LIGHTBRIDGE Corp
Form 10-K
March 01, 2013

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

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

For the fiscal year ended **December 31, 2012**

OR

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

Commission file number: **001-34487**

LIGHTBRIDGE CORPORATION

(Exact name of registrant as specified in its charter)

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

1600 Tysons Boulevard, Suite 550
Mclean, Virginia 22102
(Address of principal executive offices) (Zip Code)

(571) 730-1200
(Registrant s telephone number, including area code)

_____

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

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

Title of each class
Common Stock, $0.001 par value

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

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

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).
Yes [X] No [ ]

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

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

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

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

At June 30, 2012, the aggregate market value of shares held by non-affiliates of the registrant (based upon the closing sale price of such shares on the Nasdaq Capital Market on June 30, 2012) was $23,291,404.

At February 19, 2013, there were 12,526,240 shares of the registrant s common stock issued and outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant s Proxy Statement for the 2013 Annual Meeting of Stockholders are incorporated herein by reference in Part III of this Annual Report on Form 10-K to the extent stated herein. Such proxy statement will be filed with the Securities and Exchange Commission within 120 days of the registrant s fiscal year ended December 31, 2012.

LIGHTBRIDGE CORPORATION
FORM 10-K
For the Fiscal Year Ended December 31, 2012

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FORWARD-LOOKING STATEMENTS

In addition to historical information, this report contains forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. We use words such as believe , expect , anticipate project , target , plan , optimistic , intend , aim , will or similar expressions which are intended to identify forw statements. Such statements include, among others, (1) those concerning market and business segment growth, demand and acceptance of our Nuclear Energy Consulting Services and Nuclear Fuel Technology Business, (2) any projections of sales, earnings, revenue, margins or other financial items, (3) any statements of the plans, strategies and objectives of management for future operations, (4) any statements regarding future economic conditions or performance, (5) uncertainties related to conducting business in foreign countries, as well as (6) all assumptions, expectations, predictions, intentions or beliefs about future events. You are cautioned that any such forward-looking statements are not guarantees of future performance and involve risks and uncertainties, as well as assumptions that if they were to ever materialize or prove incorrect, could cause the results of the Company to differ materially from those expressed or implied by such forward-looking statements. Such risks and uncertainties, among others, include:

- our ability to attract new customers,
- our ability to employ and retain qualified employees and consultants that have experience in the Nuclear Industry,
- competition and competitive factors in the markets in which we compete,
- general economic and business conditions in the local economies in which we regularly conduct business, which can affect demand for the Company s services,
- changes in laws, rules and regulations governing our business,
- development and utilization of our intellectual property,
- potential and contingent liabilities, and
- the risks identified in Item 1A. Risk Factors included herein.

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

PART I

Item 1. Description of Business

OVERVIEW ABOUT OUR TWO BUSINESS SEGMENTS

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

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

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

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

NUCLEAR FUEL TECHNOLOGY BUSINESS SEGMENT

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

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

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

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

CONSULTING BUSINESS SEGMENT

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

OUR BUSINESS STRATEGY NUCLEAR FUEL TECHNOLOGY BUSINESS SEGMENT

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

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

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

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

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

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

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

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

KEY FUEL DEVELOPMENTS IN 2012

We have made considerable progress in 2012 toward execution of our technology development roadmap, including the following developments:

- We were notified by the US Department of Energy (DOE) that Rosatom had provided non-proliferation assurances to DOE that will become effective upon entry into an agreement between Lightbridge and Rosatom entities. It is our understanding that this is the last key step of the Part 810 export authorization review process prior to approval by DOE;
- We secured preliminary approval from Rosatom relating to fabrication of Lightbridge-designed metallic fuel samples for irradiation testing in the MIR research reactor in Dimitrovgrad, Russia, and the Advanced Test Reactor (ATR) at Idaho National Laboratory in the United States. As part of this process, the Russian

fabricator TVEL designated MSZ Electrostal fabrication plant as the facility for fabrication of our fuel samples. We are currently in commercial discussions with TVEL and MSZ Electrostal relating to fabrication of these fuel samples. We expect these discussions to be completed in the coming months;

- Working in collaboration with Idaho National Laboratory and Texas A&M University, we continued experiment planning and design for irradiation testing of our metallic fuel samples in the ATR at Idaho National Laboratory. The team agreed to a single fuel rod design that is compatible with both a capsule irradiation rig and a loop irradiation rig design in order to accommodate uncertainty in reactor availability between now and when the fuel samples are delivered to Idaho National Laboratory;
- We continued negotiations with fuel fabrication partners relating to metal fuel fabrication process development and demonstration work in the United States. We expect the negotiations to conclude in 2013;

- A peer-reviewed article on our metallic fuel technology was published in the December 2012 edition of the American Nuclear Society journal Nuclear Technology;

- We were granted a Eurasian patent which covers our thorium-based seed and blanket fuel assembly design for Russian-type VVER-1000 reactors. Countries that are signatories to the Eurasian Patent Convention include Russia, Kazakhstan, Belarus, Azerbaijan, Armenia, Turkmenistan, Tajikistan, Kyrgyz Republic, and Republic of Moldova. Of these countries, Russia and Kazakhstan are of key importance to Lightbridge and will be our top priority as far as patent maintenance is concerned. The new patent extends patent protection for our thorium-based seed and blanket fuel assembly design to 2027, which is well beyond 2014-2015, when the original patents covering that fuel design are set to expire;

- We were granted a U.S. patent covering a locking mechanism for our seed-and-blanket fuel assembly (US Patent No. 8,116,423) that provides protection for the locking mechanism invention in the United States from its issuance until December 2028;

- We were granted a Ukrainian patent covering our thorium-based seed-and-blanket fuel assembly for VVER-1000 reactors (Patent No. 98370). The patent provides protection for the above nuclear fuel design in Ukraine through December 2027. Presently, Ukraine has 13 VVER-1000 reactors in operation, with 2 more units under construction; and

- We filed an international patent application under the Patent Cooperation Treaty for our all-uranium seed and blanket and all-metal fuel technologies as well as national phase patent applications in key countries based on the 2008 Patent Cooperation Treaty application that covers the thorium-based seed and blanket fuel technology for Western-type pressurized water reactors. Once granted, the new patents would extend patent protection for these fuel designs to 2028-2030.

NUCLEAR FUEL TECHNOLOGY BUSINESS SEGMENT OPERATIONS

Development of Our Three Nuclear Fuel Product Lines

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

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

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

natural uranium increases due to the projected reduction in natural uranium requirements per megawatt-day. Finally, the enhanced proliferation resistance aspects of the fuel can appeal to markets that put key emphasis on non-proliferation.

The development of our power uprate product lines provides diversity to our fuel offerings and synergistically advances the development of our thorium-based fuel product line. Research and development and related expenses paid by us totaled approximately $2.1 million and $2.3 million for the years ended December 31, 2012 and 2011, respectively.

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

COMPETITION

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

Competition with respect to the design of commercially viable nuclear fuel products is limited to conventional uranium oxide fuels, which, as discussed above, are reaching the limits in terms of their capability to provide increased power output or longer fuel cycles. We believe that the industry needs fuel products that can provide these benefits. While we believe conventional uranium oxide fuel may be capable of achieving power uprates of up to 10% in existing PWRs, doing so would require uranium-235 enrichment levels above 5%, higher reload batch sizes, or a combination thereof. The alternative route of increasing reload batch sizes while keeping uranium enrichment levels below 5% for power uprates up to 10% using conventional uranium oxide fuel raises the cost of each fuel reload, resulting in a significant fuel cycle cost penalty to the nuclear utility. The cost penalty could have a dramatic adverse impact on the economics of existing plants whose original capital cost has already been written off (e.g., most of U.S. nuclear power plants fall into this category). Due to poor economics, nuclear utilities may be reluctant to embrace that route as a way to increase power output by up to 10%, which could lead to greater opportunities for use of Lightbridge s nuclear fuel technology.

