361,138)
Net cash provided by (used in) investing activities	$ 5,247,375	$ (10,714,881)
Net cash provided by (used in) financing activities	$ (1,600)	$ 12,420,649
Net cash inflow (outflow)	$ 1,195,677	$ (655,370)

Operating Activities

Net cash used in our operating activities increased by approximately $2.7 million for the year ended December 31, 2011 as compared to 2010. This increase in cash used in operations was mostly due to the decrease in our 2011 revenue, resulting in a decrease in total cash collections on our accounts receivable of approximately $1.9 million. The increase in cash used in operations was also attributable to the decrease in our accounts payable and accrued expenses balances of approximately $0.3 million. While we continue to receive payments on all our outstanding accounts receivables, a decrease in cash receipts from our future billings may continue, which can impact cash provided by operating activities in future periods.

Investing Activities

Net cash provided by our investing activities for the year ended December 31, 2011 as compared to net cash used by our investing activities in 2010, increased by approximately $16.0 million. Such increase was due to the use of our

marketable securities to fund our operating activities (increase in cash and cash equivalents) and the purchase of marketable securities of approximately $10.4 million in 2010 from the proceeds of our 2010 fundraise (decrease in cash and cash equivalents), and an increase in patent costs in 2011 compared to 2010 for the filing of patent applications. These patent applications are filed for the new developments resulting from our research and development activities in our technology business segment. We anticipate these patent costs to increase in the future periods due to the research and development work we plan to perform on our all-metal fuel design.

Financing Activities

Net cash provided by (used in) our financing activities for the year ended December 31, 2011, as compared to 2010, decreased by approximately $12.4 million. This decrease is due to the decrease in proceeds from the issuance of common stock of approximately $12.6 million. This decrease was offset by the decrease in redemption of stock from the exercise of stock options by an officer of approximately $0.2 million during 2010.

We anticipate entering into other consulting and technology agreements with our existing and new potential clients that will generate additional revenues for us in 2012 and beyond. If we do not enter into any new agreements, we anticipate that our cash position will meet our working capital needs to sustain our current operations at their current operating levels until 2013. In support of our business plan regarding our research and development activities for developing our fuel designs, we will need to raise additional capital in 2012 by way of an offering of equity securities, an offering of debt securities, a financing through a bank, or a strategic alliance with another entity. We may also need to raise additional capital sooner if the consulting business segment becomes non-sustaining. Currently, we are working on revenue opportunities with the overall goal of increasing our profitability and cash flow.

In support of our long-term business plan with respect to our fuel technology business, we endeavor to create strategic alliances with major fuel vendors, fuel fabricators and/or other strategic parties during the next three years, to support the remaining research and development activities required to further enhance and complete the development of our fuel products to a commercial stage. We may be unable to form such strategic alliances on terms acceptable to us or at all. Our total current average operating expenses, excluding the approximately $5-6 million of outside consulting research and development expenses we expect to incur over the next 12-15 months, is approximately $1.0 million per month

Off Balance Sheet Arrangements

We do not have any off balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity or capital expenditures or capital resources that is material to an investor in our securities.

Seasonality

Our business has not been subject to any material seasonal variations in operations, although this may change in the future.

Inflation

Our business, revenues and operating results have not been affected in any material way by inflation.

Item 7A. Quantitative and Qualitative Disclosure About Market Risk

Not applicable.

Item 8. Financial Statements

The full text of our audited consolidated financial statements as of December 31, 2011 and 2010 begins on page F-1 of this Report.

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure

There have been no disagreements regarding accounting and financial disclosure matters with our independent certified public accountants.

Item 9A. Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act) that are designed to ensure that information that would be required to be disclosed in Exchange Act reports is recorded, processed, summarized and reported within the time period specified in the SEC s rules and forms, and that such information is accumulated and communicated to our management, including to our Chief Executive Officer and Chief Operating Officer/Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

As required by Rule 13a-15 under the Exchange Act, our management, including our Chief Executive Officer and Chief Operating Officer/Chief Financial Officer, evaluated the effectiveness of the design and operation of our disclosure controls and procedures as of December 31, 2011. Based on that evaluation, our Chief Executive Officer and Chief Operating Officer/Chief Financial Officer concluded that as of December 31, 2011, our disclosure controls and procedures were effective to satisfy the objectives for which they are intended.

