

SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

FORM 10-K

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

For the Fiscal Year Ended: December 31, 2009

OR

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

For the Transition Period from \_\_\_ to \_\_\_

Commission File Number: 000-28543

**LIGHTBRIDGE CORPORATION**

(Exact Name of Registrant As Specified in Its Charter)

**Nevada**  
(State or Other Jurisdiction of  
Incorporation or Organization)

**91-1975651**  
(I.R.S. Employer  
Identification Number)

**1600 Tysons Boulevard, Suite 550**  
**McLean, Virginia 22102**  
(Address of Principal Executive Office and 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: **Common Stock, par value \$0.01**

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

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of 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.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition 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

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

As of June 30, 2009, the aggregate market value of the shares of the Registrant's common stock held by non-affiliates (based upon the closing price of such shares as reported on the Over-the-Counter Bulletin Board on such date) was approximately \$55.8 million. Shares of the Registrant's common stock held by each executive officer and director have been excluded in that such persons may be deemed to be affiliates of the Registrant. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of March 12, 2010 there were 10,168,412 shares of the Registrant's common stock outstanding.

**DOCUMENTS INCORPORATED BY REFERENCE:**

Portions of the Registrant's Definitive Proxy Statement for its 2009 Annual Meeting of Shareholders to be filed with the Commission within 120 days after the close of the Registrant's fiscal year are incorporated by reference into Part III of this Annual Report on Form 10-K.

**LIGHTBRIDGE CORPORATION**  
**FORM 10-K**  
**For the Fiscal Year Ended December 31, 2009**

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

## PART I

### Item 1. Description of Business.

#### 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. is treated as the accounting acquirer. In 2008 we formed Lightbridge Power International Holding, LLC (a Delaware limited liability company). We have 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 the Company's name from Thorium Power Ltd. to Lightbridge Corporation to more accurately reflect the varied nature of our business operations.

#### General Overview of Our Business Segments

We participate in the nuclear power industry in the U.S. and internationally. Our business operations can be categorized into two segments, (1) a provider of nuclear energy consulting services, and (2) a developer of proprietary nuclear fuel designs. Our consulting services aim at providing strategic advice to international commercial and government owned entities in countries with new and growing nuclear energy programs. In 2009 we had provided substantially all of our consulting and strategic advisory services to the United Arab Emirates ("UAE"). In 2010 we are seeking to provide our consulting services to other commercial or governmental entities. Our nuclear fuel development business involves the development of proprietary thorium-based nuclear fuel designs which we intend ultimately to introduce for sale into three markets: (1) nuclear fuel designs for use in commercial nuclear power plants, (2) nuclear fuel designs for reactor-grade plutonium disposition, and (3) nuclear fuel designs for weapons-grade plutonium disposition.

#### Overview of the Nuclear Power Industry

Presently, nuclear power provides approximately 7% of the world's energy, including 17% of the world's electricity. According to the International Atomic Energy Agency, there are over 440 nuclear power plants in operation today, mostly light water reactors, with the most dominant types being pressurized water reactors, or PWRs, boiling water reactors, or BWRs, and VVER reactors (a Russian equivalent of PWRs).

Nuclear power generators, which convert nuclear energy into electricity, are the largest consumers of products and services within the nuclear power industry. The product and service providers to these customers include both large vertically-integrated nuclear companies that provide a complete array of reactor services, and niche providers. These services include (1) reactor design, construction, servicing, and decommissioning, (2) front-end nuclear fuel services (nuclear fuel materials procurement and processing; nuclear fuel design (a market of interest to us) and fuel fabrication), and (3) back-end nuclear fuel services (spent fuel management and reprocessing), transportation, and various other services.

Today the vast majority of commercial nuclear power plants around the world use uranium oxide fuel. This uranium oxide fuel is comprised of uranium enriched up to 5% by uranium-235, with the remaining 95% or more being uranium-238. During irradiation inside a reactor core, some of the uranium-238 isotopes capture a neutron and become plutonium-239, a long-lived fissionable element that can be used to make nuclear weapons. Each year, an average 1,000-megawatt PWR produces over 200 kilograms of reactor-grade plutonium in its spent fuel. The plutonium-bearing spent fuel may be (1) buried in a repository such as the facility which was under development by the U.S. Department of Energy in Yucca Mountain, Nevada, (2) recycled so the plutonium is "burned" as nuclear fuel, or (3) used to make nuclear weapons. All of the above-mentioned options for the disposition of plutonium-bearing spent fuel raise environmental, safety, and/or non-proliferation issues.

#### Our Nuclear Energy Consulting and Advisory Services Business Segment

##### *The Nature of Our Consulting Services*

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 nuclear reactor procurement & deployment, reactor & fuel technology, international relations and regulatory affairs.

Due to the relatively limited growth in the nuclear energy industry since the 1980's, and corresponding limited recruitment into the industry, the cadre of engineers, managers and other nuclear energy industry experts is aging. In the nuclear renaissance, we believe that the industry will be challenged in acquiring and retaining sufficient qualified expertise. Moreover, in countries studying new nuclear energy programs, the number of qualified nuclear energy personnel is very 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, clean, efficient and cost-effective non-proliferative 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 top-of-mind issues of key decision makers in senior positions within governments or companies, as well as focus on overall management of nuclear energy programs.

On November 30, 2007, we were retained by the Executive Affairs Authority, or EAA, a government agency of Abu Dhabi, one of the member Emirates of the United Arab Emirates, or UAE, to provide consulting services designed to produce a Roadmap that would constitute the first phase of a feasibility study for a prospective program to deploy civilian nuclear power plants within the UAE, by acting as strategic advisor for the entity responsible for managing nuclear energy related activities in the UAE. We completed the Roadmap project in March 2008 and then entered into a larger follow-on consulting agreement dubbed Quickstart. The terms of the projects called for an upfront payment of professional fees to the Company of \$4.3 million and \$3.8 million, for Quickstart and Roadmap respectively. We completed work on the Quickstart project in June 2008. For these agreements, certain reimbursable expenses that were repaid to us were capped at 20% of the total professional fees and were billed separately to the EAA.

On August 1, 2008, we entered into two separate consulting services agreements with two governmental entities to be formed in the UAE, and a side agreement with the EAA ("Side Letter"). The first agreement is with the Emirates Nuclear Energy Corporation, or ENEC, an Abu Dhabi entity that, upon formation, became responsible for implementing the country's nuclear energy infrastructure. Pursuant to the services agreement we entered into with ENEC, we provide strategic advisory services regarding the development and management of ENEC (the "ENEC Agreement"). Under the second agreement with the Federal Authority for Nuclear Regulation, or FANR, a UAE federal entity, which upon formation, became the independent nuclear regulatory agency in the UAE, we provide strategic advisory services regarding the development and management of FANR (the "FANR Agreement" and collectively with the ENEC Agreement, the "Agreements"). According to the Agreements, we were to be paid \$8.9 million from ENEC and \$8.5 million from FANR (aggregate of \$17.4 million was to be paid for 2008 work, but was later adjusted to \$14.1 million, based upon subsequent changes after signing these agreements, to the agreed upon detailed work plans) for strategic advisory services performed from June 23, 2008 through December 31, 2008. In addition, we were compensated for certain defined reimbursable expenses which are capped at 20% of professional fees. The term of these Agreements is five years, with automatic renewal for one year periods unless otherwise terminated pursuant to the provisions of these Agreements.

A Side Letter with the EAA provided that upon execution of the agreements, the EAA would pay us \$10 million, which we received in September 2008. Of the \$10 million payment by the EAA, \$5 million was deemed to be made as a partial payment from ENEC and FANR, under each of the agreements. The remaining \$4.1 million in outstanding fees for our services performed in 2008 under the agreements was paid to us in 2009.

Based on the successful completion of our consulting work under these agreements in 2008, we continued in 2009 to perform and bill our consulting services under both of these consulting agreements. Effective March 2009 and July 2009, we signed follow-on agreements with ENEC and FANR respectively, specifying the detailed work plans for the rest of the 2009 year. Revenue earned under these agreements and future agreements depends upon the agreed upon work plans and time spent working on these projects, which can be more or less than the revenue amounts initially planned to be earned under these agreements. Consulting revenue including reimbursed expenses earned in 2009 under the ENEC and FANR agreements was approximately \$4.1 million and \$6.1 million, respectively. Future billings for future periods under the agreements will depend on detailed work plans, which will typically be discussed and agreed upon between us and our clients on a quarterly basis during project reviews.

Revenue from the Roadmap contract was recognized during our first fiscal quarter of 2008, when the work on the contract was substantially completed. We recognized revenue related to the Quickstart project ratably over the term of the agreement as this contract called for on-going consulting services from March 2008 through June 2008. Under the August 1, 2008 Agreements, revenues were initially being recognized from our fixed professional fee agreements using the proportional performance method of revenue recognition, but after the contract was started and more detailed work plans were agreed to, revenue was recognized on a time and expense basis. Going forward, we anticipate recognizing revenue from both of these agreements on a time and expense basis, which will be based on our agreed upon hourly billing rates and time spent working on the detailed work plans.

We may enter into additional consulting contracts to provide support and assistance to other commercial and governmental entities that are looking to develop and expand their nuclear power industry capabilities and infrastructure. In future consulting engagements we expect that revenues may be derived either from fixed professional fee agreements or from fees generated through hourly rates billed on a time and expense basis. Our current strategy in the consulting services business is focused on the following:

*Primarily* : Further strengthening the relationship with our existing clients in the UAE and increasing the revenue potential by providing additional consulting and strategic advisory services; and

*Secondarily* : Expanding our client base by further penetrating markets and attracting new clients with similar needs as our existing clients, and also enhancing and extending our services, including the creation of new service offerings.

Our most significant expense related to our consulting and strategic advisory services business segment is the cost of services before reimbursable expenses, which generally relates to costs associated with generating consulting revenues, and includes employee payroll expenses and benefits, contractor compensation, vendor compensation, marketing expenses, and direct costs of training and recruiting the consulting staff. Consultant compensation consists of salaries, incentive compensation, and benefits. As revenues are generated from services performed by our permanent staff and contractors, our success depends on attracting, retaining and motivating talented, creative and experienced professionals at all levels.

### ***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 hardware and/or provision of engineering design services. However, we believe that our independence, experience, expertise, reputation and segment focus, enable us to compete effectively in this marketplace.

### **Our Nuclear Fuel Technology Business Segment**

#### ***The Nature of Our Proprietary Technology Development Activities***

For most of the past decade we have been engaged in the development of proprietary thorium-based nuclear fuel designs which we ultimately intend to introduce for sale into two markets: (1) nuclear fuel designs for use in commercial nuclear power plants and (2) nuclear fuel designs for reactor-grade plutonium disposition. In addition, we have a conceptual nuclear fuel design for weapons-grade plutonium disposition. These three types of fuel design are primarily for use in existing or future VVER-1000 light water reactors. We have also been conducting research and development related to a variant of these nuclear fuel designs for use in existing pressurized water reactors (PWR).

To date, our operations have been devoted primarily to the development and demonstration of our nuclear fuel designs, developing strategic relationships within and outside of the nuclear power industry, securing political and financial support from the U.S. and Russian governments, and the filing of patent applications (including related administrative functions).

On August 3, 2009, we entered into two agreements with AREVA, one of the largest companies in the nuclear energy industry, regarding our fuel technology business. The first was an Agreement for Consulting Services, or Consulting Agreement, pursuant to which we will conduct the first phase of an investigation of specific topics of thorium fuel cycles in AREVA's light water reactors, or LWRs. This first phase will focus on providing initial general results relating to evolutionary approaches to the use of thorium in AREVA's LWRs, specifically within AREVA's Evolutionary Power Reactor. We will receive total fees of \$550,000 for services provided pursuant to the Consulting Agreement. The anticipated second phase and further phases of the collaboration, including a detailed study of evolutionary and longer-term thorium fuel concepts, will be conducted in accordance with additional collaborative agreements based upon the results of the first phase. The second agreement we signed with AREVA was a five-year Collaborative Framework Agreement, pursuant to which we will establish a joint steering committee with AREVA, which will be responsible for reviewing project proposals, will be empowered to make scientific and/or technical decisions and will allocate the resources required to implement future collaborative projects between us and AREVA.

To date, we have only had minimal direct revenues from our research and development activities regarding our thorium-based proprietary nuclear fuel technology, and we do not expect to generate licensing revenues from this business for several years, until our fuel designs can be fully tested and demonstrated and we obtain the proper approvals to use our nuclear fuel designs in nuclear reactors. We believe we can leverage our general nuclear technology, business and regulatory expertise as well as industry relationships, to optimize our technology development plans and create integrated advisory services with the highest levels of expertise and experience in the nuclear power industry. Additionally, our knowledge of and credibility in addressing proliferation related issues that we have developed over many years, benefit our consulting and strategic advisory services business. Our advisory services include a focus on non-proliferation, safety and operational transparency of nuclear power programs.

Our future customers may include nuclear fuel fabricators, nuclear power plant owner/operators and/or the U.S. or foreign governments.

### ***Nuclear Fuel Development and Qualification Process***

We have been developing, testing and qualifying our nuclear fuel designs in accordance with established industry processes and standard practices associated with new nuclear fuel development programs. Typically, new fuel designs go through three major development phases: (1) Conceptual design, (2) Preliminary design, and (3) Final design.

From inception until the late 1990s, we were primarily working on the conceptual design of our seed-and-blanket unit, or SBU fuel technology, for application in VVER-1000 reactors ("VVER SBU fuel"). Since the late 1990s, we have been largely engaged in activities relating to the preliminary design of VVER SBU fuel.

As announced earlier, over the next several years we intend to focus our development efforts primarily on the final design of VVER SBU fuel. In our opinion, one of the most significant technical risks remaining in our development efforts is the manufacture and testing of our full-size three-meter long metallic seed fuel rods for a VVER-1000 reactor. We plan that these full-length fuel rods will be manufactured in the second half of calendar year 2010 and then testing of these rods will begin.

We expect to have the final design of the VVER SBU fuel completed within three to four years, subject to successful conclusion of agreements with our development partners in 2010 and 2011, for the full scope of work relating to final design activities. In parallel, we, together with our development partners, expect to continue working with regulatory authorities to obtain regulatory clearance for insertion of several lead test assemblies, or LTAs, into an operating VVER-1000 reactor for final demonstration of our VVER SBU fuel technology.

The LTA testing in an operating VVER-1000 reactor is expected to be carried out over approximately 3 - 4.5 years (three 12-month or 18-month fuel cycles for a VVER-1000 reactor operating with standard uranium oxide fuel), which is one-third to one-half of the expected life of the blanket in a VVER-1000 reactor. After three cycles of operation, one or more irradiated seed and blanket fuel assemblies will undergo post-irradiation examination to collect the data on the results of LTA testing up to that point. Typically, post-irradiation examination studies take a year to complete (which includes time necessary for the cooling of irradiated fuel assemblies in a spent fuel pool before the post-irradiation examination can commence). Once the post-irradiation examination data from LTAs confirm VVER SBU fuel performance within acceptable safety limits, we expect to be able to transition to partial cores, followed by a full core and then multiple VVER-1000 reactor cores, subject to regulatory approval.