There are several major companies that collectively fabricate a large majority of the fuel used in the world s commercial nuclear power plants, including both Western-type PWRs and boiling water reactors, or BWRs, as well as Russian-type VVERs. To the extent that these companies currently own and may in the future develop new nuclear fuel designs that can be used in the same types of reactors as those targeted by us, they can be viewed as potential competitors. However, our commercialization strategy is not to compete with these major fuel fabricators, but rather to partner with one or more of these companies through technology license arrangements. For this reason, we consider these companies as potential partners or licensees as opposed to our competitors.

CURRENT STATUS

Research and Development Project Schedule

We currently anticipate that we, working in collaboration with our development partners/vendors and contingent upon execution of collaborative research and development agreements with them, will be able to:

- demonstrate the full-scale fabrication process for our metallic fuel rods in 2013-2014;
- perform in-reactor and out-of-reactor experiments in 2013-2016;
- develop analytical models in 2013-2016 for our metallic fuel technology that can be used for regulatory licensing; and
- begin lead test assembly (LTA) operation in a full-size commercial light water reactor in 2017-2018, which involves testing a limited number of our full-scale fuel assemblies in the core of a commercial nuclear power plant over three 18-month cycles.

Accordingly, based on our current estimated schedule, final qualification (i.e., deployment of fuel in the first reload batch) for our 10% power uprate fuel in a commercial reactor is expected in 2021-2022 (at the end of two 18-month cycles of LTA operation).

Government Approvals and Relationships with Critical Development Partners/Vendors

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

In July 2011, we submitted to the DOE a Part 810 export authorization request in connection with our proposed collaboration with the Russian State Atomic Energy Corporation Rosatom , or Rosatom, and its subsidiary companies relating to the planned irradiation testing at the MIR research reactor in Dimitrovgrad, Russia and the ATR test reactor at Idaho National Laboratory. In the third quarter of 2012, Lightbridge was notified by the US Department of Energy (DOE) that Rosatom had provided non-proliferation assurances to DOE that would become effective upon entry into an agreement between Lightbridge and Rosatom entities. Our understanding is that this is the last key step of the Part 810 export authorization review process prior to approval by DOE.

Some of our planned critical path research, development, and demonstration activities to be performed by Russian entities under contract with us will require formal authorization from Rosatom, which owns those entities and is the main Russian government agency that oversees Russia s civil nuclear power industry. Rosatom requires that all collaborative projects with U.S. entities fall into one of the collaboration areas outlined in a government-to-government agreement that was entered into by and between the United States and Russia soon after the 123 Agreement on peaceful nuclear cooperation between the two countries came into force in late 2010. Rosatom requires that DOE issue an official endorsement of each commercial project proposed for collaboration between a U.S. entity and Rosatom. Without such DOE endorsement and designation of the project by DOE as consistent with one of the collaboration areas outlined in the above-mentioned government-to-government agreement, Rosatom is unlikely to cooperate and participate in the proposed project. Lightbridge has recently received a letter from DOE confirming that our proposed collaborative projects with Rosatom fall under the 123 agreement, which we understand has satisfied the Rosatom requirements. In the fourth quarter of 2012, TVEL, a Russian fuel fabricator and a wholly-owned subsidiary of Rosatom, agreed to fabricate our metallic fuel samples for irradiation testing. We are currently in the process of contract negotiations with MSZ Electrostal, a wholly-owned subsidiary of TVEL, which was designated by TVEL as the fabrication facility where our fuel samples will be fabricated. Until commercial negotiations with Rosatom and/or its subsidiary companies are concluded and a legally binding agreement is entered into between the parties, a risk of development program schedule delays or a lack of sufficient interest from Rosatom or its entities in proposed collaboration still remains. We believe that we will continue to be able to conduct our operations in this regulatory environment and obtain the necessary approvals.

No safety regulatory approval is required to design nuclear fuels, although certain technology transfers may be subject to national and international export controls. The testing, fabrication and use of nuclear fuels by our future partners, licensees and nuclear power generators, are heavily regulated. The test facilities and other locations where our fuel designs may be tested before commercial use require governmental approvals from the host country s nuclear regulatory authority. The responsibility for obtaining certain necessary regulatory approvals will lie with our research and development contractors that conduct such tests and experiments. Nuclear fuel fabricators, which will ultimately fabricate fuel using our technology under commercial licenses from us, are similarly regulated. Nuclear power plants that may utilize the fuel produced by these fuel fabricators require specific licenses relating to possession and use of nuclear materials as well as numerous other governmental approvals for the ownership and operation of nuclear power plants.

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

CHALLENGES

- Collaboration with a fuel fabricator that can fabricate the LTAs and a nuclear utility that is willing to accept the LTAs is required for LTA demonstration in a commercial reactor. In the U.S., the fabricator and the utility will be primarily responsible for securing necessary regulatory licensing approvals for the LTA operation. To this end, in November 2011, we established a Nuclear Utility Fuel Advisory Board (NUFAB) to further strengthen dialogue with global nuclear utilities. Separately, we are also pursuing discussions with major fuel fabricators relating to collaboration on our nuclear fuel designs.
- There is a lack of publicly available experimental data on our metallic fuel. As a result, we will need to conduct various irradiation experiments to confirm fuel performance under normal and off-normal events. Loop irradiation in a test reactor environment prototypic of PWR operating conditions and other experiments on unirradiated and irradiated metallic fuel samples will be essential to demonstrate the performance and advantages of our metallic fuel. We are currently planning a loop irradiation experiment in the MIR research reactor as part of this effort.
- Existing analytical models may be inadequate. New analytical models, capable of accurately predicting the behavior of our metallic fuel during normal operation and off-normal events may be required. Experimental data measured from our planned irradiation demonstrations will help to identify areas where new analytical models may be required.
- Demonstration of a fabrication process for full-length (12-14 feet) metallic fuel rods is required. Past operating experience with similar metallic fuel composition involved fabrication of metallic fuel rods up to 3 feet in length. We are in discussions with potential fuel fabrication partners relating to this demonstration effort.

SOURCES AND AVAILABILITY OF RAW MATERIALS

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

materials that are required for the production of nuclear fuel assemblies that go into the reactor core.

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

OVERVIEW OF THE NUCLEAR POWER INDUSTRY

Potential Market

Presently, nuclear power provides approximately 7% of the world s energy, including approximately 14% of the world s electricity. According to the World Nuclear Association, as of February 19, 2013, there were approximately 437 nuclear power plants in operation worldwide, mostly light water reactors, with the most common types being PWRs, BWRs, and VVER reactors (a Russian equivalent of PWRs). Nuclear power provides a non-fossil, low-carbon energy solution that can meet baseload electricity needs.

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

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

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

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

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

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

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

Utilities have embraced power uprates as a cost effective way to increase their generation capacity. While the efforts thus far have occurred mostly in the United States, there is a large, untapped worldwide market for power uprates. There are about 150 PWRs operating outside the United States. If all of these plants had their power increased by 10%, the aggregate generating capacity would increase by about 14,500 MW. This is equivalent to about 12 new 1,200 MW reactors. The incentive to proceed with power uprates at the 10% level is significant since there are few changes required to implement the power uprate, and the changes that are required are relatively inexpensive. The

limiting factor at the moment is the fuel. We believe that our metallic fuel rod technology enables the 10% increase in power along with extending the fuel cycle to 24 months, and can be used to support even greater power increases up to 30%.