(b) Management s annual report on internal control over financial reporting

The management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. The Exchange Act defines internal control over financial reporting as a process designed by, or under the supervision of, the Company s principal executive and principal financial officers and effected by the Company s board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America and includes those policies and procedures that:

- Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the Company;
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with accounting principles generally accepted in the United States of America, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and
- 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.

All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. 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.

Management assessed the effectiveness of our internal control over financial reporting as of December 31, 2011. In making this assessment, management used the framework set forth in the report entitled Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission, or COSO. The COSO framework summarizes each of the components of a company s internal control system, including (i) the control environment, (ii) risk assessment, (iii) control activities, (iv) information and communication, and (v) monitoring. Based on our assessment we determined that, as of December 31, 2011, the Company s internal controls over financial reporting are effective based on those criteria.

Child, Van Wagoner & Bradshaw, PLLC, Certified Public Accountants (CVB), our independent registered public accounting firm, has performed an audit of the effectiveness of the Company s internal control over financial reporting as of December 31, 2011, and, as part of its audit, has issued its attestation report on the effectiveness of the Company s internal controls over financial reporting herein as of December 31, 2011. CVB s attestation report is included in this Annual Report on Form 10-K on page F-2. This audit is required to be performed in accordance with the standards of the Public Company Accounting Oversight Board (United States). Our independent auditors were given unrestricted access to all financial records and related data.

(c) Changes in internal control over financial reporting

During the fourth quarter of 2011, there were no changes in our internal control over financial reporting identified in connection with the evaluation performed during the fiscal year covered by this report that has materially affected, or is reasonably likely to materially affect our internal control over financial reporting.

Item 9B. Other Information

None.

PART III

Item 10. Directors and Executive Officers of the Registrant

The information required by Item 10 of Part III is included in our Proxy Statement relating to the 2012 Annual Meeting of Stockholders and is incorporated herein by reference.

Item 11. Executive Compensation

The information required by Item 11 of Part III is included in our Proxy Statement relating to the 2012 Annual Meeting of Stockholders and is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Shareholders

The information required by Item 12 of Part III is included in our Proxy Statement relating to the 2012 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 is included in our Proxy Statement relating to the 2012 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 is included in our Proxy Statement relating to the 2012 Annual Meeting of Stockholders and is incorporated herein by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

The following exhibits are filed with this report, except those indicated as having previously been filed with the Securities and Exchange Commission and are incorporated by reference to another report, registration statement or form. As to any shareholder of record requesting a copy of this report, we will furnish any exhibit indicated in the list below as filed with this report upon payment to us of our expenses in furnishing the information.