In addition to the VVER SBU fuel, we have also performed initial research and testing of a similar seed-and-blanket fuel technology for application in western pressurized water reactors, or PWR SBU fuel. In our work on the PWR SBU fuel design, we largely benefit from the results of similar work already completed on the VVER SBU fuel and the vast experience we have gained from the design of our proprietary seed-and-blanket fuel technology over the years. As a result of these past and anticipated future synergies, we believe we will be able to accelerate the PWR SBU fuel development timeline compared to the overall VVER SBU fuel development cycle.

To date, we have spent approximately \$7.9 million on research and development. Currently, we estimate that we will require about \$15 million in R&D investment over the next three to five years to complete the final design of our VVER SBU fuel.

## ***Competition in the Nuclear Fuel Design and Fabrication Area***

There are four groups of companies that collectively fabricate a large majority of the fuel used in the world's commercial nuclear power plants: AREVA, Westinghouse Electric Company, General Electric, and AtomStroyExport/TYEL. We currently do not plan to fabricate fuel for reactors. To the extent that the four companies mentioned above 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 also be viewed as competitors. The aforementioned agreements envision a possibility of entering into a technology license agreement for the Lightbridge intellectual property in the future.

We face different competition for each of our three markets for our proprietary nuclear fuel designs:

### ***Thorium/Uranium Fuel***

We believe that our thorium/uranium nuclear fuel will offer significant advantages over conventional uranium fuel, including: (1) enhanced proliferation resistance of spent fuel, (2) significantly reduced volume, weight and long-term radio-toxicity of spent fuel, and (3) cost savings in the back-end operations (spent fuel management and storage) of the nuclear fuel cycle. We expect the front-end costs (cost of fresh thorium/uranium fuel) to be cost competitive with conventional uranium fuel. At the same time, the back-end (waste handling and storage) costs are expected to be less than that for conventional uranium fuel due to significantly reduced volume and weight of spent thorium/uranium fuel.

The primary barrier to industry adoption of our fuel designs is that the entire industry infrastructure is based on uranium fuel with enrichments of 3 – 5%. Our designs require plutonium or more highly enriched uranium (up to nearly 20%). Although the designs can be accommodated by most existing reactors, there are no existing fuel fabrication facilities licensed and capable of fabricating commercial lots of fuel containing the more highly enriched uranium. There are also transportation and logistics issues with the fuel that must be addressed.

The primary marketing strategy that we intend to pursue with respect to our thorium/uranium fuel product is to form an alliance or alliances with existing nuclear fuel fabricators, to which we would license our intellectual property rights to our thorium/uranium nuclear fuel. An alternative marketing strategy that we may pursue is to form an international consortium that may involve government and/or private sector entities to build “green field” nuclear fuel fabrication facilities. In that case, we would license our intellectual property rights to the thorium/uranium fuel to the consortium that would own and/or operate the new nuclear fuel fabrication facilities.

### ***Thorium/Reactor-Grade Plutonium Disposing Fuel***

This fuel technology is designed to provide an effective means to dispose of separated reactor-grade plutonium. As of 2004, there were 274 metric tons of separated reactor-grade plutonium (equivalent of 15,000 – 20,000 nuclear weapons) stored at various locations around the world. According to *No Future Plutonium?* by Spiez Laboratory, The Swiss NBC Defense Establishment, dated November 2002, another 1,400 metric tons of this potentially weapons useable material are embedded in spent fuel and stored at hundreds of commercial reactor sites around the globe.

We believe that our thorium/reactor-grade plutonium disposing fuel technology may offer a more economically viable way to dispose of separated reactor-grade plutonium than alternative fuel technologies, such as the mixed oxide (“MOX”) fuel, or long-term storage alternatives. Currently, some nuclear reactor operators, primarily in the European Union and Japan, have their spent fuel reprocessed and re-used in nuclear reactors as MOX fuel. We expect that our thorium/reactor grade plutonium disposing fuel will be less expensive compared to MOX or conventional uranium fuel, assuming that the separated reactor-grade plutonium is available at no cost.

The cost of reprocessing spent fuel from reactors and converting it into reactor fuel is typically more expensive than producing new fuel from uranium. Spent reactor fuel has been reprocessed as a method of reducing the amount of nuclear waste in certain locations, particularly in Europe, Russia, and Japan. This reprocessing has resulted in stockpiles of plutonium that have been extracted from the spent reactor fuel. The governments of these countries generally regard this stockpiled plutonium as a liability because they pay to safeguard and secure the plutonium. In these locations, the governments may be willing to provide the plutonium free of charge if it can be used to generate electricity in a way that eliminates the plutonium stockpiles.



The long-term storage alternative faces substantial opposition from the communities chosen as sites, such as Yucca Mountain in Nevada, on grounds of environmental and safety risks. Also, the long life of plutonium means that the stored spent fuel will be a proliferation risk for centuries. Recently, the United States has abandoned the idea of long-term storage of used fuel at the Yucca Mountain site and is in the process of evaluating alternative options that may include used fuel reprocessing. Many countries have been committed to the long-term storage alternative for a number of years. In early 2006, in announcing its Global Nuclear Energy Partnership (GNEP), the United States announced that it would work with other countries to develop proliferation-resistant environmentally compatible technologies and processes to promote recycling and reduce the need for storage in long term repositories.

We believe that benefits offered by thorium/reactor-grade plutonium fuel designs include enhanced proliferation resistance, improved reactor safety, and significantly reduced volume, weight and long-term radio-toxicity of spent fuel.

Our marketing strategy with respect to thorium/reactor-grade plutonium disposing fuel is to educate reactor operators, who presently own stockpiles of separated reactor-grade plutonium and are forced to pay ongoing plutonium storage fees, about the benefits offered by this fuel technology to convince them to recycle these plutonium stockpiles in their reactors using thorium/reactor-grade plutonium disposing fuel.

#### *Thorium/Weapons-Grade Plutonium Disposing Fuel*

This fuel design (the Radkowsky Thorium Plutonium Incinerator, or RTPI) was developed to meet the needs of the U.S.-Russia plutonium disposition program. It is the policy of those countries to eliminate their extensive stockpiles of surplus weapons grade plutonium. In 2000, the U.S. and Russia signed a bi-lateral agreement, committing each country to dispose of 34 metric tons of surplus weapons-grade plutonium.

We believe that our thorium/weapons-grade plutonium disposing fuel could offer a faster, cheaper, and more effective means than other available technologies to dispose of excess quantities of weapons-grade plutonium by “burning” it using the RTPI fuel design in existing VVER nuclear power plants in Russia (a similar design may be usable in the U.S. and other Western countries). We plan to continue educating government officials and key decision-makers on the benefits of this technology for the plutonium disposition.

#### *Licensing Revenue from Our Fuel Technology*

We plan to license our nuclear fuel designs to one or more of the above mentioned nuclear fuel fabricators that have long-term supply contracts with nuclear power producers. Typically, firm commitments for fuel reloads are made by utilities 2 – 3 years before actual deliveries of fresh fuel to the nuclear power plant are made by the supplier. As a result, we will have to secure a commitment from a nuclear power producer for a first fuel reload using our proprietary fuel at least 2 – 3 years prior to transitioning to partial cores. Depending on the terms of the licensing arrangement with the fuel fabricator, we may be able to generate early licensing revenue that may include technology transfer fees and other upfront fees paid by the licensee to the Company before a first partial core is fabricated and supplied to the nuclear power plant, in addition to ongoing annual licensing fees paid by the licensee on a per fuel assembly or per reactor basis.

#### *Sources and Availability of Raw Materials*

We are a fuel designer that intends to license our technology to fuel fabricators. Accordingly, we do not plan to utilize any raw materials in the conduct of our operations. However, the fuel fabricators which potentially will license our fuel designs in the future, will need thorium and uranium to fabricate thorium-based fuels.

All of our nuclear fuel designs require both thorium and uranium in the oxide form which are the main raw materials for blanket rods. The seed rods contain either enriched uranium or plutonium metals mixed with zirconium.

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, or IAEA, thorium is over three times more naturally abundant than uranium and is found in large quantities in monazite sands in many countries, including, Australia, India, the United States of America, and China. Several companies that process monazite sands to extract rare earth minerals for use in other markets have stockpiled thorium as a byproduct with no significant current market. Currently, there is no large supplier of thorium.

Uranium and zirconium are available to the fuel fabricators from various suppliers at market driven prices. Weapons-grade plutonium, which would be used to fabricate Lightbridge’s weapons grade plutonium disposing fuel, is generally unavailable. However, governments that have developed nuclear weapons capabilities could use our fuel designs to dispose of their excess weapons-grade plutonium. Reactor-grade plutonium is available in Europe, Russia and Japan from reprocessed spent fuel. The transfer and use of reactor-grade plutonium is highly regulated.

Nuclear fuel provision generally works as a tolling operation. Rather than ordering assembled nuclear fuel, reactor operators separately source (1) uranium, (2) services to convert the uranium into uranium hexafluoride gas that is capable of being enriched, (3) uranium enrichment services, and then (4) pay a nuclear fuel fabricating company to fabricate the enriched uranium into nuclear fuel. We expect that when its fuel is ordered in the future by a reactor operator from a nuclear fuel fabrication company, following the standard nuclear power industry model, the reactor operator will need to provide the thorium materials that the nuclear fuel fabricating company will use to fabricate the nuclear fuel. It will then be necessary for the nuclear reactor operator to obtain thorium material on a timely basis and on acceptable terms. We believe that reactor operators will readily be able to obtain thorium on a timely basis and on acceptable terms, given that thorium is at least three times as abundant as uranium in the earth, and that the extraction method for thorium is well established and is used for extracting thorium for various small-scale industrial applications.

### ***Dependence on Government Support and Cooperation***

We believe that deployment and commercialization of the thorium/uranium and reactor-grade plutonium disposing fuel designs can be largely completed without direct government support. These fuel designs are more dependent on interest in these fuels within the commercial nuclear power industry.

Successful development and deployment of our thorium/weapons-grade plutonium disposing fuel technology, however, is dependent upon government support. This fuel design is being developed for application in the U.S.-Russia plutonium disposition mission that is a government program run by the National Nuclear Security Administration (“NNSA”) of the U.S. Department of Energy (“DOE”) and its Russian government counterparts pursuant to the plutonium disposition agreement that the United States and Russia entered into in 2000. The total cost to carry out the plutonium disposition mission will be in the billions of dollars. To date, the plutonium disposition program in the United States and Russia has been funded primarily by the U.S. government. The G-8 countries have made funding commitments for approximately \$800 million toward the Russian part of the plutonium disposition program but have not yet provided the funds.

In the fiscal year 2004 federal budget cycle, the U.S. Congress appropriated \$4 million for testing and evaluation of our thorium/weapons-grade plutonium disposing fuel technology for the plutonium disposition mission in Russia. Additional funding support is required from the U.S. and other governments to complete the development, testing, demonstration and deployment of our thorium/weapons-grade plutonium disposing fuel.

In March 2010, Nevada Senator Harry Reid and Utah Senator Orrin Hatch introduced a bipartisan bill that would provide \$250 million over a five-year period for research and development of thorium-based fuels.

### **Our Intellectual Property**

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

#### ***Issued Patents***

U.S. patents:

- Patent No. 6,026,136, a seed-blanket unit fuel assembly for a nuclear reactor
- Patent No. 5,949,837, a nuclear reactor having a core including a plurality of seed-blanket units
- Patent No. 5,864,593, a method for operating a nuclear reactor core comprised of at least first and second groups of seed-blanket units
- Patent No. 5,737,375, a nuclear reactor having a core including a plurality of seed-blanket units

The U.S. patents expire August 16, 2014.

International patents:

- Russia — Patent No. 2,176,826
- Russia — Patent No. 2,222,837
- South Korea — Patent No. 301,339
- South Korea — Patent No. 336,214
- China — Patent No. ZL 96196267.4

The international patents expire August 16, 2014.

### **Pending Patents**

- PCT patent application NO. PCT/RU2007/000732 filed in Russia on December 27, 2007 — “Nuclear Reactor (Alternatives), Fuel Assembly of Seed-Blanket Subassemblies for Nuclear (Alternatives), and Fuel Element for Fuel Assembly”.
- 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”.
- Euroasian patent application NO. 200802041, Priority claimed based on PCT/RU 200732.
- U.S. provisional patent application NO. 61/116,730 filed on November 21, 2008 entitled “Nuclear Reactor (Alternatives), Fuel Assembly of Seed-Blanket Subassemblies for Nuclear Reactor (Alternatives), and Fuel Element for Fuel Assembly”.
- U.S. utility patent application No. 12340833 filed on December 22, 2008. Priority claimed on PCT/RU 2007/000732 and U.S. provisional patent application No. 61/116,730.
- European Patent Application No. EP08172834.7 filed on December 23, 2008 entitled “A Fuel Element, A Fuel Assembly and a Method of Using a Fuel Assembly”. Priority claimed on PCT/RU 2007/000732 and A U.S. provisional patent application No. 61/116,730.

We have recently filed trademark applications in the United States, European Union and Russia for the following trademarks:

- Lightbridge corporate name
- Lightbridge corporate logo
- Thorium Power corporate name

Presently, we are executing a strategy aimed at further expanding our intellectual property portfolio.

### **Regulation**

No safety regulatory approval is required to design thorium-based nuclear fuels, although certain technology transfers may be subject to national and international export controls. However, the testing, fabrication and use of nuclear fuels by our future partners and licensees are heavily regulated. The Kurchatov Institute and other locations where our fuel designs may be initially tested require governmental approvals from the host country’s nuclear regulatory authority to test fuel in research reactors and other nuclear testing facilities. The Kurchatov Institute has obtained such approvals from the Russian nuclear regulatory authorities for the ongoing tests of our fuel designs that are taking place at Russian facilities. Nuclear fuel fabricators, which will potentially fabricate fuel using our technology under 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.

### **Employees**

As of December 31, 2009, we had 21 employees, 18 of whom were full-time employees. We believe that our relationship with our employees is satisfactory.

We use consultants with specific skills to assist with various business functions including evaluation, finance, due diligence, acquisition initiatives, corporate governance, business development, research and development and government relations.

### **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](http://www.ltbridge.com) as soon as reasonably practicable after such reports are electronically filed with, or furnished to, the SEC. 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 Mclean, VA 22102 USA. The information posted on our web site is not incorporated into this Annual Report.

## **Item 1A. Risk Factors.**

### **Business Risks**

***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. In addition, 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.

***Recent turmoil in the credit markets and the financial services industry may impact our ability to collect receivables on a timely basis and may negatively impact our cash flow.***

Recently, the credit markets and the financial services industry have been experiencing a period of unprecedented turmoil and upheaval. While the ultimate outcome of these events cannot be predicted, they may have a material adverse effect on us. These events could also adversely impact the availability of financing to our clients and therefore adversely impact our ability to collect amounts due from such clients or cause them to terminate their contracts with us completely.

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

Before 2008 we were a development stage company. We have only recently commenced the provision of nuclear consulting services and currently have only one significant client 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. We are subject to the risks, expenses and problems frequently encountered by companies in the early stages of development.

***Competition for highly skilled consulting 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. A loss of a significant number of our employees could have a serious negative effect on us.