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

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

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

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

Influence of Natural Gas Prices in the United States

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

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

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

Our Target Market

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

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

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

Our Intellectual Property

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

Granted U.S. Patents:

- Patent No. 6,026,136 for a seed-blanket unit fuel assembly for a nuclear reactor (expiring August 16, 2014);
- Patent No. 5,949,837 for a nuclear reactor having a core including a plurality of seed-blanket unit (expiring August 16, 2014);
- Patent No. 5,864,593 for a method for operating a nuclear reactor core comprised of at least first and second groups of seed-blanket units (expiring August 16, 2014);
- Patent No. 5,737,375 for a nuclear reactor having a core including a plurality of seed-blanket units (expiring August 16, 2014); and

- U.S. Patent No. 8,116,423 for a NUCLEAR REACTOR (ALTERNATIVES), FUEL ASSEMBLY OF SEED-BLANKET SUBASSEMBLIES FOR NUCLEAR REACTOR (ALTERNATIVES), AND FUEL ELEMENT FOR FUEL ASSEMBLY (expiring February 24, 2029).

Granted International Patents:

- Russian Patent No. 2,176,826 (expires August 16, 2014);
- Russian Patent No. 2,222,837 (expires August 16, 2014);
- South Korean Patent No. 301,339 (expires August 16, 2014);

- South Korean Patent No. 336,214 (expires August 16, 2014);
- Chinese Patent No. ZL 96196267.4 (expires August 16, 2014);
- Eurasian Patent No. EA015019 (B1), based on PCT Patent Application No. PCT/RU2007/000732, filed December 26, 2007, titled NUCLEAR REACTOR (ALTERNATIVES), FUEL ASSEMBLY OF SEED-BLANKET SUBASSEMBLIES FOR NUCLEAR REACTOR (ALTERNATIVES), AND FUEL ELEMENT FOR FUEL ASSEMBLY (expires December 26, 2027);
- Ukrainian Patent No. 98370, based on PCT Patent Application No. PCT/RU2007/000732, filed December 26, 2007, titled NUCLEAR REACTOR (ALTERNATIVES), FUEL ASSEMBLY OF SEED-BLANKET SUBASSEMBLIES FOR NUCLEAR REACTOR (ALTERNATIVES), AND FUEL ELEMENT FOR FUEL ASSEMBLY (expires December 26, 2027).

Pending Patent Applications:

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

- Japanese Application No. JP2010-540611;
- Australian Application No. 2007 363 064;
- S. Korean Application No. 10-2010-7016627;
- S. Korean Divisional Application No. 10-2010-7026035;
- Canadian Application No. 2,710,432;
- Chinese Application No. CN20078102099.4;
- Indian Application No. 5244/DELNP/2010 ;
- European Application No. 8142834.7;
- European Application No. 10166457.1; and
- U.S. Application No. 13/047,168
- When and if these applications are allowed and granted as patents, they are expected to expire on December 26, 2027.

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

- Japanese Application No. JP 2011-543460;
- Australian Application No. AU20080365658;
- S. Korean Application No. 10-2011-7016736;
- Canadian Application No. CA20082748367;
- Chinese Application No. CN20088132741;
- Indian Application No. 5521/DELNP/2011;
- Eurasian Application No. 201100729;
- European Application No. EP20080879222;
- Ukrainian Application No. a201109224; and
- U.S. Application No. 13/139,677.
- When and if these applications are allowed and granted as patents, they are expected to expire on December 25, 2028.

Patent Applications Based On PCT International Patent Application No. PCT/US2011/036034, filed May 11, 2011, titled Fuel Assembly:

- Japanese Application (# not yet available);
- S. Korean Application No. 10-2012-7029003;
- Canadian Application (# not yet available);
- Chinese Application No. 201180023785.9;
- Indian Application No. 9326/DELNP/2012;
- European Application No. 11735927.3;
- U.S. Application No. 13/695,792;
- Eurasian Application No. 201201481;
- Ukrainian Application No. a201213992; and
- Australian Application No. 2011250906.
- When and if these applications are allowed and granted as patents, they are expected to expire on May 11, 2030.

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

Registered US Trademarks:

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

Registered International Trademarks:

LIGHTBRIDGE corporate name:
European Union (Registration No. 8773988)
France (Registration No. (08)3573606)
United Kingdom (Registration No. 2486858)
Russia (Registration No. 434229)
Lightbridge s corporate logo:
European Union (Registration No. 8771875)
Russia (Registration No. 434228)
THORIUM POWER corporate name:
Russia (Registration No. 426009)

Pending Trademark Applications:

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

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

Our Consulting Business Segment

The Nature of Our Consulting Services

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

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

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

Our consulting services are expert and relationship based, with particular emphasis on key decision makers in senior positions within governments or companies, as well as focus on overall management of nuclear energy programs. To date, substantially all of our revenues are derived from our consulting and strategic advisory services business segment, which primarily provides nuclear consulting services to entities within the United Arab Emirates, our first

significant consulting and strategic advisory client. In April 2010 and December 2010, we began to provide consulting services in additional countries, including the member states of the Gulf Cooperation Council and Kuwait. We have also provided nuclear safety consulting advice to U.S. nuclear utilities.

Competition in Nuclear Industry Consulting

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

Our major challenge in pursuing our business is that the decision making process for nuclear power programs typically involves careful consideration by many parties and therefore requires significant time. Many of the potential clients that could benefit from our services are in regions of the world where tensions surrounding nuclear energy are high, or in countries where public opinion plays an important role. Domestic and international political pressure and public opposition to nuclear power may hinder our efforts to provide 13 nuclear energy consulting services, regardless of our focus on non-proliferative nuclear power.

Employees

Our business model is to limit the number of our full-time employees and to rely on consultants, outside agencies and technical facilities with specific skills to assist with various business functions including, but not limited to: corporate governance, research and development, and government relations. This model limits overhead costs and allows us to draw upon resources that are specifically tailored to our internal and external (client) needs. As of December 31, 2012, we had 15 full-time employees. We utilize a network of over 150+ contract employees available for deployment for specialized consulting assignments. We believe that our relationship with our employees and contractors is satisfactory.

History and Corporate Structure

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

Available Information

Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, including exhibits, and amendments to those reports filed or furnished pursuant to Sections 13(a) and 15(d) of the Exchange Act, are available free of charge on our website at *www.ltbridge.com* as soon as reasonably practicable after such reports are electronically filed with, or furnished to, the Securities and Exchange Commission. Copies of these reports may also be obtained free of charge by sending written requests to Investor Relations, Lightbridge Corporation, 1600 Tysons Blvd, Suite 550 Mclean, VA 22102 USA. The information posted on our web site is not incorporated into this Annual Report.

Item 1A. Risk Factors

General Business Risks

If the price of non-nuclear energy sources falls, there could be an adverse impact on new build nuclear reactor activities in certain markets, which would have a material adverse effect on our operations.

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

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

Our future results may be adversely affected by the worldwide economic downturn, continued volatility or further deterioration in the debt and equity capital markets, inflation, deflation, or other adverse economic conditions that may negatively affect us. At present, it is likely that we will require additional capital in the near future in order to fund our operations. Due to the above listed factors, we cannot be certain that additional funding will be available on terms that

are acceptable to us, or at all.

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

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

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

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

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

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

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

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

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

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

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

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

Risks Associated with our Fuel Technology Business

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

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

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

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

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

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

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

Existing commercial nuclear infrastructure, including conversion facilities, enrichment facilities, fabrication facilities, fuel storage facilities, fuel handling procedures, fuel operation at reactor sites, used fuel storage facilities and shipping containers, were designed and are currently licensed to handle uranium enrichment up to 5%. Our fuel designs are expected to have enrichment levels up to 19.7% and would therefore require certain modifications to existing commercial nuclear infrastructure to enable commercial nuclear facilities to handle our fuels. Those nuclear facilities will need to go through a regulatory licensing process and obtain regulatory approvals to be able to handle uranium with enrichment levels up to 19.7% and operate commercial reactors using our fuel. There is a risk that some relevant entities within the nuclear power industry may be slow in making any required facility infrastructure modifications or obtaining required licenses or approvals to handle our fuel or operate commercial reactors using our fuel. There is also a political risk associated with negative perception in certain news media and among some nuclear critics of uranium enrichments greater than 5% that could potentially delay or hinder regulatory approval of our nuclear fuel designs.