Exhibit Number	Description
3.1	Articles of Incorporation of the registrant as filed with the Secretary of State of Nevada. (Incorporated by reference to Exhibit 3.1 to the Registrant s registration statement on Form SB-2 filed on December 11, 2001 in commission file number 333-74914)
3.2	Certificate of Amendment to Articles of Incorporation. (Incorporated by reference to Exhibit 3.1 to the Registrant s current report on 8-K filed on February 13, 2006)
3.3	Certificate of Amendment to Articles of Incorporation. (Incorporated by reference to appendix A to the Registrant s definitive information statement on Schedule 14C filed on July 31, 2006)
3.4	Certificate of Amendment to Articles of Incorporation. (Incorporated by reference to Exhibit 3.1 to the Registrant s current report on 8-K filed on September 25, 2009)
3.5	Amended and Restated Bylaws of the Registrant. (Incorporated by reference to Exhibit 3.2 to the Registrant s current report on 8-K filed on July 9, 2007)
4.1	2006 Stock Plan (incorporated by reference to Exhibit 10.1 of the current report of the Company on Form 8-K filed February 21, 2006).
10.1	Employment Agreement, dated as of February 14, 2006, between the Company and Seth Grae (incorporated by reference to Exhibit 10.2 of the current report of the Company on Form 8-K filed February 21, 2006).
10.2	Teaming Agreement dated February 22, 2006 between The University of Texas System, The University of Texas of the Permian Basin, The University of Texas at Austin, The University of Texas at Arlington, The University of Texas at Dallas, The University of Texas at El Paso, The City of Andrews, Texas, Andrews County, Texas, the Midland Development Corporation, the Odessa Development Corporation, Thorium Power and General Atomics (incorporated by reference from Exhibit 10. the Company s Registration Statement on Form S-4 filed June 14, 2006).
10.3	Employment Agreement, dated July 27, 2006, between the Company and Andrey Mushakov (incorporated by reference to Exhibit 10.1 of the current report of the Company on Form 8-K filed August 4, 2006).
10.4	Independent Director Contract, dated August 21, 2006, between the Company and Victor Alessi (incorporated by reference to Exhibit 10.1 of the current report of the Company on Form 8-K filed August 25, 2006).
10.5	Independent Director Contract, dated October 23, 2006, between the Company and Jack D. Ladd (incorporated by reference to Exhibit 10.1 to the Company s Current Report on Form 8-K, filed on October 23, 2006).
10.6	Independent Director Contract, dated October 23, 2006, between the Company and Daniel B. Magraw (incorporated by reference to Exhibit 10.2 to the Company s Current Report on Form 8- K, filed on October 23, 2006).
10.7	Employment Agreement, dated February 1, 2007, between James Guerra and the Company (incorporated by reference to Exhibit 10.1 to the Company s Current Report on Form 8-K, filed on October 23, 2007).
10.8	Agreement for Ampoule Irradiation Testing in 2006 2007, dated December 28, 2007, between Thorium Power, Inc. and Russian Research Centre Kurchatov Institute (incorporated by reference to Exhibit 10.9 to the Company s Annual Report on Form 10-K, filed on March 26, 2009).
10.9	

Restricted Stock Grant Agreement, dated July 14, 2009, between Seth Grae and the Company (incorporated by reference to Exhibit 10.1 to the Company s Current Report on Form 8-K, filed on July 20, 2009).

10.10	Stock Option Agreement, dated July 14, 2009, between Seth Grae and the Company (incorporated by reference to Exhibit 10.1 to the Company s Current Report on Form 8-K, filed on July 20, 2009).
10.11	Restricted Stock Grant Agreement, dated July 14, 2009, between James Guerra and the Company (incorporated by reference to Exhibit 10.1 to the Company s Current Report on Form 8-K, filed on July 20, 2009).
10.12	Stock Option Agreement, dated July 14, 2009, between James Guerra and the Company (incorporated by reference to Exhibit 10.1 to the Company s Current Report on Form 8-K, filed on July 20, 2009).
10.13	Initial Collaborative Agreement, dated July 23, 2009, between the Company and AREVA (incorporated by reference to Exhibit 10.1 to the Company s Current Report on Form 8-K, filed on July 23, 2009).
10.14	Agreement for Consulting Services, dated August 3, 2009, between the Company and AREVA (incorporated by reference to Exhibit 10.1 to the Company s Current Report on Form 8-K, filed on August 4, 2009).
10.15	Collaboration Framework Agreement, dated August 3, 2009, between the Company and AREVA (incorporated by reference to Exhibit 10.1 to the Company s Current Report on Form 8-K, filed on August 6, 2009).
10.16	Agreement for Ampoule Irradiation Testing, effective as of August 21, 2009, between Thorium Power, Inc. and Russian Research Centre Kurchatov Institute (incorporated by reference to Exhibit 10.1 to the Company s Current Report on Form 8-K, filed on August 25, 2009).
14.1	Code of Ethics (incorporated by reference from the Company s Annual Report on Form 10-KSB filed on November 25, 2005).
31.1*	Rule 13a-14(a)/15d-14(a) Certification Principal Executive Officer.
31.2*	Rule 13a-14(a)/15d-14(a) Certification Principal Accounting Officer.
32*	Section 1350 Certifications.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

XBRL (Extensible Business Reporting Language) information is furnished and not filed or a part of a registration statement or prospectus for purposes of sections 11 or 12 of the Securities Act of 1933, is deemed not filed for purposes of section 18 of the Securities Exchange Act of 1934, and otherwise is not subject to liability under these sections.