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

Our revenue, and thereby our profitability, will be largely based on the bill 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 without significant underutilized personnel,
- our ability to transition employees from completed projects to new engagements,
  
- our clients' perceptions of our ability to add value through our services,
- our competitors' pricing of services,

- the market demand for our services,
- our ability to manage our human capital resources, and
- our ability to manage significantly larger and more diverse workforces as we increase the number of our professionals and execute our growth strategies.

***We expect that our future client engagements will generally be short term in nature, less than one year, and may be terminated. Our inability to attract business from new or then existing clients could have a material adverse effect on us.***

We might not meet our current or future commitments if we do not continually secure new engagements.

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. We expect that our engagements will usually be relatively short term in comparison to our office-related expenses and other infrastructure commitments.

Additionally, the above mentioned factors limit our ability to predict future revenues and required professional staffing, which can impact our financial results.

***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.

In addition, 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. In addition, 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 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 market opportunities will exist. Our fuel designs are still in the research and development stage and while irradiation testing in a test reactor in Russia (which mimics the operating characteristics of an actual commercial reactor) and thermal-hydraulic experiments have been ongoing for several years, the fuel technology is yet to be demonstrated in an existing commercial reactor. We will not be certain about the ability of the fuel we design to perform in actual commercial reactors until we are able to demonstrate our fuel designs. We will also have to establish a relationship 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.

In addition, there are several technical challenges involved in commercializing thorium based fuels. Some of the technical challenges with our technology identified by the experts at Russian Research Centre Kurchatov Institute, an independent contractor that is closely affiliated with the government of the Russian Federation, Westinghouse Electric Company LLC, and the International Atomic Energy Agency (“IAEA”), include:

- *Fuel Fabrication* : The relatively high melting point of thorium oxide will require fuel pellet manufacturing techniques that are different from those currently used for uranium pellets.
- *Fuel Fabrication* : Our metallic seed fuel rod designs are greater than 3 meters long compared to conventional Russian metallic icebreaker fuel rods that we understand are approximately 1 meter long. The longer rods will require new equipment, and experience making longer extrusions.
- *Fuel Design* : Our “seed-and-blanket” fuel assembly design has a detachable central part which is not in conventional fuel designs.
- *Fuel Design* : Some of our fuel designs include plutonium-zirconium fuel rods which will operate in a soluble boron environment. Current reactor operating experience is with uranium-zirconium fuel in a boron-free environment.

- *Fuel Use* : Our fuel is expected to be capable of producing more gigawatt days per ton of fuel than is allowed by current reactor licenses, so to gain full economic benefits, reactor operators will have to obtain regulatory approval.
- *Fuel Use* : The thorium-uranium oxide blanket section in our fuels is expected to produce energy economically for up to 9 years in the reactor core. Conventional uranium fuel demonstrates that the cladding can remain corrosion-free for up to 5 years. Testing is needed to prove corrosion resistance for the longer residence time.
- *Fuel Reprocessing* : The IAEA has identified a number of ways that reprocessing spent thorium fuel will require technologies different from existing uranium fuel reprocessing. Management's current marketing plans do not assume or depend on the ability to reprocess and recycle spent fuel. Management expects spent thorium fuel will go into long term storage. This is current U.S. government policy for all spent commercial nuclear fuel.

***Our fuel designs differ from fuels currently licensed and used by commercial nuclear power plants. As a result, the licensing and approval process for our fuels may be delayed and made more costly, and industry acceptance of our fuels may be hampered.***

Our fuel designs differ significantly in some aspects from the fuel licensed and used today by commercial nuclear power plants. Some of the differences between our fuels and those currently used include:

- use of thorium and uranium oxide mix instead of only uranium oxide,
- higher uranium enrichment level,
- seed-and blanket fuel assembly design integrating thorium and uranium,
- high burn-up levels of seed and blanket,
- use of metallic seed rods,
- longer residence time of the blanket in the reactor, and
- the ability of some of our fuels to dispose of reactor-grade plutonium and/or weapons-grade plutonium through the use of new fuel designs and in reactors that have never used plutonium-bearing fresh fuels.

These differences will likely result in more prolonged and extensive review by the U.S. Nuclear Regulatory Commission and other nuclear licensing authorities and customers. Also, the nuclear industry may be hesitant to switch to another fuel with little or no history of successful commercial use because of the need for additional engineering and testing with no guarantee of success, as well as investor reluctance to invest in a new technology when viable existing technologies are available.

***Our plans to develop our thorium/weapons-grade plutonium disposing fuel are dependent upon U.S. government funding and support. Without such support, we are unlikely to be able to serve this market.***

Our thorium/weapons-grade plutonium disposing fuel design is highly dependent upon U.S. and perhaps other government funding, and acceptance as a technology appropriate to eliminate U.S. and Russian stockpiles of surplus weapons-grade plutonium. In the past, we have faced resistance from some offices within the U.S. Department of Energy ("DOE") that support other alternative plutonium disposing technology, particularly mixed plutonium uranium oxide ("MOX") fuel designs. The Company has spent a significant amount of funds to gain commercial and market acceptance for its fuel designs.

***Our plans to develop our thorium-based fuel designs depend on us acquiring rights to the designs, 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.***

Dr. Alvin Radkowsky invented the thorium fuel technology that we are developing. Upon founding Thorium Power in 1992, Dr. Radkowsky assigned all of his rights in the intellectual property relating to such fuel designs to Thorium Power, Inc. Thorium Power, Inc. then filed patent applications in the United States and other countries and the patents were issued and are held solely by our Company. We are currently conducting fuel assembly design work in Russia through the Russian Research Centre Kurchatov Institute, OKBM, MSZ Electrostal and others, that are independent contractors 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, methodologies or processes required for the fabrication of fuel assemblies. If we desire to utilize such processes or methodologies in the future, we must obtain a license or other right to use such technologies from the Russian entities that previously developed and own such technologies. If we are unable to obtain such a license or other right on terms that the Russian entities deem to be reasonable, then we may not be able to fully exploit our intellectual property and may be hindered in the sale of products and services.

***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. 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. We do not have a key man insurance policy relating to Seth Grae or any other key individuals, and do not anticipate obtaining any such insurance.

***The price of fossil fuels or uranium may fall, which would reduce the interest in thorium fuel by reducing the economic advantages of utilizing thorium-based fuels and adversely affect the market prospects for our fuel designs.***

Coal, uranium and crude oil prices are currently at historically high levels. Management believes the high cost of these energy sources has resulted in increased interest in other sources of energy such as thorium. If prices of traditional energy sources fall, then the demand that the company expects for thorium based fuels may not materialize. A decrease in demand for thorium-based fuels would negatively affect our future operating results.

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

Substantially all of our present research activities are in Russia. Our research operations 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 the plutonium disposition program and 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 have a significant adverse impact on our ability to execute our business model. Furthermore, the Russian institutes engaged in the Lightbridge 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 this project should be redirected to other high priority national projects in the nuclear sector which could lead to delays or have other significant adverse impacts on our project. Finally, certain future R&D activities to be performed by Russian entities under contract with us will require formal authorization from the Russian State Atomic Energy Corporation, "Rosatom", which owns those entities and is the main Russian government agency that oversees Russia's civil nuclear power industry. Securing such Russian government authorization is vital to the overall success of our R&D activities relating to the Russian VVER reactors and our ability to begin a full-scale product demonstration (i.e., lead test assembly testing) in an operating VVER-1000 nuclear power plant.

***We serve the nuclear power industry, which is highly regulated.***

The nuclear power industry is a highly regulated industry. We intend to license our fuel designs to nuclear fuel fabricators, which would in turn, sell the thorium-based nuclear fuel that would be fabricated using our intellectual property to nuclear generating companies. All nuclear companies are subject to the jurisdiction of the United States Nuclear Regulatory Commission, or its foreign equivalents, with respect to the operation of nuclear reactors, fuel cycle facilities, and handling of nuclear materials and technologies. The U.S. Nuclear Regulatory Commission, and its foreign equivalents, subject nuclear facilities to continuing review and regulation covering, among other things, operations, maintenance, emergency planning, and security, as well as the environmental and radiological aspects of those facilities. These nuclear regulatory bodies may modify, suspend or revoke operating licenses and impose civil penalties for failure to comply with applicable laws and regulations such as the Atomic Energy Act, the regulations under such Act, or the terms of such licenses. Possession and use of nuclear materials, including thorium-based nuclear fuel, would require the approval of the United States Nuclear Regulatory Commission or its counterparts around the world, and would be subject to monitoring by international agencies.

***Public opposition to nuclear power could increase.***

Successful execution of our business model is dependent upon public support for nuclear power in the United States and other countries. Nuclear power faces strong opposition from certain competitive energy sources, individuals and organizations. The occurrence of another major, Chernobyl-like nuclear accident 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 United States Nuclear Regulatory Commission and equivalent foreign governmental authorities. 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. In fact, since the Chernobyl nuclear accident, no new nuclear power plant has been built and opened in the United States.

***Modifications to existing nuclear fuel cycle infrastructure as well as reactors may prove too extensive or costly.***

The existing nuclear fuel cycle infrastructure is predominantly based on low-enrichment uranium oxide fuels. Introduction of thorium-based fuel designs, which require relatively higher enriched uranium or plutonium as a source of reactivity into the existing nuclear fuel cycle supply chain, would necessitate certain changes to procedures, processes and equipment used by existing nuclear fuel fabrication facilities, and nuclear fuel transportation companies. In addition, 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 seed rods must be produced using a co-extrusion fabrication process that was developed in Russia. 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 or plutonium seed fuel. While we understand that the co-extrusion fabrication process has been successfully used in Russia for decades to produce one meter long metallic nuclear fuel rods used in nuclear reactors that propel Russian icebreakers, it must be upgraded and tested to demonstrate its ability to produce longer metallic rods (approximately 3.5 meters long for Russian VVER-1000 reactors), so that our seed fuel can be consistent with the standard length of fuel rods used in existing commercial reactors. Full-size metallic fuel rods have not yet been produced using this fabrication process, and there are no guarantees that this new fabrication technology will be successful.

Deployment of our nuclear fuel designs into existing commercial reactors may require modifications to existing equipment, refueling and fuel handling procedures, and other processes utilized at existing nuclear power plants. The costs of such modifications are difficult to ascertain. While one of our goals is to make our fuel designs as compatible as possible with the design of existing commercial reactors in order to minimize the extent and cost of modifications that may be required, we may not be able to achieve compatibility sufficient to reduce the extent and costs of required modifications, to make our fuel designs economical for reactor operations.

***Our nuclear fuel process is dependent on outside suppliers of nuclear and other materials.***

Production of fuel assemblies using our nuclear fuel designs is dependent on the ability of fuel fabricators to obtain supplies of thorium oxide for the “blanket” component of our fuel assembly design. Fabricators will also need to obtain metal for components, particularly zirconium. These materials are regulated and can be difficult to obtain or may have unfavorable pricing terms. The inability of fabricators to obtain these materials could have a material adverse effect on their ability to market fuel based on our technology.

***We may be unable to protect our intellectual property, particularly in light of Russian intellectual property laws.***

Intellectual property rights are evolving in Russia, trending towards international norms, but are by no means fully developed. We work closely with our Russian branch office employees and other Russian contractors to develop some of our intellectual property and so some of our intellectual property rights derive, or are affected by, Russian intellectual property laws. If the application of these laws to our intellectual property rights proves inadequate, then the Company may not be able to fully avail itself of our intellectual property and our business model may therefore be impeded.

***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 also be subject to U.S. export controls administered by the U.S. Department of Energy, and/or the U.S. Department of Commerce. U.S. governmental authorizations may be required before we can export our services or technology. These controls are subject to change and a number of U.S. governmental licensing policies. 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.



## 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 its 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
- results of analyses of mining and resources assets.

In addition, the stock market has recently experienced extreme volatility that has often been 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 \$41,768 per month for office rent and approximately another \$2,741 per month for other fees for the rented office space located at 1600 Tysons Boulevard, Suite 550, McLean, Virginia 22102. The space is used by our executives and employees 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 \$9,322 per month for office rent and approximately another \$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, 2010 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. The address for our branch in Abu Dhabi is Fotouh Al Khair Center ( Marks & Spencer) Tower No. 3, '0' floor, next to Etisalat Head office, PO Box 44183, Abu Dhabi.

### **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. Submission of Matters to a Vote of Security Holders.**

We did not submit any matters to a vote of our security holders during the quarter ended December 31, 2009.

## PART II

### Item 5. Market for Common Equity, Related Stockholder Matters and Small Business 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 closing bid 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.

The quotations for all periods prior to and including September 30, 2009 have been adjusted to account for our 30-for-1 reverse stock split which was effective as of September 21, 2009.

<b>Fiscal Year</b>	<b>Quarter Ending</b>	<b>High</b>	<b>Low</b>
2009	December 31	\$ 12.05	\$ 5.03
	September 30	\$ 10.95	\$ 5.46
	June 30	\$ 7.35	\$ 5.40
	March 31	\$ 8.40	\$ 4.08
2008	December 31	\$ 7.20	\$ 4.20
	September 30	\$ 8.40	\$ 4.50
	June 30	\$ 9.30	\$ 6.60
	March 31	\$ 10.80	\$ 6.60

#### Holdings

As of February 1, 2010, our common stock was held by 207 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. Additionally, 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.

## 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.

#### Overview

The following Management’s Discussion and Analysis of Financial Condition and Results of Operations (“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 cash flows; an overview of financial position.

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

##### *General Overview*

We are a provider of nuclear energy consulting and strategic advisory services and a developer of proprietary nuclear fuel designs, each of which will be described in the following sections.

##### *Consulting and Strategic Advisory Services Business Segment*

Substantially all of our revenues are derived from our Consulting and Strategic Advisory Services business segment, which provides nuclear consulting services to entities within the United Arab Emirates, or UAE, as described in Note 3 to our financial statements for the years ended December 31, 2009 and 2008, which are included with this report. We may enter into additional consulting contracts to provide support and assistance to other commercial and governmental entities that are looking to develop and expand their nuclear power industry capabilities and infrastructure. In future consulting engagements, we expect that revenues may be derived either from fixed professional fee agreements or from fees generated through hourly rates, billed on a time and expense basis.

Our most significant expense related to our consulting and strategic advisory services business segment is the cost of consulting services provided, which relates to costs associated with generating consulting revenues, and includes employee payroll expenses and benefits, contractor compensation, vendor compensation, marketing expenses, direct costs of training and recruiting the consulting staff and other costs. As revenues are generated from services performed by our permanent staff and contractors, our success depends on attracting, retaining and motivating talented, creative and experienced professionals at all levels in our business.

## ***Technology Business Segment***

Our operations related to development and demonstration of our thorium-based nuclear fuel designs primarily involve testing of the fuel designs, developing strategic relationships within and outside of the nuclear power industry, securing political and financial support from the U.S. and Russian governments, and the filing of patent applications including related administrative functions.

On August 3, 2009, we entered into two agreements with AREVA regarding our fuel technology business. The first was an Agreement for Consulting Services, or Consulting Agreement, pursuant to which we will conduct the first phase of an investigation of specific topics of thorium fuel cycles in AREVA's light water reactors, or LWRs. This first phase will focus on providing initial general results relating to evolutionary approaches to the use of thorium in AREVA's LWRs, specifically within AREVA's Evolutionary Power Reactor. We will receive total fees of \$550,000 for services provided pursuant to the Consulting Agreement. The anticipated second phase and further phases of the collaboration, including a detailed study of evolutionary and longer-term thorium fuel concepts, will be conducted in accordance with additional collaborative agreements based upon the results of the first phase. The second agreement we signed with AREVA was a five-year Collaborative Framework Agreement, pursuant to which we will establish a joint steering committee with AREVA, which will be responsible for reviewing project proposals, will be empowered to make scientific and/or technical decisions and will allocate the resources required to implement future collaborative projects between us and AREVA.