Our nuclear fuel designs rely on fabrication technologies that, in certain material ways, are different from the fabrication techniques presently utilized by existing commercial fuel fabricators. In particular, our metallic fuel rods must be produced using a co-extrusion fabrication process. Presently, most commercial nuclear fuel is produced using a pellet fabrication technology, whereby uranium oxide is packed into small pellets that are stacked and sealed inside metallic tubes. The co-extrusion fabrication technology involves extrusion of a single-piece solid fuel rod from a metallic matrix containing uranium and zirconium alloy. Fabrication of full-length (approximately 3.5 to 4.5 meters) metallic fuel rods has yet to be demonstrated. There is a risk that the fuel fabrication process required to produce one meter long metallic fuel rods may not be adaptable to the fabrication of full-length metallic fuel rods used in commercial reactors.

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

We are currently conducting fuel assembly design and testing work in Russia through our Moscow office personnel as well as Russian research institutes and other nuclear entities that are owned or are closely affiliated with the government of Russia. We do not currently have all of the necessary licensing or other rights to acquire or utilize

certain designs, data, methodologies or processes required for the fabrication of our fuel assemblies. If we, or a fuel fabricator to whom we license our fuel technology, desire to utilize such processes or methodologies in the future, a license or other right to use such technologies from the Russian entities that previously developed and own such technologies would be required. Nuclear operators typically seek diversity of fuel supply and may be hesitant to use a fuel product that is only available from a single supplier. If we are unable to obtain a license or other right to acquire or utilize certain know-how required for the fabrication of our fuel assemblies on terms that the Russian entities deem to be reasonable, or there is only a single supplier of our fuel assemblies, then we may not be able to fully exploit our intellectual property and may be hindered in the sale of our fuel products and services.

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

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

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

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

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

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

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

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

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

Our nuclear fuel designs may infringe, or be claimed to infringe, patents or patent applications under which we do not hold licenses or other rights. Third parties may own or control these patents and patent applications in the United States and elsewhere. Third parties could bring claims against us that would cause us to incur substantial expenses and, if successfully asserted against us, could cause us to pay substantial damages. If a patent infringement suit were brought against us, we could be forced to stop or delay commercialization of the fuel design or a component thereof that is the subject of the suit. As a result of patent infringement claims, or in order to avoid potential claims, we may choose or be required to seek a license from the third party and be required to pay license fees, royalties or both.

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These licenses may not be available on acceptable terms, or at all. Even if we were able to obtain a license, the rights may be nonexclusive, which could result in our competitors gaining access to the same intellectual property. Ultimately, we could be forced to cease some aspect of our business operations if, as a result of actual or threatened patent infringement claims, we are unable to enter into licenses on acceptable terms. This could significantly and adversely affect our business, financial condition and results of operations. In addition to infringement claims against us, we may become a party to other types of patent litigation and other proceedings, including interference proceedings declared by the United States Patent and Trademark Office regarding intellectual property rights with respect to our nuclear fuel designs. The cost to us of any patent litigation or other proceeding, even if resolved in our favor, could be substantial. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace. Patent litigation and other proceedings may also absorb significant management time.

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

Production of fuel assemblies using our nuclear fuel designs is dependent on the ability of fuel fabricators to obtain supplies of nuclear material utilized in our fuel assembly design. Fabricators will also need to obtain metal for components, particularly zirconium or its alloys. These materials are regulated and can be difficult to obtain or may have unfavorable pricing terms. Any difficulties in obtaining these materials by fuel fabricators could have a material adverse effect on their ability to market fuel based on our technology.

Risks Associated With Our Consulting Activities.

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

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

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

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

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

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

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

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

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

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

Risks Relating to the Ownership of Our Securities

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

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

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

The stock market may experience extreme volatility that is often unrelated to the performance of particular companies. These market fluctuations may cause our stock price to fall regardless of its performance.

Item 1B. Unresolved Staff Comments

Not applicable.

Item 2. Description of Property

We are obligated to pay approximately $47,000 per month for office rent and approximately another $2,000 per month for other fees for the rented office space located at 1600 Tysons Boulevard, Suite 550, Tysons Corner, Virginia 22102. The space is used by our executives, employees and contractors for administrative purposes. The term of the lease for our offices expires on December 31, 2013 and is renewable for additional one-year terms.

We are obligated to pay approximately US$10,000 per month for office rent and approximately another US$1,500 per month for other fees for the rented office space located at Zemlyanoi Val, 9, Moscow, Russia, 105064. The space is

used by our Moscow staff for administrative purposes. The term of the lease for our offices expires on April 29, 2013 and is renewable for additional one-year terms.

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

Item 3. Legal Proceedings

From time to time, we may become involved in various lawsuits and legal proceedings which arise in the ordinary course of business. However, litigation is subject to inherent uncertainties, and an adverse result in these or other matters may arise from time to time that may harm our business. We are currently not aware of any such legal proceedings or claims that we believe will have a material adverse effect on our business, financial condition or operating results.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

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

Market Information

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

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

Fiscal Year	Quarter Ending	High	Low
2012	December 31	$ 2.13	$ 1.02
	September 30	$ 2.74	$ 2.00
	June 30	$ 3.27	$ 1.91
	March 31	$ 4.18	$ 1.95
2011	December 31	$ 3.24	$ 1.96
	September 30	$ 3.70	$ 1.72
	June 30	$ 5.80	$ 3.53
	March 31	$ 7.22	$ 5.10

Holders

As of February 19, 2013, our common stock was held by 144 stockholders of record. This number excludes the shares of our common stock owned by stockholders holding stock under nominee security position listings.

Reports to Stockholders

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

Dividends

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

Transfer Agent

Our transfer agent and registrar for our common stock is Computershare Trust Company, 350 Indiana Street, Suite 800, Golden, Colorado, 80401. Its telephone number is 800-962-4284 and facsimile is 303-262-0604.

Recent Sales of Unregistered Securities

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

Securities Authorized for Issuance Under Equity Compensation Plans

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

Item 6. Selected Financial Information.

Not applicable

Item 7. Management s Discussion and Analysis of Financial Condition and Results of Operations.

The following Management s Discussion and Analysis of Financial Condition and Results of Operations, or MD&A, is intended to help the reader understand Lightbridge Corporation, our operations and our present business environment. MD&A is provided as a supplement to, and should be read in conjunction with, our consolidated financial statements and the accompanying notes thereto contained in Item 8. Financial Statements and Supplementary Data of this report. This overview summarizes the MD&A, which includes the following sections:

Our Business a general overview of our two business segments, the material opportunities and challenges of our business;

Critical Accounting Policies and Estimates a discussion of accounting policies that require critical judgments and estimates;

Operations Review an analysis of our Company s consolidated results of operations for the two years presented in our consolidated financial statements. Except to the extent that differences among our operating segments are material to an understanding of our business as a whole, we present the discussion in the MD&A on a consolidated basis; and

Liquidity, Capital Resources and Financial Position an analysis of our cash flows; an overview of our financial position.

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

Our Business

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

Our Nuclear Fuel Technology Business Segment

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

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

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

Consulting Business Segment

We are primarily engaged in the business of assisting commercial and governmental entities with developing and expanding their nuclear industry capabilities and infrastructure. We provide integrated strategic advice across a range

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

Factors Affecting Our Financial Performance

Economics of Nuclear Power

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

Consulting and Strategic Advisory Services

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

Critical Accounting Policies and Estimates

The SEC issued Financial Reporting Release No. 60, *Cautionary Advice Regarding Disclosure About Critical Accounting Policies* suggesting that companies provide additional disclosure and commentary on their most critical accounting policies. In Financial Reporting Release No. 60, the SEC has defined the most critical accounting policies as the ones that are most important to the portrayal of a company s financial condition and operating results, and require management to make its most difficult and subjective judgments, often as a result of the need to make estimates of matters that are inherently uncertain. Based on this definition, we have identified the following significant policies as critical to the understanding of our financial statements.