* Filed herewith

AUDITED FINANCIAL STATEMENTS

LIGHTBRIDGE CORPORATION

December 31, 2011 and 2010

TABLE OF CONTENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and
Stockholders of Lightbridge Corporation

We have audited the accompanying consolidated balance sheets of Lightbridge Corporation as of December 31, 2011 and 2010, and the related consolidated statements of operations, changes in stockholders equity, and cash flows for each of the years then ended. We also have audited Lightbridge Corporation s internal control over financial reporting as of December 31, 2011 and 2010, based on criteria established in *Internal Control Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Lightbridge Corporation s management is responsible for these financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management s Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on these financial statements and an opinion on the company s internal control over financial reporting based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the consolidated financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company s internal control over financial reporting 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 generally accepted accounting principles, 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.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Lightbridge Corporation as of December 31, 2011 and 2010, and the results of its operations and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, Lightbridge Corporation maintained, in all material respects, effective internal control over financial reporting as of December 31, 2011 and 2010, based on criteria established in *Internal Control Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

/s/ Child, Van Wagoner & Bradshaw PLLC
Salt Lake City, Utah
February 20, 2012

Lightbridge Corporation
Consolidated Balance Sheets

	December 31, 2011	Decemb 201
ASSETS		
Current Assets		
Cash and cash equivalents	$ 3,569,098	$ 2,3
Marketable securities	5,146,823	10,4
Restricted cash	551,883	5
Accounts receivable - project revenue and reimbursable project costs	277,211	9
Prepaid expenses and other current assets	269,697	3
Total Current Assets	9,814,712	14,7
Property, Plant and Equipment -net	46,514	
Other Assets		
Patent costs - net	537,075	3
Security deposits	120,486	1
Total Other Assets	657,561	4
Total Assets	$ **10,518,787**	$**15,3**
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities		
Accounts payable and accrued liabilities	$ 1,680,433	$ 2,0
Deferred revenue	-	
Total Current Liabilities	1,680,433	2,1
Commitments and contingencies		
Stockholders' Equity		
Preferred stock, $0.001 par value, 50,000,000 authorized shares, no shares issued and outstanding	-	
Common stock, $0.001 par value, 500,000,000 authorized, 12,476,414 shares issued, 12,427,220 shares outstanding and 12,430,058 shares issued, 12,345,840 shares outstanding at December 31, 2011 and December 31, 2010, respectively	12,427	
Additional paid in capital - stock and stock equivalents	70,946,951	69,3
Deficit	(62,155,774)	(56,2
Common stock reserved for issuance, 17,120 shares and 6,451 shares at December 31, 2011 and December 31, 2010, respectively	34,750	
Total Stockholders' Equity	8,838,354	13,1
Total Liabilities and Stockholders' Equity	$ **10,518,787**	$ **15,3**

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

Lightbridge Corporation
Consolidated Statements of Operations

	Years Ended December 31,	
	2011	2010
Revenue:		
Consulting Revenue	$ 6,356,424	$ 7,586,708
Cost of Consulting Services Provided	3,992,153	4,941,030
Gross Margin	2,364,271	2,645,678
Operating Expenses		
General and administrative	6,342,673	8,677,504
Research and development expenses	2,349,749	1,607,886
Total Operating Expenses	8,692,422	10,285,390
	(6,328,151)	(7,639,712)
Other Income and (Expenses)		
Investment income	465,162	193,208
Other income (expenses)	(6,018)	(116,977)
Total Other Income and Expenses	459,144	76,231
Net loss before income taxes	(5,869,007)	(7,563,481)
Income taxes	-	-
Net loss	$ (5,869,007)	$ (7,563,481)
Net Loss Per Common Share, Basic and diluted	$ (0.47)	$ (0.68)
Weighted Average Number of shares outstanding	12,376,548	11,133,927

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

Lightbridge Corporation
Consolidated Statements of Cash Flows

	Years Ended December 31,	
	2011	2010
Operating Activities:		
Net Loss	$ (5,869,007)	$ (7,563,481)