To date, we have only had minimal direct revenues from our research and development activities regarding our proprietary nuclear fuel technology, and we do not expect to generate licensing revenues from this business for several years, until our fuel designs can be fully tested and demonstrated and we obtain the proper approvals to use our nuclear fuel designs in nuclear reactors. We believe we can leverage our general nuclear technology, business and regulatory expertise as well as industry relationships, to optimize our technology development plans and create integrated advisory services with the highest levels of expertise and experience in the nuclear power industry. Additionally, our knowledge of and credibility in addressing proliferation related issues that we have developed over many years, benefit our consulting and strategic advisory services business. Our advisory services include a focus on non-proliferation, safety and operational transparency of nuclear power programs.

### **Material Opportunities and Challenges**

#### ***Consulting and Strategic Advisory Services***

Our emergence in the field of nuclear energy consulting is in direct response to the need for independent assessments and highly qualified and integrated strategic advisory services for countries looking to establish nuclear energy programs, while still providing a blueprint for safe, clean, efficient and cost-effective non-proliferative nuclear power. We offer full-scope planning and strategic advisory services for new and existing markets and offer such services without a bias towards or against any reactor vendor or fuel technology. We believe that there are significant opportunities available to provide services to governments that are dedicated to non-proliferative, safe, and transparent nuclear programs.

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. Also, 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.

#### ***Proprietary Nuclear Fuel Technology Development***

We believe that a major opportunity for us is the possibility that our thorium-based fuel designs, which are currently in the research and development stage, will be used in the manufacturing of nuclear fuel utilized in many existing light water nuclear reactors in the future. Light water reactors are the dominant reactor types currently in use in the world, and fuels for such reactors constitute the majority of the commercial market for nuclear fuel. Currently, we have three types, or variants, of thorium-based fuel designs in various stages of development. The first is designed to provide reactor owner/operators with an economically viable alternative fuel that will not generate weapons-usable plutonium in the spent fuel. The second is designed to dispose of reactor-grade plutonium that has been extracted from spent fuel from commercial reactors and stockpiled in Russia, Western Europe, the U.S., Japan, and other countries. The third is designed to dispose of weapons-grade plutonium that is stockpiled in Russia and the United States. All three of these fuel variants are expected to have additional benefits, including reduced volume and reduced long-term radio-toxicity of spent fuel for the same amount of electricity generated, as compared with the uranium fuels that are currently used in light water reactors. Presently, our focus is on the first design.

From our U.S. and Moscow offices, we are working with Russian nuclear research institutes and Russian nuclear regulatory authorities, to have one or more of the fuel designs demonstrated in a Russian VVER-1000 reactor within the next three to four years, if we are able to obtain necessary support and enter into agreements with the Russian government and Russian research institutes. We believe that it will be necessary to enter into commercial arrangements with one or more major nuclear fuel fabricators, which in many cases are also nuclear fuel vendors, as a prerequisite to having our fuel designs widely deployed in global markets.

Our nuclear fuel designs have never been demonstrated in a full-size commercial reactor. Our planned demonstration of the fuels in a VVER-1000 reactor in Russia would provide operating experience that is critical to reactor owners and regulatory authorities. We believe that once the fuels have been demonstrated in the VVER-1000 reactor, this can help convince other light water reactor operators around the world to accept our thorium-based fuel designs.

We have also been conducting research and development related to a variant of these nuclear fuel designs for use in existing and future western pressurized water reactors.

We believe that our greatest challenge will be acceptance of these fuel designs by nuclear power plant operators, which have in the past been hesitant to be the first to use a new type of nuclear fuel. In addition, our fuel designs would require regulatory approval by relevant nuclear regulatory authorities, such as the Nuclear Regulatory Commission in the United States or its equivalent agencies in other countries, before they can be used in commercial reactors. The regulatory review process, which is outside of our control, may take longer than expected and may delay a rollout of the fuel designs into the market. We believe that demonstration of one of the Company's fuel designs in a commercial nuclear reactor would make deployment of the other designs easier, due to the many similarities that exist among all of our fuel designs.

We have been building relationships with companies and organizations in the nuclear power industry for several years. We will attempt to cause some or all of these companies and organizations to work in a consortium or a joint venture type arrangement with us in the future. However, we may not be able to develop any such consortium or arrangement in the near term or at all. The companies that we have identified for potential relationships have existing contracts with nuclear power plant owner/operators, under which they supply nuclear fuel branded with their name to such nuclear power plants. We will attempt to cause these nuclear fuel vending companies to provide their nuclear power plant operating customers with fuels that are designed with our technology. To do so, we will need to enter into agreements with one or more of these companies. Without such arrangements it would be more difficult for us to license our fuel designs because, in addition to the reputations, guarantees, services, and other benefits that these nuclear fuel vendors provide when selling fuel to nuclear power plant operators, they also often have multi-year fuel supply contracts with the reactor operators. These multi-year fuel supply contracts act as a barrier to entry into the market, such that it can be almost impossible to penetrate some markets for nuclear fuel without working with a nuclear fuel vendor that can support long term contracts. If we are successful in demonstrating our fuel designs in Russia and in continuing to build relationships with nuclear fuel vendors, we believe it may lead to one or more of these major companies in the nuclear power industry working with us in producing and selling our nuclear fuel designs to commercial reactor operators and governments.

See also "Item 1A. Risk Factors" in Part I of this report for additional information about risks and uncertainties facing our Company.

## Critical Accounting Policies

### *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 Warrants Granted to Employees and Non-employees*

We adopted the FASB requirements for stock-based compensation, where all forms of share-based payments to employees, including employee stock options and employee 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 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. 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. As a result, 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.

The options were valued using the Black-Scholes option pricing model. The assumptions used were as follows: volatility of 96% to 284%, a risk-free interest rate of 2.6% to 5.24%, dividend yield of 0% and an exercise term of two to ten years.

### ***Income Taxes***

We account for income taxes using the liability method in accordance with the FASB 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 FASB 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 FASB 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 foreign commercial and government owned entities 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 were fixed-fee service contracts but were subsequently changed to time and expense contracts. We recognized 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.

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 \$242,000 as of December 31, 2009. 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 believes that any liability to the Company that may arise as a result of having to pay out additional expenses that may have a material adverse effect on the financial condition of the Company taken as a whole should be disclosed. Refer to Note 10 of 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.

## 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, 2009 and 2008, in order to provide a meaningful discussion of our business segments. We have organized our operations into two principal segments: Consulting and Strategic Advisory Services and 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.

	<u>Consulting</u>	<u>Technology</u>	<u>Corporate and Eliminations</u>	<u>Total 12 Months</u>
<b>December 31, 2009</b>				
Revenue	10,257,306	259,072	—	10,516,378
Segment Profit (Loss) – Before Tax	3,771,974	(1,597,699)	(9,407,586)	(7,233,312)
Total Assets	2,297,070	309,274	4,529,694	7,136,038
Property Additions	—	—	14,920	14,920
Interest Expense	—	—	—	—
Depreciation	—	—	25,482	25,482
<b>December 31, 2008</b>				
Revenue	22,219,905	—	—	22,219,905
Segment Profit (Loss) – Before Tax	11,131,182	(2,505,990)	(11,474,568)	(2,849,376)
Total Assets	1,278,020	217,875	10,950,882	12,446,777
Property Additions	—	—	102,113	102,113
Interest Expense	—	—	—	—
Depreciation	—	—	24,668	24,668

## Consulting and Strategic Advisory Services Business

At the present time, substantially all of our revenue for the year ended December 31, 2009, is derived from our consulting and strategic advisory services business segment by offering services to foreign governments planning to create or expand electricity generation capabilities using nuclear power plants benefiting from thorium-based or other nuclear fuels. The fee type and structure that we offer for each client engagement is dependent on a number of variables, including the complexity, the level of the opportunity for us to improve the client's electricity generation capabilities using nuclear power plants, and other factors. Substantially all of the Company's revenues, totaling approximately \$10.2 million, for the year ended December 31, 2009, have been derived from our continuing work under the August 1, 2008 agreements and follow-on agreements in 2009, with the Executive Affairs Authority, or EAA, of Abu Dhabi, and upon their subsequent formation, the Emirates Nuclear Energy Corporation, or ENEC, and the Federal Authority for Nuclear Regulation, or FANR. We entered into next phase follow-on agreements in March 2009 and July 2009 to continue our consulting services under the ENEC and FANR agreements for 2009.

Revenue was recognized on a time and expense basis for the year ended December 31, 2009 and for the third and fourth quarter of 2008. Revenue was recognized during our first fiscal quarter of 2008 on a fixed-fee basis from our initial project with the EAA called Roadmap on March 31, 2008, when the work on this contract was substantially completed. We recognized revenue during the second quarter of 2008 from our second project with the EAA called the Quickstart project ratably over the term of the agreement, as this contract called for on-going consulting services from March 2008 through June 2008. Revenues from these two projects and the August 1, 2008 agreements mentioned above totaled approximately \$22.2 million for the year ended December 31, 2008.

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The cost of consulting services provided was approximately \$6.2 million and \$11.1 million for the years ended December 31, 2009 and 2008, respectively. These amounts consisted primarily of direct labor consulting expenses and other labor support costs incurred, as mentioned in the general overview section above. Some indirect corporate overhead expenses incurred were allocated to the consulting and strategic advisory services business segment, and are included above in the business segment information chart as part of *Segment Profit (Loss) – Before Tax*.

## Technology Business

On August 3, 2009, we entered into a consulting agreement with AREVA for \$550,000, as discussed above. For the year ended December 31, 2009 our total revenue from AREVA was approximately \$259,000 (fees of \$238,000 and expense billings of \$21,000). As of the date hereof, we have successfully completed the first three tasks and two-thirds of task four out of the total of six tasks under Phase 1 of the consulting agreement. We are executing work on the remaining tasks as planned.

Over the next 12 to 15 months we expect to incur up to \$5 – \$6 million in research and development expenses related to the development of our proprietary thorium-based nuclear fuel designs. We expect to incur these expenses after we have entered into formal agreements with Russian nuclear entities that will grant us licensing and other rights to use such technologies or intellectual property developed by the Russian entities. Any such agreement may require formal review and approval by the Russian State Atomic Energy Corporation (“RosAtom”). We spent approximately \$1.6 million for research and development in 2009, and a cumulative amount from the date of our inception (January 8, 1992, date of inception of Thorium Power Inc.) to December 31, 2009 of approximately \$7.9 million. As of May 1, 2008, we established an office in Moscow and leased office space to support research and development



2009 of approximately \$7.9 million. As of May 1, 2008, we established an office in Moscow and leased office space to support research and development activities in Russia, and, in July 2009, we hired several employees (former consultants) to work on our research and development projects in Russia.

Over the next several years, we expect that our research and development activities will increase and will be primarily focused on testing and demonstration of our fuel technology for VVER-1000 reactors. The main objective of this research and development phase is to prepare for full-scale demonstration of our thorium-based nuclear fuel technology in an operating commercial VVER-1000 reactor in Russia. Key research and development activities will include: (1) scaling up the fuel fabrication process to full length (10 feet) rods used in commercial VVER-1000 reactors, (2) validating thermal hydraulic performance of the full size (10 feet) seed and blanket fuel assembly, (3) designing the loop irradiation test, fabricating longer fuel samples and conducting loop irradiation testing of the fabricated longer samples, and (4) obtaining final regulatory approvals for insertion of fuel in VVER-1000 commercial reactors. As this research and development program relates to commercial applications of our fuel technology, and retaining ownership or control over as much key intellectual property as we possibly can is critical to the long-term success of our licensing business model, our plan is to fully fund these research and development activities ourselves. At the same time, we do not currently plan to fund research, testing and demonstration of our thorium/weapons-grade plutonium disposing fuel, which can only be used in the U.S.-Russia government-to-government weapons-grade plutonium disposition program and has no commercial applications. Hence, funding for any future research and development activities on this fuel design would have to be provided by the U.S. government or other stakeholders.

## Financial Status

At December 31, 2009, our total assets were approximately \$7.1 million and total liabilities were approximately \$2.1 million. From the results of operations including our consulting business segment, our working capital surplus decreased by approximately \$2.3 million at December 31, 2009. Our working capital was approximately \$4.5 million and \$6.8 million at December 31, 2009 and 2008, respectively.

Management expects that our current cash position, as well as the revenue and profits that are expected to be earned from our follow-on agreements from the two consulting agreements entered into in August 2008, and the AREVA agreement, will meet our foreseeable working capital needs for our current operations until sometime in 2011. We anticipate entering into other consulting and technology agreements with our existing and new clients that may generate additional revenues going forward. In support of our longer-term business plan for our technology business segment, we will need to raise additional capital in the near term by way of an offering of equity securities, an offering of debt securities, or a financing through a bank or other entity to finance our overhead and research and development expenditures. We will also need to raise capital to support our technology business if the consulting and strategic advisory services business becomes non-sustaining. Our current average monthly projected working capital requirements for the Company's total expenses, excluding the \$5 – \$6 million of research and development expenses we expect to incur in Russia over the next 12 – 15 months, is approximately \$1,000,000 per month. A financing or other capital raising transaction will need to take place sometime during 2010 or 2011, to ensure that we have the necessary working capital to continue our planned business operations through 2010 and beyond. A financing may not be available or we may not be able to obtain that financing on terms acceptable to us. If additional funds are raised through the issuance of equity securities, there may be a significant dilution in the value of our outstanding common stock. To support this financing activity, we are exploring transaction opportunities that could simultaneously create strategic industry and market alliances for us to support our operations going forward.

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## Consolidated Results of Operations

The following table summarizes certain aspects of the Company's consolidated results of operations for the year ended December 31, 2009 compared to the year ended December 31, 2008.

*Comparison of the Year Ended December 31, 2009 to the Year Ended December 31, 2008*

	Year Ended December 31,		(Decrease) Change \$	(Decrease) Change %
	2009	2008		
<b>Consulting Revenues</b>	\$ 10,516,378	22,219,905	\$ (11,703,527)	(53)%
<b>Cost of services provided</b>				
Consulting expenses	\$ 6,228,046	11,088,723	\$ (4,860,677)	(44)%
% of total revenues	59%	50%		
<b>Gross profit</b>	\$ 4,288,332	\$ 11,131,182	\$ (6,842,850)	(61)%
% of total revenues	41%	50%		
<b>Operating Expenses</b>				
General and administrative	\$ 9,896,027	\$ 12,608,000	\$ (2,711,973)	(22)%
% of total revenues	94%	57%		
Research and development expenses	\$ 1,632,208	\$ 1,565,594	\$ 66,614	4%
% of total revenues	16%	7%		
Total Operating Loss	\$ (7,239,903)	\$ (3,042,412)	\$ 4,197,491	138%
% of total revenues	(69)%	(14)%		
Other Income and (Expenses)				
Interest income/expense, other	\$ 6,591	\$ 193,036	\$ (186,445)	(97)%
% of total revenues	0%	1%		
<b>Net loss – before income taxes</b>	\$ (7,233,312)	\$ (2,849,376)	\$ 4,383,936	154%
% of total revenues	(69)%	(13)%		

### Revenues

There was \$10.2 million of revenue for the year ended December 31, 2009 that was mostly generated from our consulting and strategic advisory services business segment. The 53 percent decrease in revenue for the year ended December 31, 2009 compared to 2008 was primarily due to the uneven nature of our consulting projects with ENEC and FANR, which are being performed pursuant to ongoing requests to work on specific projects on a time and expense basis as needed. For the first and second quarter of 2008, for the Road Map Project (first quarter of 2008) and Quick Start project (second quarter of 2008), these

two contracts were entered into on a fixed fee basis and we therefore earned more revenue on these contracts and other work performed with ENEC and FANR in 2008, than on the 2009 contracts that were performed on a time and expense basis.