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

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

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

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

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

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

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

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

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

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

Income Taxes

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

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

Revenue Recognition from Consulting Contracts

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

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

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

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

(1) There is persuasive evidence of an arrangement;
(2) The service has been provided to the customer;
(3) The collection of the fees is reasonably assured; and
(4) The amount of fees to be paid by the customer is fixed or determinable.

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

Intangibles

As presented on the accompanying balance sheet, we had patents with a net book value of approximately $601,000 as of December 31, 2012. There are many assumptions and estimates that may directly impact the results of impairment testing, including an estimate of future expected revenues, earnings and cash flows, and discount rates applied to such expected cash flows in order to estimate fair value. We have the ability to influence the outcome and ultimate results based on the assumptions and estimates we choose for testing. To mitigate undue influence, we set criteria that are reviewed and approved by various levels of management. The determination of whether or not intangible assets have become impaired involves a significant level of judgment in the assumptions. Changes in our strategy or market conditions could significantly impact these judgments and require adjustments to recorded amounts of intangible assets.

Contingencies

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

Recent Accounting Standards and Pronouncements

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

Operations Review

Business Segments and Periods Presented

We have provided a discussion of our results of operations on a consolidated basis and have also provided certain detailed segment information for each of our business segments below for the years ended December 31, 2012 and 2011, in order to provide a meaningful discussion of our business segments. We have organized our operations into two principal segments: Consulting and Nuclear Fuel Technology. We present our segment information along the same lines that our chief executives review our operating results in assessing performance and allocating resources.

BUSINESS SEGMENT RESULTS YEAR ENDED DECEMBER 31, 2012 AND 2011

	Consulting		Technology		Corporate and Eliminations		Total	
	2012	2011	2012	2011	2012	2011	2012	2011
Revenue	3,677,596	6,356,424	0	0	0	0	3,677,596	6,356,424
Segment Profit Pre Tax	719,158	1,411,615	(2,064,568)	(2,349,749)	(2,711,665)	(4,930,873)	(4,057,075)	(5,869,007)
Total Assets	601,803	277,211	600,596	537,075	4,941,257	9,704,501	6,143,656	10,518,787
Property Additions	0	0	0	0	936	1,297	936	1,297
Interest Expense	0	0	0	0	0	0	0	0
Depreciation Expense	0	0	1,577	2,120	26,780	24,842	28,357	26,962

Technology Business

Over the next 12 to 15 months, we expect to incur approximately $3-4 million in research and development expenses related to the development of our proprietary nuclear fuel designs. We spent approximately $2.1 million and $2.3 million for research and development during the years ended December 31, 2012 and 2011, respectively.

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

Consulting Services Business

At the present time, substantially all of our revenue for the years ended December 31, 2012 and 2011, is from our consulting services business segment and is derived by offering services to governments outside of the U.S. planning to create or expand electricity generation capabilities using nuclear power plants. The fee type and structure that we offer for each client engagement is dependent on a number of variables, including the complexity of the services, the level of the opportunity for us to improve the client s electricity generation capabilities using nuclear power plants, and

other factors.

Consolidated Results of Operations

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

	Year Ended December 31,	
	2012	2011
Consolidated Statements of Income Data:		
Revenues	100 %	100 %
Costs and expenses:		
Cost of revenues	62	63
Gross Profit	38	37
Research and development	56	37
General and administrative	104	99
Total costs and expenses	160	136
Loss from operations	(122)	(99)
Interest income and other, net	12	7
Loss before income taxes	(110)	(92)
Provision for income taxes	0	0
Net loss	(110) %	(92)% %

Revenue

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

	Year Ended December 31,	
	2012	2011
Consulting Segment Revenues:		
ENEC and FANR (UAE)	$ 3.6	$ 4.7
Other (GCC and other countries)	.1	1.7
Total	3.7	6.4
Technology Segment Revenues	0.0	0.0
Total Revenues	$ 3.7	$ 6.4

The decrease in our revenues from 2011 to 2012 of $2.7 million resulted from the decrease in the work performed for our FANR project of approximately $1.3 million, and a decrease in revenue we earned from our GCC contract that we completed in 2011, of approximately $1.4 million. Our consulting projects with ENEC and FANR are being performed pursuant to ongoing requests to work on specific projects on a time and expense basis as needed. The FANR contract was renegotiated in 2012 and its contract term extended to December 31, 2014. This renegotiation and the formulation of our work plans or FANR task orders caused delays which resulted in a decrease in revenue in 2012. The future revenue to be earned and recognized under both the ENEC and FANR agreements will depend upon agreed upon work plans, which can differ from the revenue amounts initially planned to be earned under these agreements.

We believe that in 2013 we may obtain consulting contracts from other governments interested in deploying nuclear power in their countries, based on our commitment to providing consulting services that are relevant and objective in exploring the use of nuclear power, which in turn could increase our future consulting revenues. We have submitted proposals to several countries to provide our consulting services and we expect to hear back in the upcoming quarters as to whether we will be awarded the consulting work over other competing bids.

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

Costs and Expenses

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

	Year Ended December 31,	
	2012	2011
Consulting	$ 2.3	$ 4.0
Technology	0.0	0.0
Total	$ 2.3	$ 4.0

Cost of Services Provided

Cost of services provided is comprised of expenses related to the consulting, professional, administrative and other support costs allocated to our technology and consulting projects, which were incurred to perform and support the work done for our consulting projects with ENEC, FANR and our other contracts. The billing rates to us from our

consultants who provide services under our consulting contracts predominantly remained the same in 2012 and 2011. The decrease in our consulting costs of $1.7 million was a result of the decrease of the work we performed for our consulting projects, as discussed above. We also used less outside consultants to perform work for us in 2012, resulting in an improvement of our gross margins in 2012.

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

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

Research and Development

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

	Year Ended December 31,	
	2012	2011
Research and development expenses	$ 2.1	$ 2.3

Research and development expenses consist mostly of compensation and related costs for personnel responsible for the research and development of our fuel. The decrease of $0.2 million in 2012 was primarily due to a decrease in salaries and wages. All of our research and development activities are conducted in Russia and the United States. We expense research and development costs as they are incurred.

Research and development expenses will increase in dollar amount and may increase as a percentage of revenues in future periods because we expect to continue to invest an additional $3-4 million in the development of our nuclear fuel products over the next 12-15 months.

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

General and Administrative Expenses

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

	Year Ended December 31,	
	2012	2011
General and administrative expenses	$ 3.8	$ 6.3

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

The general and administrative expenses decrease of $2.5 million was mostly related to the decrease in stock-based compensation expense of $0.4 million as a result of a significant amount of equity awards which fully vested in prior years; the reduction in consulting expenses of 0.5 million primarily due to the reduction of fees paid to our strategic advisory committee; the reduction in professional fees of $0.7 million which included a reduction of fees paid to outside investor relation firms, accounting, legal and other outside professionals; the reduction in accruals for taxes and license fees of $0.3 million, and; the reduction in travel expense of $0.2 million and the reduction in payroll expenses and payroll benefits of approximately $0.4 million, which reduction was partially due to the negotiation to have some of our 2011 employees to work as outside consultants in 2012.

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

Interest Income and Other, Net

Interest income and other income and expenses, net, was approximately the same for the years ended December 31, 2012 as compared to the year ended December 31, 2011. The decrease in cash equivalents and marketable securities balances in 2012 was offset by the increase in realized gains from the sale of marketable securities in 2012.

Provision for Income Taxes

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

	Year Ended December 31, 2012	2011
Provision for income taxes	$ 0.0	$ 0.0

We incurred a net loss for both 2012 and 2011, and took a 100% valuation allowance against all deferred tax assets. Therefore we did not have a provision for taxes for both 2012 and 2011.

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

Liquidity and Capital Resources

As of December 31, 2012, we had total cash and cash equivalents and restricted cash of approximately $2.8 million, and marketable securities of $1.6 million, both totaling $4.4 million. Our working capital at December 31, 2012, is approximately $5.1 million. Our monthly cash flow shortfall from our current operations is approximately $200,000 to $300,000 per month. Based on our December 31, 2012 working capital amount and our current monthly operating cash flow shortfall, we expect to have sufficient working capital to fund our operations at their current level, for the next 12 months. The following table provides detailed information about our net cash flow for all financial statements periods presented in this Report.

Cash Flow (in millions)

	December 31, 2012	2011
Net cash provided by (used in) operating activities	$ (5.1)	$ (4.1)
Net cash provided by (used in) investing activities	$ 3.7	$ 5.3
Net cash provided by (used in) financing activities	$ 0	$ 0
Net cash inflow (outflow)	$ (1.4)	$ 1.2

Operating Activities

Cash used in operating activities in the year ended December 31, 2012, consisted of net loss adjusted for non-cash expense items such as depreciation and amortization, as well as the effect of changes in working capital. Cash used in operating activities in the year ended December 31, 2012, consisted of a net loss of $4.1 million and net adjustments for non-cash expense items totaling $0.8 million, consisting of stock-based compensation of $1.0 million and unrealized gains on marketable securities of $(0.2) million. Total cash used for working capital totaled $1.8 million. The cash used for working capital was due to the increase in accounts receivable of $0.3 million, an increase in prepaid expenses and other assets of $0.2 million, and a decrease in accounts payable, accrued expenses and other current liabilities of $1.3 million.

Cash used in operating activities in the year ended December 31, 2011, consisted of net loss adjusted for non-cash expense items such as depreciation and amortization, as well as the effect of changes in working capital. Cash used in operating activities in the year ended December 31, 2011, consisted of a net loss of $5.9 million and net adjustments for non-cash expense items totaling $1.4 million, consisting of stock-based compensation of $1.5 million and unrealized gains on marketable securities of $(0.1) million. Total cash provided by the change in working capital totaled $0.4 million. The cash provided by working capital was due to the decrease in accounts receivable of $0.7 million and a decrease in prepaid expenses and other assets of $0.1 million. These decreases were offset by a decrease in accounts payable, accrued expenses and other current liabilities of $0.3 million and a decrease in deferred revenue of $0.1 million.

Investing Activities

Net cash provided by our investing activities for the year ended December 31, 2012, as compared to net cash used by our investing activities in 2011, decreased by $1.5 million. Such decrease was due to the decrease in proceeds from the sale of our marketable securities of approximately $6.4 million reduction offset by a decrease in our purchases of marketable securities of approximately $4.8 million and a decrease in patent costs in 2012 compared to 2011 for the filing of patent applications of $0.1 million. These patent applications are filed for the new developments resulting from our research and development activities in our technology business segment. We anticipate these patent costs to increase in the future periods due to the research and development work we plan to perform on our all-metal fuel design.

Financing Activities

Net cash provided by (used in) our financing activities for the year ended December 31, 2012, as compared to 2011, primarily remained the same.

Short-Term and Long-Term Liquidity Sources

We will seek new financing or additional sources of capital in the next 6 months. The primary potential sources of cash available to us are as follows:

1. Equity investment from investors;

2. Strategic investment through alliances with major fuel vendors, fuel fabricators and/or other strategic parties during the next three years, to support the remaining research and development activities required to further enhance and complete the development of our fuel products to a commercial stage; and

3. New consulting contracts.

In support of our long-term business plan with respect to our fuel technology business, we endeavor to create strategic alliances with major fuel vendors, fuel fabricators and/or other strategic parties during the next three years, to support the remaining research and development activities required to further enhance and complete the development of our fuel products to a commercial stage. We may be unable to form such strategic alliances on terms acceptable to us or at all.

Currently, we are working on revenue opportunities with the overall goal of increasing our profitability and cash flow. We anticipate entering into consulting and technology agreements with our existing and new potential clients, which will generate additional revenues and cash flows for us in 2013 and beyond. We have written proposals out to these prospects, which as of the date of this filing are pending approval.

Although we anticipate securing new consulting work from one or more of these prospects, we cannot determine as of the date of this filing if and when a new consulting contract will be awarded to us. If we do not enter into any new consulting or technology agreements to provide working capital to support of our business plan regarding our planned research and development activities for developing our fuel designs, we may need to raise additional capital in 2013 by way of an offering of equity securities, an offering of debt securities, a financing through a bank, or a strategic alliance with another entity, options which we are currently beginning to explore. We may also need to raise additional capital sooner if our current consulting business segment becomes non-sustaining. We believe that if we are awarded new consulting contracts, the margin earned on these new contracts will favorably impact our short-term and long-term liquidity and will supplement the funding for our anticipated research and development expenses of our nuclear fuel technologies, of $3 million to $4 million over the next 12-15 months.

Off Balance Sheet Arrangements

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

Seasonality

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

Inflation

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

Item 7A. Quantitative and Qualitative Disclosure About Market Risk

Not applicable.

Item 8. Financial Statements

The full text of our audited consolidated financial statements as of December 31, 2012 and 2011 begins on page F-1 of this Report.

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

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

Item 9A. Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures

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

As required by Rule 13a-15 under the Exchange Act, our management, including our Chief Executive Officer and Chief Operating Officer/Chief Financial Officer, evaluated the effectiveness of the design and operation of our disclosure controls and procedures as of December 31, 2012. Based on that evaluation, our Chief Executive Officer and Chief Operating Officer/Chief Financial Officer concluded that as of December 31, 2012, 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, 2012. 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, 2012, the Company s internal controls over financial reporting are effective based on those criteria.

(c) Changes in internal control over financial reporting

During the fourth quarter of 2012, 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 2013 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 2013 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 2013 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 2013 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 2013 Annual Meeting of Stockholders and is incorporated herein by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

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

Exhibit Number	Description
3.1	Articles of Incorporation of the registrant as filed with the Secretary of State of Nevada. (Incorporated by reference to Exhibit 3.1 to the Registrant s registration statement on Form SB-2 filed on December 11, 2001 in commission file number 333-74914)
3.2	Certificate of Amendment to Articles of Incorporation. (Incorporated by reference to Exhibit 3.1 to the Registrant s current report on 8-K filed on February 13, 2006)
3.3	Certificate of Amendment to Articles of Incorporation. (Incorporated by reference to appendix A to the Registrant s definitive information statement on Schedule 14C filed on July 31, 2006)
3.4	Certificate of Amendment to Articles of Incorporation. (Incorporated by reference to Exhibit 3.1 to the Registrant s current report on 8-K filed on September 25, 2009)
3.5	Amended and Restated Bylaws of the Registrant. (Incorporated by reference to Exhibit 3.2 to the Registrant s current report on 8-K filed on July 9, 2007)
4.1	2006 Stock Plan (incorporated by reference to Exhibit 10.1 of the current report of the Company on Form 8-K filed February 21, 2006).
10.1	Employment Agreement, dated as of February 14, 2006, between the Company and Seth Grae (incorporated by reference to Exhibit 10.2 of the current report of the Company on Form 8-K filed February 21, 2006).
10.2	

	Teaming Agreement dated February 22, 2006 between The University of Texas System, The University of Texas of the Permian Basin, The University of Texas at Austin, The University of Texas at Arlington, The University of Texas at Dallas, The University of Texas at El Paso, The City of Andrews, Texas, Andrews County, Texas, the Midland Development Corporation, the Odessa Development Corporation, Thorium Power and General Atomics (incorporated by reference from Exhibit 10. the Company s Registration Statement on Form S-4 filed June 14, 2006).
10.3	Employment Agreement, dated July 27, 2006, between the Company and Andrey Mushakov (incorporated by reference to Exhibit 10.1 of the current report of the Company on Form 8-K filed August 4, 2006).
10.4	Independent Director Contract, dated August 21, 2006, between the Company and Victor Alessi (incorporated by reference to Exhibit 10.1 of the current report of the Company on Form 8-K filed August 25, 2006).
10.5	Independent Director Contract, dated October 23, 2006, between the Company and Jack D. Ladd (incorporated by reference to Exhibit 10.1 to the Company s Current Report on Form 8-K, filed on October 23, 2006).
10.6	Independent Director Contract, dated October 23, 2006, between the Company and Daniel B. Magraw (incorporated by reference to Exhibit 10.2 to the Company s Current Report on Form 8- K, filed on October 23, 2006).
10.7	Employment Agreement, dated February 1, 2007, between James Guerra and the Company (incorporated by reference to Exhibit 10.1 to the Company s Current Report on Form 8-K, filed on October 23, 2007).
10.8	Agreement for Ampoule Irradiation Testing in 2006 2007, dated December 28, 2007, between Thorium Power, Inc. and Russian Research Centre Kurchatov Institute (incorporated by reference to Exhibit 10.9 to the Company s Annual Report on Form 10-K, filed on March 26, 2009).