Our work with ENEC was reduced in 2009 due in part to ENEC's focus on selecting a prime contractor for the development and implementation of its nuclear power program. Our work with FANR was delayed in the third and fourth quarters of 2009 due to FANR's implementation of a new security clearance review process for all consultants retained by FANR. Notwithstanding the normal variations in billable hours worked under these contracts, we re-negotiated some of our billing rates in 2009 to further enhance and maintain the competitiveness of our advisory services which also resulted in a reduction of our revenue for the year ended December 31, 2009, compared to 2008. The future revenue to be earned and recognized under both the ENEC and FANR agreements will depend upon future agreed upon work plans which can differ from the revenue amounts initially planned to be earned under these agreements and amounts earned in prior periods.

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For the year ended December 31, 2009, we earned approximately \$259,000 (fees of \$238,000 and expense reimbursement billings of \$21,000) from our new consulting agreement with AREVA mentioned above. We will receive total fees of \$550,000 for services provided pursuant to this Consulting Agreement. The anticipated second phase and further phases of the collaboration, including a detailed study of evolutionary and longer-term thorium fuel concepts, will be conducted in accordance with additional collaborative agreements based upon the results of the first phase of our work.

#### *Cost of Services Provided*

The decrease in the cost of services for the year ended December 31, 2009 compared with 2008 is due to the decrease in billable hours for the ENEC and FANR projects, which also reduced our reported revenue numbers for the year ended December 31, 2009. These expenses related to the consulting, professional, administrative and other costs allocated to the consulting projects, which were incurred to perform and support the work done for our consulting projects with the EAA in Abu Dhabi. The billing rates to us from our consultants who provide services under our consulting contracts primarily remained unchanged in 2009 and 2008. This decrease was offset by an approximately \$216,000 increase in the cost of services provided for the AREVA project mentioned above, for the year ended December 31, 2009.

#### *Gross Profit*

The total gross profit margin of 41 percent for the year ended December 31, 2009 is lower as compared to 2008 because the advisory contracts changed from fixed price contracts to time and expense contracts for the entire year of 2009. Our gross margins from our advisory contracts with ENEC and FANR also decreased due to the reduction that occurred in the third quarter and fourth quarter of 2009 in some of our hourly consultants' billing rates to the EAA.

#### *General and Administrative Expenses*

There was a 22 percent decrease in the general and administrative expenses for the year ended December 31, 2009, as compared to 2008. This decrease was primarily due to decreases in (1) consulting expenses of approximately \$1,200,000, (2) travel expenses of approximately \$156,000, (3) stock-based compensation of approximately \$1 million, (4) public relations expenses and other professional fees of approximately \$576,000, (5) payroll and payroll related benefits of \$283,000 and (6) office expenses of \$129,000. The decreases in these expenses were partially offset by increases in (1) finance personnel to support our new ERP accounting system and to support the activities of our consulting projects, as well as to strengthen our internal controls for Sarbanes Oxley compliance of approximately \$349,000, (2) the cost of more office space for our branch offices established in 2009 of approximately \$28,000, (3) insurance expense of approximately \$118,000, (4) dues of \$67,000 and (5) telephone and internet of \$41,000. In 2009, we incurred professional fees to engage firms to assist us in establishing branch offices in Abu Dhabi and Russia. To reduce our consulting fees in 2009, we established our Strategic Advisory Council, which replaced our International Advisory Board, and we also hired employees who were formerly consultants. We expect that our general and administrative expenses may increase in future periods due to the expansion of our consulting and strategic advisory services business segment and the hiring of new officers, employees and consultants to help further develop and support our consulting and strategic advisory services and technology business segments.

The decrease in stock-based compensation for the year ended December 31, 2009 as compared to 2008, is due to certain long-term incentive stock options and stock that were granted in prior years under our stock plan to executives, directors, advisors and employees, which became fully vested in 2008. Stock-based incentives were granted to current management, directors, board members and employees on January 21, 2009, April 6, 2009, April 26, 2009, July 14, 2009, and July 22, 2009. In the future, stock-based compensation may be offered to attract new employees in 2010, due to our expansion to meet the demands of contracts with our current customers, and anticipated future business with new customers.

#### *Research and Development Costs*

The increase in research and development costs for the year ended December 31, 2009 compared to 2008 is due to the increase in the scope of work for our research and development activities in Russia. We expect that our research and development expenses will increase in the future periods. Over the next 12 to 15 months we expect to incur approximately up to \$5 – \$6 million in research and development expenses related to the development of our proprietary nuclear fuel designs.

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#### *Other Income and Expense*

The decrease in other income and expense for the year ended December 31, 2009 is due to the decrease in interest income earned on our idle cash.

#### **Liquidity and Capital Resources**

As of December 31, 2009, we had total cash and cash equivalents of approximately \$3.0 million. The following table provides detailed information about our cash flow for all financial statements periods presented in this Report.

about our net cash flow for an financial statements periods presented in this report.

### **Cash Flow**

	<b>December 31,</b>	
	<b>2009</b>	<b>2008</b>
Net cash provided by (used in) operating activities	\$ (2,560,733)	\$ (3,614,876)
Net cash provided by (used in) investing activities	\$ (38,890)	\$ (102,113)
Net cash provided by (used in) financing activities	\$ 48,170	\$ (610,458)
Net cash inflow (outflow)	\$ (2,551,453)	\$ (4,327,447)

### **Operating Activities**

Net cash used by our operating activities decreased by approximately \$1.0 million for the year ended December 31, 2009, as compared to 2008. This decrease in funds used by our operating activities was primarily due to an increase in our collections of our accounts receivable in 2009 of approximately \$8.0 million and a decrease in our deferred revenue liability of approximately \$3.8 million (cash received in 2007 as a prepayment for 2008 consulting services). This decrease in funds used by our operating activities was offset by an increase in funds used by our operating activities due to the increased operating loss of approximately \$4.3 million (\$6.0 million increase in our net loss or use of cash in 2009, if you exclude the \$1.7 million decrease in non-cash stock-based compensation expense in 2009 versus 2008, that is included in the \$4.3 million net loss difference). Total stock-based compensation was approximately \$6.5 million in 2008, which was included in the net loss reported of approximately \$2.9 million in 2008. Total stock-based compensation was approximately \$4.8 million in 2009, which was included in the net loss reported for 2009 of approximately \$7.2 million. There was also an increase in 2009 for payments made for our accounts payable and accrued liabilities of approximately \$4.8 million. Some of the detail related to changes in the operating activities cash flows are mentioned above in the Consolidated Results of Operations section of this management discussion and analysis, regarding our operating expenses and other income and expense items.

### **Investing Activities**

Net cash used in our investing activities for the year ended December 31, 2009 as compared to 2008 decreased by approximately \$64,000, which was due to the decrease in the acquisition of property and equipment in 2009 of approximately 87,000. This decrease was partially offset by an increase in professional fees incurred in 2009 for the filing of patent applications of approximately \$24,000. These patent applications are filed for the new developments resulting from our research and development activities in our fuel technology business segment.

### **Financing Activities**

Net cash provided by our financing activities increased by approximately \$658,000 for the year ended December 31, 2009, as compared to 2008. This increase in the cash provided by financing activities was mainly attributable to a decrease in 2009 in cash used for collateral and classified as restricted cash of \$648,000, and a decrease in the payments of notes payable of approximately \$10,000.

### **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.

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### **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, 2009 and 2008 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.

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## 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 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 Financial Officer, evaluated the effectiveness of the design and operation of our disclosure controls and procedures as of December 31, 2009. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that as of December 31, 2009, 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, 2009. 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, 2009, the Company's internal control over financial reporting is 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, 2009, 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, 2009. 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 2009, 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 2010 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 2010 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 2010 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 2010 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 2010 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.

<b>Exhibit Number</b>	<b>Description</b>
3.1*	Articles of Incorporation
3.2	By-laws (incorporated by reference from the Company's Current Report on Form 8-K filed on September 18, 2006).
4.1	2005 Compensation Plan for Outside Consultants of Custom Brand Networks, Inc. dated March 1, 2005 (incorporated by reference from the Company's Registration Statement on Form S-8 filed on March 10, 2005).
4.2	2005 Augmented Compensation Plan for Outside Consultants of the Company dated August 15, 2005 (incorporated by reference from the Company's Registration Statement on Form S-8 filed on August 19, 2005).
4.3	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.

\* Filed herewith



**AUDITED FINANCIAL STATEMENTS**

**LIGHTBRIDGE CORPORATION**

**December 31, 2009 and 2008**

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**Child,  
Van Wagoner  
& Bradshaw,**

**PLLC**

CERTIFIED PUBLIC ACCOUNTANTS



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**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Board of Directors and  
Stockholders of Lightbridge Corporation  
McLean, VA 22102

We have audited the accompanying consolidated balance sheets of Lightbridge Corporation as of December 31, 2009 and 2008, 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, 2009, 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, 2009 and 2008, 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, 2009, 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  
Child, Van Wagoner & Bradshaw, PLLC  
Salt Lake City, Utah  
March 5, 2010

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

	<b>December 31, 2009</b>	<b>December 31, 2008</b>
<b>ASSETS</b>		
<b>Current Assets</b>		
Cash and cash equivalents	\$ 3,028,791	\$ 5,580,244
Restricted cash	652,174	650,000
Accounts receivable - project revenue and reimbursable project costs	2,421,088	5,357,804
Prepaid expenses & other current assets	574,095	394,315
<b>Total Current Assets</b>	<b>6,676,148</b>	<b>11,982,363</b>
Property Plant and Equipment -net	97,559	108,121
<b>Other Assets</b>		
Patent costs - net	241,845	217,875
Security deposits	120,486	138,418
<b>Total Other Assets</b>	<b>362,331</b>	<b>356,293</b>
<b>Total Assets</b>	<b>\$ 7,136,038</b>	<b>\$ 12,446,777</b>
<b>LIABILITIES AND STOCKHOLDERS EQUITY</b>		
<b>Current Liabilities</b>		
Accounts payable and accrued liabilities	\$ 2,162,221	\$ 5,138,979
<b>Total Liabilities</b>	<b>2,162,221</b>	<b>5,138,979</b>
Commitments and contingencies		
<b>Stockholders' Equity</b>		
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, 10,168,412 shares issued and outstanding at December 31, 2009 and 10,049,769 shares (restated for reverse stock split of 1 for 30, prior to reverse stock split was 301,493,084 shares issued and outstanding at December 31, 2008)	10,168	10,050
Additional paid in capital - stock and stock equivalents	54,108,685	48,898,894
Accumulated Deficit	(48,723,286)	(41,489,974)
Common stock reserved for issuance, 5,721 shares and 16,135 shares (restated for reverse stock split of 1 for 30, prior to reverse stock split was 484,055 shares) at December 31, 2009 and 2008, respectively	34,750	114,787
Deferred stock compensation	(456,500)	(225,959)
<b>Total Stockholders' Equity</b>	<b>4,973,817</b>	<b>7,307,798</b>
<b>Total Liabilities and Stockholders' Equity</b>	<b>\$ 7,136,038</b>	<b>\$ 12,446,777</b>

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

**LIGHTBRIDGE CORPORATION**

**CONSOLIDATED STATEMENTS OF OPERATIONS**

	Years Ended December 31,	
	2009	2008
Revenue:		
Consulting Revenue	\$ 10,516,378	\$ 22,219,905
Cost of Consulting Services Provided	<u>6,228,046</u>	<u>11,088,723</u>
Gross Margin	4,288,332	11,131,182
Operating Expenses		
General and administrative	9,896,027	12,608,000
Research and development expenses	<u>1,632,208</u>	<u>1,565,594</u>
Total Operating Expenses	<u>11,528,235</u>	<u>14,173,594</u>
Operating loss	(7,239,903)	(3,042,412)
Other Income and (Expenses)		
Interest income	22,422	162,893
Other	(15,831)	0
Realized loss on marketable securities		<u>30,143</u>
Total Other Income and Expenses	<u>6,591</u>	<u>193,036</u>
Net loss before income taxes	(7,233,312)	(2,849,376)
Income taxes	<u>0</u>	<u>10,026</u>
Net loss	<u>\$ (7,233,312)</u>	<u>\$ (2,859,402)</u>
Net Loss Per Common Share, Basic and diluted	<u>\$ (0.72)</u>	<u>\$ (0.29)</u>
Weighted Average Number of shares outstanding for the period used to compute per share data - (prior reporting periods restated to reflect 1 for 30 reverse stock split)	<u>10,021,429</u>	<u>10,002,364</u>

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

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

	Years Ended December 31,	
	2009	2008
<b>Operating Activities:</b>		
Net Loss	\$ (7,233,312)	\$ (2,859,402)
Adjustments to reconcile net loss from operations to net cash used in operating activities:		
Stock based compensation	4,848,987	6,546,493
Depreciation and amortization	25,482	24,668
Gain on marketable securities - available for sale	0	(30,143)
Changes in non-cash operating working capital items:		
Accounts receivable - fees and reimbursable project costs	2,936,716	(5,357,804)
Prepaid expenses and other current assets	(179,780)	(190,280)
Security deposits	17,932	(136,369)
Accounts payable, accrued liabilities and other current liabilities	(2,976,758)	1,809,455
Deferred revenue	0	(3,793,125)
Deferred project costs - net	0	371,631
Net Cash Used In Operating Activities	<u>(2,560,733)</u>	<u>(3,614,876)</u>
<b>Investing Activities:</b>		
Property and equipment	(14,920)	(102,113)
Patent costs	(23,970)	0
Net Cash Used In Investing Activities	<u>(38,890)</u>	<u>(102,113)</u>
<b>Financing Activities:</b>		
Proceeds from issue of common shares	50,344	49,975
Payments on notes payable and other	0	(10,433)
Increase in restricted cash	(2,174)	(650,000)
Net Cash Provided by (Used In) Financing Activities	<u>48,170</u>	<u>(610,458)</u>
Net Decrease In Cash and Cash Equivalents	(2,551,453)	(4,327,447)
Cash and Cash Equivalents, Beginning of Year	<u>5,580,244</u>	<u>9,907,691</u>
Cash and Cash Equivalents, End of Year	<u>\$ 3,028,791</u>	<u>\$ 5,580,244</u>
<b>Supplemental Disclosure of Cash Flow Information</b>		
Cash paid during the year:		
Interest paid	<u>\$ 0</u>	<u>\$ 0</u>
Income taxes paid	<u>\$ 0</u>	<u>\$ 10,026</u>