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

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

* Filed herewith

LIGHTBRIDGE CORPORATION

December 31, 2012 and 2011

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Lightbridge Corporation
Consolidated Balance Sheets

	December 31, 2012	December 31, 2011
ASSETS		
Current Assets		
Cash and cash equivalents	$ 2,197,555	$ 3,569,098
Marketable securities	1,598,209	5,146,823
Restricted cash	553,682	551,883
Accounts receivable - project revenue and reimbursable project costs	601,803	277,211
Prepaid expenses & other current assets	574,590	269,697
Total Current Assets	5,525,839	9,814,712
Property Plant and Equipment -net	17,221	46,514
Other Assets		
Patent costs - net	600,596	537,075
Security deposits	-	120,486
Total Other Assets	600,596	657,561
Total Assets	$ **6,143,656**	$ **10,518,787**
LIABILITIES AND STOCKHOLDERS EQUITY		
Current Liabilities		
Accounts payable and accrued liabilities	$ 385,223	$ 1,680,433
Total Current Liabilities	385,223	1,680,433
Commitments and contingencies		
Stockholders' Equity		
Preferred stock, $0.001 par value, 50,000,000 authorized shares, no shares issued and outstanding	-	-
Common stock, $0.001par value, 500,000,000 authorized, 12,540,686 shares issued, 12,526,240 shares outstanding and 12,476,414 shares issued, 12,427,220 shares outstanding at December 31, 2012 and December 31, 2011, respectively	12,526	12,427
Additional paid in capital - stock and stock equivalents	71,955,631	70,946,951
Deficit	(66,212,849)	(62,155,774)
Common stock reserved for issuance, 2,264 shares and 17,120 shares at December 31, 2012 and December 31, 2011, respectively	3,125	34,750
Total Stockholders' Equity	5,758,433	8,838,354
Total Liabilities and Stockholders' Equity	$ **6,143,656**	$ **10,518,787**

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

Lightbridge Corporation
Consolidated Statements of Operations

	Years Ended December 31,	
	2012	2011
Revenue:		
Consulting Revenue	$ 3,677,596	$ 6,356,424
Cost of Consulting Services Provided	2,266,815	3,992,153
Gross Margin	1,410,781	2,364,271
Operating Expenses		
General and administrative	3,841,486	6,342,673
Research and development expenses	2,064,568	2,349,749
Total Operating Expenses	5,906,054	8,692,422
Operating Loss	(4,495,273)	(6,328,151)
Other Income and (Expenses)		
Investment income	433,636	465,162
Other income (expenses)	4,562	(6,018)
Total Other Income and (Expenses)	438,198	459,144
Net loss before income taxes	(4,057,075)	(5,869,007)
Income taxes	-	-
Net loss	$ (4,057,075)	$ (5,869,007)
Net Loss Per Common Share, Basic and Diluted	$ (0.32)	$ (0.47)
Weighted Average Number of shares outstanding	12,491,106	12,376,548

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

Lightbridge Corporation
Consolidated Statements of Cash Flows

	Years Ended December 31,	
	2012	2011
Operating Activities:		
Net Loss	$ (4,057,075)	$ (5,869,007)
Adjustments to reconcile net loss from operations to net cash used in operating activities:		
Stock based compensation	975,421	1,513,021
Depreciation and amortization	28,357	26,962
Unrealized gains on marketable securities	(195,892)	(93,951)
Changes in non-cash operating working capital items:		
Accounts receivable - fees and reimbursable project costs	(324,592)	713,352
Prepaid expenses and other assets	(184,407)	95,564
Accounts payable, accrued liabilities and other current liabilities	(1,295,210)	(337,929)
Deferred revenue	-	(98,110)
Net Cash Used In Operating Activities	(5,053,398)	(4,050,098)
Investing Activities:		
Proceeds from the sale of marketable securities	3,979,469	10,408,785
Purchase of marketable securities	(234,963)	(5,000,300)
Property and equipment	936	(1,297)
Patent costs	(63,521)	(159,813)
Net Cash Provided By Investing Activities	3,681,921	5,247,375
Financing Activities:		
Proceeds from the issuance of common stock	1,733	-
Restricted cash	(1,799)	(1,600)
Net Cash Used In Financing Activities	(66)	(1,600)
Net Increase (Decrease) In Cash and Cash Equivalents	(1,371,543)	1,195,677
Cash and Cash Equivalents, Beginning of Year	3,569,098	2,373,421
Cash and Cash Equivalents, End of Year	$ 2,197,555	$ 3,569,098
Supplemental Disclosure of Cash Flow Information:		
Cash paid during the year:		
Interest paid	$ -	$ -
Income taxes paid	$ -	$ -
Non-Cash Financing Activity:		
Grant of Common Stock for Payment of Accrued Liabilities	$ -	$ 70,000

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

Lightbridge Corporation
Consolidated Statement of Changes in Stockholders' Equity
For The Years Ended December 31, 2012 and 2011

	Common Stock		Additional Paid-in		Stock Committed Future	Stockholders
	Shares	Amount	Capital	Deficit	Issuance	Equity
Balance - December 31, 2010	12,345,840	$ 12,346	$ 69,370,261	$ (56,286,767)	$ 28,500	$ 13,124,340
Shares issued - stock grants	81,380	81	115,419		(115,500)	-
Net loss for the year				(5,869,007)		(5,869,007)
Stock-based compensation			1,461,271		121,750	1,583,021
Balance - December 31, 2011	12,427,220	$ 12,427	$ 70,946,951	$ (62,155,774)	$ 34,750	$ 8,838,354
Shares issued - stock grants	99,020	99	45,759		(44,125)	1,733
Net loss for the year				(4,057,075)		(4,057,075)
Stock-based compensation			962,921		12,500	975,421
Balance - December 31, 2012	12,526,240	$ 12,526	$ 71,955,631	$ (66,212,849)	$ 3,125	$ 5,758,433

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

LIGHTBRIDGE CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

Basis of presentation

We were incorporated in the state of Delaware on January 8, 1992, and changed our name to Thorium Power, Inc. (TPI) in April 2001. On February 14, 2006, Novastar Resources Ltd., a Nevada corporation (Novastar), and TPI entered into an Agreement and Plan of Merger and merged on October 6, 2006. After the merger, we were known as Thorium Power Ltd. and TPI became our wholly-owned subsidiary. On September 29, 2009, we changed our name from Thorium Power, Ltd. to Lightbridge Corporation (Lightbridge or the Company). We are engaged in two operating business segments: our Technology Business Segment and our Consulting Business Segment (see Note 12-Business Segment Results).