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

**LIGHTBRIDGE CORPORATION**

**CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY**

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Stock Committed Future Issuance	Accumulated Comprehensive Income	Deferred Stock Compensation	Stockholders' Equity
	Shares	Amount						
Balance - December 31, 2007	299,014,182	\$ 299,014	\$ 41,791,735	\$ (38,630,572)	\$ 590,000	\$ 30,143	\$ (479,445)	\$ 3,600,875
Balance - December 31, 2007 - Restated to reflect 1 to 30 reverse stock split on September 29, 2009	9,967,139	9,967	42,080,782	(38,630,572)	590,000	30,143	(479,445)	3,600,875
Unrealized loss on marketable securities						(30,143)		(30,143)
Exercise of stock options	10,678	11	49,964					49,975
Stock option expense			6,138,220					6,138,220
Stock based compensation	5,285	5	39,995		114,787		(114,787)	40,000
Amortization of deferred stock compensation costs							368,273	368,273
Shares issued	66,667	67	589,933		(590,000)			0
Net loss for the year				(2,859,402)				(2,859,402)
Balance - December 31, 2008	10,049,769	10,050	48,898,894	(41,489,974)	114,787	0	(225,959)	7,307,798
Stock based compensation			4,483,735		139,000		226,252	4,848,987
Net loss for the period				(7,233,312)				(7,233,312)
Shares issued- non cash	108,026	108	675,722		(219,037)		(456,793)	0
Shares issued- cash (options exercised)	10,617	10	50,334					50,344
Balance - December 31, 2009	10,168,412	\$ 10,168	\$ 54,108,685	\$ (48,723,286)	\$ 34,750	\$ 0	\$ (456,500)	\$ 4,973,817

## LIGHTBRIDGE CORPORATION

### NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

#### 1. NATURE OF OPERATIONS AND BASIS OF PRESENTATION

##### **Nature of operations**

Radkowsky Thorium Power Corp., incorporated in the state of Delaware on January 8, 1992, changed its name to Thorium Power, Inc. in April 2001. On February 14, 2006, Novastar Resources Ltd. ("Novastar"), entered into an Agreement and merged on October 6, 2006 with Thorium Power, Inc. After the merger, the company was known as Thorium Power, Ltd. On September 29, 2009 we changed our name from Thorium Power, Ltd. to Lightbridge Corporation ("Lightbridge" or the "Company") and we effected a 1-for-30 reverse stock split of the Company's common stock, effective on September 29, 2009. Lightbridge is engaged in two business segments.

##### **Technology Business Segment**

The first business segment is the development, promotion and marketing of our patented thorium-based nuclear fuel designs for existing pressurized water reactors. Presently, we are focusing most of our efforts on demonstrating and testing our nuclear fuel technology for the Russian designed VVER-1000 reactors. Operations to date in this business segment have been devoted primarily to continued development of our fuel designs, filing for certain patents related to our technology, developing strategic relationships within the nuclear power industry, and securing political as well as some financial support from the United States and Russian governments.

Once our reactor fuels are further developed and tested, we plan to license our intellectual property rights to fuel fabricators, nuclear generators, and governments for use in commercial light water nuclear reactors, or sell the technology to a major nuclear company or government contractor, or some combination of the two. We anticipate having the final design of our fuel technology for VVER-1000 reactors and commencing the demonstration of our fuel in a VVER-1000 operating reactor within the next three to five years. Presently all of our research, testing and demonstration activities are being conducted in Russia.

On July 23, 2009, we entered into an Initial Collaborative Agreement ("AREVA Agreement") with AREVA, the world's largest nuclear energy company. Pursuant to the AREVA Agreement, the Company will conduct the first phase of an investigation of specific topics of thorium fuel cycles in AREVA's light water reactors ("LWRs"). This first phase will focus on providing initial, general results relating to evolutionary approaches to the use of thorium in AREVA's LWRs, specifically within AREVA's Evolutionary Power Reactor. AREVA is obligated to pay the Company a total of \$550,000 for services provided in phase 1, assuming no early termination and assuming completion of the original scope of work. Anticipated phase 2 and further phases of the collaboration, including a detailed study of evolutionary and longer-term thorium fuel concepts, will be conducted in accordance with additional collaborative agreements.

Phase 1 and phase 2 of the collaboration between our Company and AREVA are now being conducted with the intention of future collaborative agreements between the two parties in order to develop and set up new products and technologies related to thorium fuel concepts. AREVA's use of our intellectual property for commercial purposes or any purpose, other than as specified in the AREVA Agreement, would be separately negotiated on a royalty basis.

Pursuant to the AREVA Agreement, each party shall retain ownership in its existing (*i.e.*, developed prior to entering into the AREVA Agreement) intellectual property. The parties have also agreed that AREVA will retain full ownership of any work product resulting from the services performed by us under the AREVA Agreement that relate to AREVA's LWRs, and we will retain full ownership of any work product resulting from the services performed by us under the AREVA Agreement that relate to reactors other than AREVA's LWRs, including, but not limited to Russian VVER-type reactors.

##### **Consulting Business Segment**

Our business model expanded in 2007, and our second business segment is providing consulting and strategic advisory services to companies and governments planning to create or expand electricity generation capabilities using nuclear power plants. To date, we have secured four contracts with successively larger values for consulting and strategic advisory services in the United Arab Emirates ("UAE"). On August 1, 2008, we signed separate consulting services agreements with two government entities in Abu Dhabi. Under these two new agreements, we are to provide consulting and strategic advisory services over a contract term of five years starting June 23, 2008, with automatic renewals of these contracts for one year periods. In 2009, certain contractual items in these two agreements were amended, and we entered into amended agreements. These contracts are billed on a time and expense basis.

## Accounting Policies and Pronouncements

In June 2009, the Financial Accounting Standards Board (“FASB”) issued a new accounting pronouncement which identifies the sources of accounting principles and the framework for selecting the principles to be used in the preparation of financial statements that are presented in conformity with U.S. generally accepted accounting principles (“GAAP”). This accounting pronouncement does not change the way the Company accounts for its transactions or the nature of related disclosures made. This accounting pronouncement affects the way the Company references U.S. GAAP in its consolidated financial statements. The Company adopted this accounting pronouncement in the fourth quarter of fiscal 2009 and is referring to these new sources of accounting principles in these financial statements as accounting pronouncements.

Certain reclassifications have been made to the 2008 financial statements so that it conforms to the classifications made in the 2009 financial statements.

A reclassification has been made for stock-based compensation, originally reported as a separate line item in 2008 but now is reported for 2009 and 2008 in general and administrative expenses.

On September 29, 2009, a 1-for-30 reverse stock split of the Company’s common shares became effective. Total common stock outstanding at December 31, 2008 was originally reported as 301,493,084 shares and is being restated as 10,049,769 shares. The loss per share reported for the year ended December 31, 2008 was originally reported at \$0.01 per share, and has been restated to a loss per share of \$0.29, based on the restated weighted average shares outstanding at December 31, 2008, originally reported on the statement of operations as 300,070,925 shares, and restated as 10,002,364 shares (restated to reflect this 1 for 30 reverse stock split).

### a) Consolidation

These financial statements include the accounts of Lightbridge, a Nevada corporation, and our wholly-owned subsidiaries, Thorium Power, Inc., a Delaware corporation, Lightbridge Power International Holding, LLC, a Delaware limited liability company and our branch offices.

All significant intercompany transactions and balances have been eliminated in consolidation. We formed a branch office in England in 2008 called Lightbridge Advisors Limited, which is wholly-owned by Lightbridge Power International Holding, LLC, as well as a branch office in Moscow, Russia, established in July 2009.

### b) Use of Estimates and Assumptions

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

#### Significant Estimates

These consolidated financial statements include some amounts that are based on management's best estimates and judgments. The most significant estimates relate to valuation of stock grants and stock options, the valuation allowance for deferred taxes and various contingent liabilities. It is reasonably possible that these above-mentioned estimates and others may be adjusted as more current information becomes available, and any adjustment could be significant in future reporting periods.

### c) Risks and Uncertainties

The Company’s future operations and earnings will depend on the results of the Company’s operations outside the United States. There can be no assurance that the Company will be able to successfully continue to conduct such operations, and a failure to do so would have a material adverse effect on the Company’s financial position, results of operations, and cash flows. Also, the success of the Company’s operations will be subject to other numerous contingencies, some of which are beyond management’s control. These contingencies include general and regional economic conditions, prices for the Company’s services, competition, changes in regulations, changes in accounting and taxation standards, inability to achieve our overall long-term goals, future impairment charges and global or regional catastrophic events. Because the Company is dependent on international operations for all its revenue, particularly in one country right now, the Company will be subject to various additional political, economic, and other uncertainties.



We participate in a highly regulated industry that is characterized by governmental regulation. Our results of operations are affected by a wide variety of factors including decreases in the use or public favor of nuclear power, the ability of our technology, the ability to safeguard the production of nuclear power, and safeguarding our patents and intellectual property from competitors. Due to these factors, we may experience substantial period-to-period fluctuations in our future operating results. Potentially, a loss of a key officer, key management, and other personnel could impair our ability to successfully execute our business strategy, particularly when these individuals have acquired specialized knowledge and skills with respect to nuclear power and our operations. Our research operations are subject to various political, economic, and other risks and uncertainties inherent in Russia.

Our Company monitors our operations with a view to minimizing the impact to our overall business that could arise as a result of the risks and uncertainties inherent in our business.

#### **d) Revenue Recognition**

##### Consulting Business Segment

At the present time we are deriving substantially all of our revenue from our consulting and strategic advisory services business segment, by offering services to governments outside the United States planning to create or expand electricity generation capabilities using nuclear power plants. Our fee structure for each client engagement is dependent 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 electrical generation capabilities using nuclear power plants, and other factors. The accounting policy we use to recognize revenue depends on the terms and conditions of the specific contract.

All of our consulting contracts in 2009 and 2008 mentioned below are with the Executive Affairs Authority ("EAA") of Abu Dhabi, one of the member Emirates of the UAE, and the related entities, Emirates Nuclear Energy Corporation ("ENEC") and Federal Authority for Nuclear Regulation ("FANR"). All of the Company's revenues recognized for 2009 were recognized on a time and expense basis. All of the Company's revenues recognized for the first quarter of 2008 were recognized under the completed performance model of revenue recognition for our first consulting project with EAA (Roadmap). All of the Company's revenues for the second quarter of 2008 were derived from the completion of the defined contract deliverables required from the second consulting contract entered into March 2008 with the EAA, and completed in June 2008. All of the Company's revenues for the third and fourth quarter of 2008 were recognized on a time and expense basis.

Certain customer arrangements require evaluation of the criteria outlined in the accounting standards for reporting revenue "*Gross as a Principal Versus Net as an Agent*" in determining whether it is appropriate to record the gross amount of revenue and related costs, or the net amount earned as agent fees. Generally, when we are primarily obligated in a transaction, revenue is recorded on a gross basis. Other factors that we consider in determining whether to recognize revenue on a gross versus net basis include our assumption of credit risk, latitude in establishing prices, our determination of service specifications and our involvement in the provision of services. We have determined, based on the credit risk that we now bear for collecting consulting fees, travel costs and other reimbursable costs from our customers, that in 2009 we acted as a principal, and therefore we are recognizing as revenue all travel costs and other reimbursable costs billed to our customers.

For the year ended December 31, 2008, we were paid upfront by our customer for all travel costs and other reimbursable costs, thus these reimbursed costs were not recorded as revenue in 2008.

##### Technology Business Segment

We recognize revenue from our agreement with AREVA upon the completion of certain defined contract deliverables that are accepted by AREVA.

Once the Company's thorium-based nuclear fuel designs have advanced to a commercially usable stage, the Company will seek to license our technology to major government contractors, working for the U.S. and other governments or nuclear companies. We expect that our revenue from license fees will be recognized on a straight-line basis over the expected period of the related license term.

#### **e) Trade Accounts Receivable**

We record trade accounts receivable at net realizable value. This value includes an appropriate allowance for estimated uncollectible accounts to reflect any loss anticipated on the trade accounts receivable balances and charged to the provision for doubtful accounts. We calculate this allowance based on our history of write-offs, level of past-due accounts based on the contractual terms of the receivables, and our relationships with and the economic status of our customers. There was no provision for doubtful accounts recorded at December 31, 2009 and 2008. Substantially all accounts receivable at December 31, 2009 and 2008 were from ENEC and FANR.

#### **f) Deferred Project Costs**

All costs directly related to producing the work under the agreements with AREVA, such as consulting costs, other professional fees and various administrative support and other costs, are capitalized as deferred project costs (reported as prepaid expenses and other current assets on the accompanying balance sheet). Deferred project costs are then recognized or amortized to an expense captioned "cost of consulting services provided" on the accompanying statement of operations, when the revenue is to be recognized upon delivery and acceptance of defined deliverables.

#### **g) Segment Reporting**

The Company uses the "management approach" in determining reportable operating segments. The management approach considers the internal organization and reporting used by the Company's chief operating decision makers for making operating decisions and assessing performance, as the source for determining the Company's reportable segments. The Company has determined that the Company has two operating segments as mentioned above and defined by the FASB accounting pronouncement, "*Disclosures about Segments of an Enterprise and Related Information*". The two reporting business segments are our technology business and our consulting and strategic advisory services business.

#### **h) Cash and Cash Equivalents and Restricted Cash**

We classify marketable securities that are highly liquid and have maturities of three months or less at the date of purchase as cash equivalents. We manage our exposure to counterparty credit risk through specific minimum credit standards, diversification of counterparties and procedures to monitor our credit risk concentrations. Restricted cash represents cash being held by Capital One, and this cash is used as collateral for the Company's corporate credit cards. This cash became unrestricted in January 2010 when the Company cancelled its credit card program with Capital One. The Company does hold cash balances in excess of the federally insured limits of \$250,000 with two prominent financial institutions. The Company deems this credit risk not to be significant.

#### **i) Fair Value Measurements**

We adopted the FASB accounting pronouncement, "*Fair Value Measurements*," effective January 1, 2008 for financial assets and liabilities measured on a recurring basis. This FASB accounting pronouncement applies to all financial assets and financial liabilities that are being measured and reported on a fair value basis. As defined by this FASB accounting pronouncement, fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (exit price). This FASB accounting pronouncement requires disclosure that establishes a framework for measuring fair value and expands disclosure about fair value measurements. The statement requires that fair value measurements be classified and disclosed in one of the following categories:

- Level 1: Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities. We consider active markets as those in which transactions for the assets or liabilities occur with sufficient frequency and volume to provide pricing information on an ongoing basis.
- Level 2: Quoted prices in markets that are not active, or inputs that are observable, either directly or indirectly, for substantially the full term of the asset or liability. This category includes those derivative instruments that we value using observable market data. Substantially all of these inputs are observable in the marketplace throughout the full term of the derivative instrument, and can be derived from observable data or supported by observable levels at which transactions are executed in the marketplace. Instruments in this category include non-exchange traded derivatives such as over-the-counter commodity price swaps, investments, and interest rate swaps.
- Level 3: Measured based on prices or valuation models that require inputs that are both significant to the fair value measurement and less observable from objective sources (*i.e.*, supported by little or no market activity).

We held approximately \$1.6 million of auction rate securities throughout the year in 2008, which were classified at a Level 3 fair value measurement. These securities were originally recorded at face value because their full redemption at face value was guaranteed by the financial institution holding these securities. In the fourth quarter of 2008 this financial institution redeemed all of these securities at their full face value. We did not hold any marketable securities at December 31, 2008, therefore the balance in accumulated other comprehensive income was \$0 at December 31, 2009 and 2008.

Unrealized gains and losses and the related deferred income tax effects are excluded from earnings and reported as a separate component of stockholders' equity, other comprehensive income (loss). Realized gains or losses are computed based on specific identification of the securities sold. There was a realized gain of \$30,143, reported as other income and expense on the accompanying statement of operations, for the year ended December 31, 2008.

#### **j) Property and Equipment**

Property, plant and equipment is comprised of furniture, computers and office equipment and is stated at cost less accumulated depreciation. Depreciation of furniture, computers and office equipment is recognized over the estimated useful life of the asset, generally five years utilizing the straight line balance methodology. Upon disposition of assets, the related cost and accumulated depreciation are eliminated and any gain or loss is included in the statement of income. Expenditures for major improvements are capitalized. Expenses related to maintenance and repairs are recognized as the costs are incurred.

#### **k) Intangible Assets — Patents**

Patents are stated in the balance sheet at cost less accumulated amortization. The costs of the patents, once placed in service, are amortized on a straight-line basis over their estimated useful lives. The amortization periods for our patents range between 17 and 20 years. The patents have not been placed in service for the years ended December 31, 2009 and 2008.

#### **l) Income Taxes**

Income taxes are accounted for under the asset and liability method in accordance with the FASB accounting pronouncement “*Accounting for Income Taxes*.” Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial carrying amounts of existing assets and liabilities and their respective tax bases as well as operating loss and tax credit carry forwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. Deferred tax assets are reduced by a valuation allowance to the extent that the recoverability of the asset is unlikely to be recognized. The Company did not provide any current or deferred income tax provision or benefit for any periods presented to date because the Company has continued to experience a net operating loss since inception.

The Company adopted the FASB accounting pronouncement “*Accounting for Uncertainty in Income taxes*”. This pronouncement provides guidance for recognizing and measuring uncertain tax positions, as defined in the FASB accounting pronouncement “*Accounting for Income Taxes*”. This pronouncement prescribes a threshold condition that a tax position must meet for any of the benefits of the uncertain tax position to be recognized in the financial statements. This pronouncement also provides accounting guidance on derecognizing, classification and disclosure of these uncertain tax positions.

#### **m) Stock-Based Compensation**

In December 2004, the FASB issued a revised FASB accounting pronouncement, “*Share-Based Payment*”, which is a revision of the original FASB accounting pronouncement, “*Accounting for Stock-Based Compensation*”. In addition to requiring supplemental disclosures, this pronouncement addresses the accounting for share-based payment transactions in which a company receives goods or services in exchange for (a) equity instruments of the company or (b) liabilities that are based on the fair value of the company’s equity instruments or that may be settled by the issuance of such equity instruments. This accounting pronouncement focuses primarily on accounting for transactions in which a company obtains employee services in share-based payment transactions. The pronouncement generally requires that such transactions be accounted for using a fair value based method. Accordingly, pro-forma disclosure is no longer an alternative.

Under this accounting pronouncement, the Company is required to recognize compensation cost for the portion of outstanding awards previously accounted for under the provisions of APB-25 for which the requisite service had not been rendered as of the adoption date for this Statement. The Statement also requires companies to estimate forfeitures of stock compensation awards as of the grant date of the award.

The Company adopted this FASB accounting pronouncement on January 1, 2006, using the modified prospective method. Stock issued to consultants for consulting services is valued as of the date of the agreements with the various consultants, which in all cases is earlier than the dates when the services are committed to be performed by the various consultants.

#### **n) Basic and Diluted Loss per Share**

In accordance with the FASB accounting pronouncement, “*Earnings Per Share*,” the basic loss per common share is computed by dividing net loss available to common stockholders by the weighted average number of common shares outstanding. Diluted loss per common share is computed in a manner similar to basic loss per common share except that the denominator is increased to include the number of additional common shares that would have been outstanding if the potential common shares had been issued and if the additional common shares were dilutive. At December 31, 2009 and 2008, the Company’s stock equivalents were anti-dilutive and excluded in the diluted loss per share computation because the Company had a net loss.

#### **o) Impairment Charges**

Unlike goodwill and indefinite-lived intangible assets, the accounting pronouncements do not provide for an annual impairment test in determining whether property, plant, and equipment and finite-lived intangible assets (e.g., patents) are impaired. Instead, they require that a triggering event occur before testing an asset for impairment. Examples of such triggering events include current-period operating or cash flow loss combined with a history of operating or cash flow losses, a significant disposal of a portion of such assets, an adverse change in the market involving the business employing the related asset, a significant decrease in the benefits realized from an acquired business, difficulties or delays in integrating the business and a significant change in the operations of an acquired business.

Once a triggering event has occurred, the impairment test employed is based on whether the intent is to hold the asset for continued use or to hold the asset for sale. If the intent is to hold the asset for continued use, the impairment test involves a comparison of undiscounted cash flows against the carrying value of the asset as an initial test. If the carrying value of such asset exceeds the undiscounted cash flow, the asset would be deemed to be impaired. Impairment would then be measured as the difference between the fair value of the fixed or amortizing intangible asset and the carrying value to determine the amount of the impairment. The Company generally determines fair value by using the discounted cash flow method. If the intent is to hold the asset for sale and certain other criteria are met (i.e., the asset can be disposed of currently, appropriate levels of authority have approved the sale, and there is an actively pursuing buyer), the impairment test is a comparison of the asset's carrying value to its fair value less costs to sell. To the extent that the carrying value is greater than the asset's fair value less costs to sell, an impairment loss is recognized for the difference. The Company conducted an impairment test of its patent at December 31, 2009 and 2008, and determined that the future undiscounted cash flows associated with the patent rights were sufficient to recover its carrying value on the balance sheet.

#### **p) Commitments and Contingencies**

Liabilities for loss contingencies arising from various claims, assessments, litigation, fines and penalties and other sources are recorded when it is probable that a liability has been incurred and the amount of the assessment can be reasonably estimated.

#### **q) Retirement 401K Plan**

We have a 401(k) savings plan that was set up in 2006 covering substantially all of our employees. Eligible employees may contribute through payroll deductions. There were no Company matching contributions made to the 401(k) savings plan in 2009 and 2008.

#### **r) Recent Accounting Pronouncements**

In April 2008, the FASB issued a pronouncement regarding the "*Determination of the Useful Life of Intangible Assets*." This guidance amends the factors that should be considered in developing renewal or extension assumptions used to determine the useful life of a recognized intangible asset. The intent of this guidance is to improve the consistency between the useful life of a recognized intangible asset and the period of expected cash flows used to measure the fair value of the asset under other U.S. GAAP. This guidance is effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those fiscal years. The guidance for determining the useful life of a recognized intangible asset shall be applied prospectively to intangible assets acquired after the effective date. Certain disclosure requirements shall be applied prospectively to all intangible assets recognized as of, and subsequent to, the effective date.

In April 2009, the FASB issued a pronouncement regarding "*Interim Disclosures about Fair Value of Financial Instruments Disclosures*" to require disclosures about fair value of financial instruments in interim financial statements as well as in annual financial statements. This new guidance requires these disclosures in all interim financial statements. This guidance is effective for interim and annual periods ending after June 15, 2009, with early application permitted. The fair value of all cash, receivables and payables are equal to the carrying amounts.

In May 2009, the FASB issued a pronouncement regarding "*Subsequent Events*". This guidance establishes general standards of accounting for and disclosure of events that occur after the balance sheet date but before the financial statements are issued or are available to be issued. It requires the disclosure of the date through which an entity has evaluated subsequent events and the basis for that date. This guidance is effective for interim and annual reporting periods ending after June 15, 2009, and shall be applied prospectively.

## 2. FINANCIAL STATUS OF THE COMPANY

The Company is currently executing its strategic plan for 2010 and is working on determining its future cash needs. Management anticipates, based on its current working capital and projected working capital requirements, that it will have enough working capital funds to sustain its current operations at its current operating level until sometime in 2011. In support of the Company's business plan regarding its research and development activities for developing its fuel, the Company will need to raise additional capital in 2010 by way of an offering of equity securities, an offering of debt securities, or a financing through a bank or other entity. The Company may also need to raise additional capital sooner to support its overhead operation if the consulting and strategic advisory services business becomes non-sustaining. Currently, the Company is working on revenue opportunities with the overall goal of increasing the Company's profitability and cash flow. The Company expects to meet all of its financial commitments and operating needs for 2010.

## 3. CONSULTING REVENUES

### ENEC and FANR Projects

Substantially all of the Company's revenue earned in the amount of approximately \$3.0 million for the first quarter of 2009, approximately \$3.4 million for the second quarter of 2009, approximately \$2.0 million for the third quarter of 2009 and approximately \$2.1 million for the fourth quarter of 2009, has been derived from the two consulting contracts entered into in August 2008 with ENEC and FANR, for consulting services. The variation in revenue reflects the uneven nature of consulting projects and the timing of revenues recognized on the respective projects.

We expect to continue to provide strategic advisory services to the EAA of Abu Dhabi and to both the ENEC and FANR entities during the five-year term of these consulting agreements. Under these agreements, revenue will be recognized on a time and expense basis. We periodically discuss our consulting work with the EAA of Abu Dhabi, who will review the work we perform, and our reimbursable travel expenses, and accept our monthly invoicing for services and expenses.

Travel costs and other reimbursable costs under these contracts are reported in the accompanying statement of operations as both revenue and cost of consulting services provided, and totaled approximately \$917,000 for the year ended December 31, 2009. The total travel and other reimbursable expenses that have not been reimbursed are being presented on the accompanying balance sheet and included in total accounts receivable in the amount of approximately \$159,000 at December 31, 2009. The remaining accounts receivable reported at December 31, 2009 of approximately \$2,262,000, represents consulting fees billed and due for the work performed for both the ENEC and FANR projects mentioned above, as well as work performed on the AREVA project. Total accounts receivable reported on the accompanying balance sheet is approximately \$2,421,000 at December 31, 2009, of which approximately \$610,000 is for December 2009 work that was billed in January 2010. Foreign currency exchange loss was approximately \$16,000 and \$0 for the years ended December 31, 2009 and 2008, respectively, which is reported in other income and expense.

## 4. BUSINESS SEGMENTS

The Company has two principal operating segments, which are (1) technology and (2) consulting and strategic advisory services. These operating segments were determined based on the nature of the operations and the services offered. Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief decision-makers, in deciding how to allocate resources and in assessing performance. The Company's Chief Executive Officer, Chief Operating Officer and Chief Financial Officer have been identified as the chief operating decision makers. The Company's chief operating decision makers direct the allocation of resources to operating segments based on the profitability, the cash flows, and the business plans of each respective segment.

The Company evaluates performance based on several factors, of which the primary financial measure is business segment income before taxes. The following tables show the operations of the Company's reportable segments for the years ended December 31, 2009 and 2008.

BUSINESS SEGMENT RESULTS – YEARS ENDED DECEMBER 31, 2009 AND 2008

	Consulting		Technology		Corporate and Eliminations		Total	
	2009	2008	2009	2008	2009	2008	2009	2008
Revenue	10,257,306	22,219,905	259,072	—	—	—	10,516,378	22,219,905
Segment Profit – Before Tax	3,771,974	11,131,182	(1,597,699)	(2,505,990)	(9,407,587)	(11,474,568)	(7,233,312)	(2,849,376)
Total Assets	2,297,070	1,278,020	309,274	217,875	4,529,694	10,950,882	7,136,038	12,446,777
Property Additions	—	—	—	—	14,920	102,113	14,920	102,113
Interest Expense	—	—	—	—	—	—	—	—
Depreciation	—	—	—	—	25,482	24,668	25,482	24,668

5. RESEARCH AND DEVELOPMENT COSTS

Research and development costs, included in the statement of operations amounted to approximately \$1,632,000 and \$1,566,000 for the years ended December 31, 2009 and 2008, respectively. Total cumulative expense has amounted to approximately \$7.9 million from January 8, 1992 (date of inception of Lightbridge) to December 31, 2009. These totals do not include the costs incurred on the research and development contracts for AREVA shown below of approximately \$216,000, which may result in potential intellectual property for the Company to use in the future, for other than AREVA's LWRs reactors, including, but not limited to, Russian VVER-type reactors.

Research and Development Contracts

The Company entered into the AREVA Agreement on July 23, 2009, under which it is obligated to perform certain specific research and development activities. The Company receives fees under the terms of this AREVA Agreement.

AREVA is obligated to pay the Company a total of \$550,000 for services provided in phase 1, assuming no early termination and assuming completion of the original scope of work. AREVA will also reimburse the Company for any reasonable out of pocket expenses properly incurred by the Company and directly attributable to the provision of the services outlined in the Agreement.

Compensation earned and costs incurred by the Company for the year ended December 31, 2009 under this contract are as follows:

Fees earned and reimbursable expenses	<u>\$ 259,072</u>
Costs incurred to date - charged to cost of consulting services provided	<u>\$ 215,963</u>

Deferred projects costs for this project, included on the balance sheet in the caption "prepaid expenses and other current assets", totaled approximately \$53,000 at December 31, 2009. Deferred project costs are then recognized or amortized to an expense captioned, "cost of consulting services provided" (on the accompanying statement of operations), when the revenue is to be recognized as specified deliverables are accepted.

## 6. PROPERTY, PLANT AND EQUIPMENT

The following represents the detail of the Company's property, plant and equipment at December 31, 2009 and 2008:

	<u>2009</u>	<u>2008</u>
Furniture, computers and office equipment	\$ 135,001	\$ 167,139
Accumulated Depreciation	37,442	59,018
Net Book Value	<u>\$ 97,559</u>	<u>\$ 108,121</u>

Depreciation expense for the years ended December 31, 2009 and 2008 was approximately \$25,000 each year. Asset lives are five years and the depreciation method is straight line for all of the above assets. There was no gain or loss on disposition of assets in 2009 and 2008.

## 7. INTANGIBLE ASSETS - PATENTS

Patents represent legal fees and filing costs that are capitalized and amortized over their estimated useful lives of 17 to 20 years. There were no patents placed in service for the years ended December 31, 2009 and 2008. As of December 31, 2008, we had capitalized approximately \$218,000 in patent costs. In 2009 we capitalized approximately \$24,000 for patents, for a total investment in patents of approximately \$242,000 as of December 31, 2009.

No amortization expense of patents was recorded in either of the years ended December 31, 2009 and 2008. These patents were not placed in service for the years ended December 31, 2009 and 2008.

## 8. ACCOUNTS PAYABLE AND ACCRUED EXPENSES

Accounts payable and accrued expenses consisted of the following:

	<u>2009</u>	<u>2008</u>
Trade payables -	\$ 296,120	\$ 2,474,564
Accrued expenses and other	928,054	801,082
Accrued payroll	938,047	1,863,333
	<u>\$ 2,162,221</u>	<u>\$ 5,138,979</u>

## 9. STOCKHOLDERS' EQUITY

On September 29, 2009, the 1-for-30 reverse split of the Company's common shares became effective. Total common stock outstanding at December 31, 2009 was 10,168,412 and was 10,049,769 at December 31, 2008 (restated to reflect this 1 for 30 reverse stock split). This reverse stock split resulted in a decrease in the par value of the common stock and a corresponding increase in additional paid in capital of approximately \$295,000 and \$291,000 at December 31, 2009 and 2008, respectively. At December 31, 2009, there were 5,721 shares reserved for future issuance and 1,785,204 stock options outstanding, all totaling 11,959,337 of total stock and stock equivalents outstanding at December 31, 2009.

### a) Share-Based Compensation

The Company has in place a stock-based compensation plan to reward for services rendered by officers, directors, employees and consultants. On July 17, 2006, the Company amended this stock plan. The Company has reserved 2,500,000 shares of common stock of its unissued share capital for the stock plan. Other limitations are as follows:

1. No more than an aggregate of 1,250,000 shares can be granted for the purchase of restricted common shares during the term of the stock plan;
2. The maximum number of shares of common stock with respect to which options may be granted to any one person during any fiscal year of the Company may not exceed 266,667 shares; and
3. The maximum number of restricted shares that may be granted to any one person during any fiscal year of the Company may not exceed 166,667 common shares.

Total stock options outstanding at December 31, 2009 were 1,785,204 of which 1,217,172 of these options were vested at December 31, 2009.

Stock option transactions to the employees, directors, advisory board members and consultants are summarized as follows for the year ended December 31, 2009:

<b>Stock Options Outstanding</b>	<b>2009</b>
Beginning of the Year	1,736,179
Granted	430,559
Exercised	(10,617)
Forfeited	(128,754)
Expired	(242,162)
End of Period	1,785,204
Options exercisable	1,217,172

The above table includes options issued as of December 31, 2009 as follows:

1. A total of 597,928 non-qualified 5-10 year options have been issued by Lightbridge Corporation., and are outstanding, to advisory board members at exercise prices of \$4.50 to \$19.20 per share.
2. A total of 1,125,319 5-10 year options have been issued to directors, officers and employees of the Company and are outstanding, at exercise prices of \$4.68 to \$23.85 per share. From this total, 683,985 options are outstanding to the Chief Executive Officer who is also a director, with remaining contractual lives of 0.6 – 9.5 years. All other options issued have a remaining contractual life ranging from 0.5 years to 9.5 years.
3. A total of 61,957 non-qualified 5-10 year options have been issued and are outstanding to consultants of the Company, at exercise prices of \$6.30 to \$15.30 per share.

The following table provides certain information with respect to the above-referenced stock options that are outstanding and exercisable at December 31, 2009:

Exercise Prices	Stock Options Outstanding		Stock Options Vested	
	Weighted Average Remaining Contractual Life - Years	Number of Awards	Number of Awards	Weighted Average Exercise Price
\$4.50 - \$8.70	6.91	798,997	335,678	\$ 6.23
\$9.00 - \$12.90	6.13	185,674	145,013	\$ 10.47
\$13.20-\$18.90	4.82	493,865	439,813	\$ 14.00
\$19.20-\$23.85	5.65	306,668	296,668	\$ 22.81
Total	6.04	1,785,204	1,217,172	\$ 13.58

The aggregate intrinsic value of stock options outstanding at December 31, 2009 was \$537,705 of which \$209,828 related to vested awards. The aggregate intrinsic value of stock options outstanding at December 31, 2008 was \$0. Intrinsic value is calculated based on the difference between the exercise price of the underlying awards and the quoted price of our common stock as of the reporting date (\$5.99 per share as of the close on December 31, 2009 and \$4.20 per share as of the close on December 31, 2008). The weighted average fair value of stock options grants made in 2009 and 2008 was approximately \$4.71 and \$7.09, respectively.



Assumptions used in the Black Scholes option-pricing model for the years ended December 31, 2009 and 2008 were as follows:

	<u>2009</u>	<u>2008</u>
Average risk-free interest rate	2.99%	3.61%
Average expected life	10 years	8.78 years
Expected volatility	98.49%	112.30%
Expected dividends	0%	0%

During the years ended December 31, 2009 and 2008, approximately \$4,849,000 and \$6,546,000, respectively, was recorded as total stock-based compensation expense in the statement of operations.

The Company received approximately \$50,000 for the year ended December 31, 2009 from the exercise of 10,617 stock option grants.

Stock-based compensation expense includes the expense related to (1) grants of stock options, (2) grants of restricted stock, and (3) stock issued as consideration for some of the services provided by our directors and strategic advisory council members. Grants of stock options and restricted stock are awarded to our employees, directors, consultants and board members, and we recognize the fair market value of these awards ratably as they are earned. The expense related to payments in stock for services is recognized as the services are provided.

<b>Stock-Based Compensation Recognized</b>	<u>2009</u>	<u>2008</u>
Stock option awards recognized ratably over the service period	\$ 4,483,735	\$ 6,138,220
Restricted stock awards recognized ratably over the service period	226,252	339,106
Stock issued to compensate directors and advisors for services	139,000	69,166
Total Stock-Based Compensation Recognized	<u>\$ 4,848,987</u>	<u>\$ 6,546,492</u>

<b>Stock Based Compensation: Presentation in the Financial Statements</b>	<u>2009</u>	<u>2008</u>
Presented as Cost of Consulting Services Provided	\$ 27,642	\$ 856,657
Presented as General and Administrative Operating Expenses	4,821,346	5,689,835
Total Stock Based Compensation Recognized	<u>\$ 4,848,987</u>	<u>\$ 6,546,492</u>

The total fair market value of restricted stock awards is recorded as deferred stock compensation (a component of equity, which is presented in the Balance Sheet), as grants are awarded. Deferred stock compensation is amortized as stock-based compensation expense is recognized, or grants are forfeited. On December 31, 2009 and 2008 the balance carried in the deferred stock compensation account was \$456,500 and \$225,959, respectively.

<b>Deferred Stock Compensation</b>	<u>2009</u>	<u>2008</u>
Balance Forward	\$ 225,959	\$ 479,445
Restricted Stock Awards Granted	529,121	114,787
Restricted Stock Awards Forfeited	(72,328)	—
Recognition of Stock-Based Expense for Restricted Stock Awards	(226,252)	(368,273)
December 31,	<u>\$ 456,500</u>	<u>\$ 225,959</u>

**b). Warrants**

There no warrants outstanding as of December 31, 2009 and 2008.

c). Common Stock reserved for Future Issuance

Common stock reserved for future issuance consists of

	Shares of Common Stock	Stock Purchase Warrants	Amount
Stock-based Compensation	5,721	—	\$ 34,750

10. INCOME TAXES

Our tax provision is determined using an estimate of our annual effective tax rate adjusted for discrete items, if any, that are taken into account in the relevant period. The 2009 and 2008 annual effective tax rate is estimated to be at a combined 40% for the U.S. federal and states statutory tax rate.

As of December 31, 2009 and 2008, there were no tax contingencies recorded.

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities recognized for financial reporting, and the amounts recognized for income tax purposes. The significant components of deferred tax assets (at a 40% effective tax rate) as of December 31, 2009 and 2008 respectively, are as follows:

Deferred Tax Assets	Total Amount		Deferred Tax Asset Amount	
	2009	2008	2009	2008
Capitalized start up costs	\$ 6,613,773	\$ 7,125,807	\$ 2,645,509	\$ 2,850,323
Stock-based compensation	18,958,076	14,474,341	7,583,230	5,789,735
Net operating loss carryforward	17,756,315	14,494,704	7,102,526	5,797,882
Less: valuation allowance	(43,328,164)	(36,094,849)	(17,331,265)	(14,437,940)
	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>

The Company has net operating loss carryforwards for federal and state tax purposes of approximately \$17.8 million that is available to offset future taxable income that begin to expire in the year 2021. For financial reporting purposes, no deferred tax asset was recognized because at December 31, 2009 substantially all of the net operating losses are presently expected to expire unused. As a result, the amount of the deferred tax assets considered realizable was reduced 100% by a valuation allowance. The Company has no other deferred tax assets or liabilities. The change in the valuation allowance was approximately \$2,893,000 for the year ended December 31, 2009. Many of the Company's operating expenses in its 2007 and 2006 tax years were classified under the internal revenue code as capitalized start-up costs which were not deductible for tax purposes until 2008.

The Company files a consolidated tax return with its subsidiaries.

In 2009, the Company prepaid federal and state income taxes in the amount of \$266,000, for estimates for 2008 corporate taxes. The Company received its Federal tax refund of \$225,000 from the Internal Revenue Service in the fourth quarter of 2009, and its State tax refunds of \$41,000 in the first quarter of 2010.

11. RESEARCH AGREEMENTS

Effective on August 21, 2009, Lightbridge entered into an agreement for ampoule irradiation testing (the "AIT Agreement") with the Russian Research Centre Kurchatov Institute ("Kurchatov"). Under the AIT Agreement, Lightbridge agreed to compensate Kurchatov for irradiation testing of Lightbridge's proprietary nuclear fuel designs conducted in 2008 and part of 2009. Pursuant to the AIT Agreement, Lightbridge is obligated to pay to Kurchatov a total of \$400,000, and Kurchatov is obligated to transfer to Lightbridge the worldwide rights in all of the test data generated in the course of the irradiation testing of Lightbridge's proprietary nuclear fuel designs in 2008 and part of 2009. Kurchatov agrees not to use, in any manner, the work product associated with such testing or exercise any rights associated therewith without the written consent of Lightbridge. Further, Kurchatov is obligated to provide to Lightbridge and its affiliates specified information and documentation for audit purposes, and to obtain any and all permits from Russian governmental entities which may be required in order for Kurchatov to perform under the AIT Agreement.

In October 2009 the Company entered into an umbrella agreement (“SOSNY Agreement”) with Russian Limited Liability Research and Development Company (“SOSNY”). SOSNY will serve as Lightbridge's prime contractor in Russia to manage the research and development activities related to the lead test assembly program for Russian-designed VVER-1000 reactors. SOSNY is a leading Russian commercial nuclear entity specializing in front-end and back-end nuclear fuel cycle management and logistics services. Specific work will be carried out under individual task orders to be issued under the SOSNY Agreement. The scope, deliverables, and costs are to be agreed to between the parties in each individual task order. As of the date hereof, no task orders have been issued.

In addition to the above agreements, there are consulting agreements with several consultants working on various projects for the Company, which total approximately \$5,000 per month.

## 12. COMMITMENTS AND CONTINGENCIES

The Company has employment agreements with its executive officers and some consultants, the terms of which expire at various times. Such agreements provide for minimum compensation levels, as well as incentive bonuses that are payable if specified management goals are attained. Under each of the agreements, in the event the officer's employment is terminated (other than voluntarily by the officer or by the Company for cause, or upon the death of the officer), the Company, if all provisions of the employment agreements are met, is committed to pay certain benefits, including specified monthly severance.

The Company moved from its prior office facility and has entered into an agreement to lease new office space under the terms of a sublease with a term of 65 months commencing August 1, 2008. Under the terms of the sublease, the lease payments are inclusive of pass-through costs, which include real estate taxes and standard operating expenses. The Company has paid the security deposit related to this sublease agreement in the amount of \$120,486. The Company pays monthly rental fees in the amount of \$40,162 in the first year of the sublease agreement, and payments increase by a factor of 4% each year thereafter. The Company may terminate this agreement by providing 60 days notice to the sublessor. The monthly straight-line rental expense from August 1, 2008 to December 1, 2013 is approximately \$44,000. As a result of the straight-line rent calculation generated by the one free month rent period and rent escalation, the Company has a deferred rent credit at December 31, 2009 of \$55,807. Total rent expense was \$562,856 and \$578,143 for the years ended December 31, 2009 and 2008, respectively.

Future estimated rental payments under our operating leases are as follows:

	Total
Year Ending - December 31, 2010	\$ 509,643
Year Ending - December 31, 2011	530,034
Year Ending - December 31, 2012	551,211
Year Ending - December 31, 2013	571,271
Total Minimum lease payments	<u>\$ 2,162,159</u>

We are obligated to pay approximately \$9,322 per month for office rent and approximately another \$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, 2010 and is renewable for additional one-year terms

## 13. SUBSEQUENT EVENTS

Effective this quarter, the Company implemented a new FASB accounting pronouncement, Subsequent Events. This standard establishes general standards of accounting for and disclosure of events that occur after the balance sheet date but before financial statements are issued. The adoption of this accounting pronouncement did not impact our financial position or results of operations. The Company evaluated all events or transactions that occurred after December 31, 2009 up through the date these financial statements were issued on March 8, 2010. During this period the Company did not have any material recognizable subsequent events.

## SIGNATURES

In accordance with section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant caused this Report on Form 10-K to be signed on its behalf by the undersigned, thereto duly authorized individual.

Date: March 16, 2010

### LIGHTBRIDGE CORPORATION

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

In accordance with the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on March 16, 2010.

<u>Signature</u>	<u>Title</u>
<u>/s/ Seth Grae</u>	Chief Executive Officer, President and Director
<u>Seth Grae</u>	(Principal Executive Officer)
<u>/s/ James Guerra</u>	Chief Financial Officer, Chief Operating Officer and Treasurer
<u>James Guerra</u>	(Principal Financial Officer)
<u>/s/ Thomas Graham, Jr.</u>	Director
<u>Thomas Graham, Jr.</u>	
<u>/s/ Victor Alessi</u>	Director
<u>Victor Alessi</u>	
<u>/s/ Jack Ladd</u>	Director
<u>Jack Ladd</u>	
<u>/s/ Daniel B. Magraw, Jr.</u>	Director
<u>Dan Magraw</u>	

**EXHIBIT INDEX**

<b>Exhibit Number</b>	<b>Description</b>
3.1	Articles of Incorporation
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.

I, Seth Grae, certify that:

1. I have reviewed this Annual Report on Form 10-K of Lightbridge Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
  - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 16, 2010

/s/ Seth Grae

Seth Grae, Principal Executive Officer

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I, James Guerra, certify that:

1. I have reviewed this Annual Report on Form 10-K of Lightbridge Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
  - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 16, 2010

/s/ James Guerra

James Guerra, Principal Financial Officer

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**STATEMENT FURNISHED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

The undersigned is the Chief Executive Officer and Treasurer or Principal Accounting Officer of Lightbridge Corporation. This Certification is made pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. This Certification accompanies the Annual Report on Form 10-K of Lightbridge Corporation for the year ended December 31, 2009.

The undersigned certifies that such 10-K Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that the information contained in such 10-K Report fairly presents, in all material respects, the financial condition and results of operations of Lightbridge Corporation as of December 31, 2009.

This Certification is executed as of March 16, 2010.

*By: /s/ Seth Grae*

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*Name: Seth Grae*

*Title: President, Chief Executive Officer and Director  
(Principal Executive Officer)*

*By: /s/ James Guerra*

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*Name: James Guerra*

*Title: Chief Financial Officer  
(Principal Financial Officer)*

A signed original of this written statement required by Section 906 has been provided to Lightbridge Corporation and will be retained by Lightbridge Corporation and furnished to the Securities and Exchange Commission or its staff upon request.

The forgoing certification is being furnished to the Securities and Exchange Commission pursuant to § 18 U.S.C. Section 1350. It is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is not to be incorporated by reference into any filing of the Company, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

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