Technology Business Segment

Our primary business segment, based on future revenue potential, is to develop innovative, proprietary nuclear fuel designs which we expect will significantly enhance the nuclear power industry s economics and increase power output by: (1) extending the fuel cycle to 24 months while simultaneously increasing the power output by up to 17% in existing pressurized water reactors (PWR s), including Westinghouse 4-loop reactors, which are currently limited to an 18-month fuel cycle; (2) enabling increased reactor power output (up to 30% increase) without changing the core size in new-build PWRs; and (3) improving the back-end of the fuel cycle related to the volume of used fuel per kilowatt-hour as well as non-proliferation of weapons-usable materials. There are significant technology synergies among our primary fuel products due to utilization of the proprietary metallic fuel rod technology that is at the core of each of them. As a result, once completed, full-scale demonstration and qualification of the metallic fuel rod technology will simultaneously advance all of our product families currently under development.

We are currently focusing our development efforts on three primary fuel product lines: (1) all-uranium seed and blanket fuel for existing plants, (2) all-metal fuel (i.e., non-oxide fuel) for new build reactors, and (3) thorium-based seed and blanket fuel for both existing and new build reactors. Each of the fuel designs utilizes our metallic fuel rod technology.

Consulting Business Segment

Our business model expanded with the establishment of a consulting business segment in 2007, through which we provide consulting and strategic advisory services to companies and governments planning to create or expand electricity generation capabilities using nuclear power plants. On August 1, 2008, we signed separate consulting services agreements with two government entities; Emirates Nuclear Energy Corporation (ENEC) formed by Abu Dhabi, one of the member Emirates of the United Arab Emirates (UAE), and the Federal Authority for Nuclear Regulation (FANR) formed by the government of the UAE. Under these two agreements, we provide consulting and strategic advisory services over a contract term of five years starting from June 23, 2008. The termination date of our agreement with ENEC was extended to December 31, 2013, and for FANR was extended to December 31, 2014. These termination dates can be extended upon agreement by both parties.

Accounting Policies and Pronouncements

Basis of Consolidation

These financial statements include the accounts of Lightbridge, a Nevada corporation, and our wholly-owned subsidiaries, TPI, a Delaware corporation, Lightbridge International Holding LLC, a Delaware limited liability

company and our foreign branch offices.

All significant intercompany transactions and balances have been eliminated in consolidation. We registered a branch office in the United Kingdom in 2008 called Lightbridge Advisors Limited (currently inactive) and we also established a branch office in Moscow, Russia, in July 2009, both which are wholly owned by Lightbridge International Holding LLC.

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 accompanying 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 on deferred tax assets 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.

Certain Risks, Uncertainties and Concentrations

Management anticipates, based on our current working capital and our current projected working capital requirements, that we will have enough working capital funds to sustain our current operations at our current operating level until 2014. We will need to raise additional capital in 2014 by way of an offering of equity securities, an offering of debt securities, a financing through a bank, or a strategic alliance with another entity. We may also need to raise additional capital sooner for research and development expenses in 2013 if our consulting business segment becomes non-sustaining. Currently, we are working on consulting revenue opportunities with the overall goal of increasing our profitability and cash flow.

We participate in a government regulated industry. Our operating results 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 future operations and earnings currently 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 research and development activities, 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, 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 its international operations for almost all its revenue, the Company may be subject to various additional political, economic, and other uncertainties.

Financial instruments that potentially subject us to concentrations of credit risk consist principally of cash equivalents, marketable securities and accounts receivable. Cash equivalents and marketable securities consist of money market funds and mutual bond funds held with one major financial institution with a high credit standing. The underlying

fixed-income investments of the money market and bond mutual funds are either United States Treasury securities or represent a diversified portfolio of investments.

Accounts receivable are typically unsecured and are primarily derived from revenues earned from customers located in the Middle East. We perform ongoing evaluations to determine customer credit and we limit the amount of credit we extend, but generally we do not require collateral from our customers. We maintain reserves for estimated credit losses, however, no reserve has been set up for 2012 and 2011, as we have not incurred any credit losses from our customers, to date. Substantially all of our consulting revenues were from our Middle East contracts for the years ended December 31, 2012 and 2011. One consulting firm accounted for 31% and 30% of our total cost of consulting services provided, for the years ended December 31, 2012 and 2011, respectively.

Revenue Recognition

Consulting Business Segment

At the present time, we derive all of our revenue from our consulting and strategic advisory services business segment, by offering consulting 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.

Revenues from the Executive Affairs Authority ("EAA") of Abu Dhabi, one of the member Emirates of the UAE, and the related entities, ENEC and FANR, are billed and 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 bear for collecting consulting fees, travel costs and other reimbursable costs from our customers, that in 2012 and 2011 we acted as a principal, and therefore we are recognizing as revenue all travel costs and other reimbursable costs billed to our customers.

Cost of consulting services includes labor, travel expenses and other related consulting costs. All costs directly related to producing work under certain consulting agreements where revenue is recognized upon acceptance of certain contractual milestones by our customer, are first capitalized as deferred project costs. Deferred project costs are then recognized or amortized to an expense captioned "cost of consulting services provided" on the accompanying consolidated statement of operations, when the revenue is recognized upon the delivery and acceptance of the defined contractual milestones or deliverables.

Technology Business Segment

Once our nuclear fuel designs have advanced to a commercially usable stage by either a fuel fabricator or nuclear plant owner/operator, we will seek to license our technology to them or to major government contractors working for the U.S. or other governments. We expect that our revenue from these license fees will be recognized on a straight-line basis over the expected period of the related license term.

Stock-Based Compensation

The stock-based compensation expense incurred by Lightbridge for employees and directors in connection with its stock option plan is based on the employee model of ASC 718, and the fair market value of the options is measured at the grant date. Under ASC 718 employee is defined as, An individual over whom the grantor of a share-based compensation award exercises or has the right to exercise sufficient control to establish an employer-employee relationship based on common law as illustrated in case law and currently under U.S. Tax Regulations . Our advisory board members and consultants do not meet the employer-employee relationship as defined by the IRS and therefore are accounted for under ASC 505-50.

ASC 505-50-30-11 (previously EITF 96-18) further provides that an issuer shall measure the fair value of the equity instruments in these transactions using the stock price and other measurement assumptions as of the earlier of the following dates, referred to as the measurement date:

i. The date at which a commitment for performance by the counterparty to earn the equity instruments is reached (a performance commitment); and
ii. The date at which the counterparty s performance is complete.

We have elected to use the Black-Scholes-Merton pricing model to determine the fair value of stock options on the measurement date of the grant. Restricted stock units are measured based on the fair market values of the underlying stock on the measurement date of the grant. Shares that are issued to officers on the exercise dates of their stock options may be issued net of the statutory withholding requirements to be paid by us on behalf of our employees. As a result, the actual number of shares issued will be fewer than the actual number of shares exercised under the stock option. We recognize stock-based compensation using the straight-line method.

For the years ended December 31, 2012 and 2011, we recognized stock-based compensation of approximately $1.0 million and $1.5 million respectively. Related income tax benefits were not recognized, as we incurred a tax loss for both years.

Fair Value of Financial Instruments

The carrying amounts of our financial instruments, including cash and cash equivalents, accounts receivable, accounts payable, and accrued liabilities, approximate fair value because of their generally short maturities. We carry marketable securities at fair value.

Cash and Cash Equivalents, Restricted Cash and Marketable Securities

We invest our excess cash in money market mutual funds, and mutual bond funds. We classify all highly liquid investments with stated maturities of three months or less from date of purchase as cash equivalents and all highly liquid investments with stated maturities of greater than three months as marketable securities. We hold cash balances in excess of the federally insured limits of $250,000 with two prominent financial institutions. We deem this credit risk not to be significant as our cash is held by major prominent financial institutions. Total cash and cash equivalents held in checking accounts and a money market core cash account, as reported on the accompanying consolidated balance sheets, totaled approximately $2.2 million and $3.6 million at December 31, 2012 and 2011, respectively.

Restricted cash represents cash being held by one prominent financial institution that is being used as collateral for our corporate credit cards and future letters of credit that we may issue to some of our foreign customers. The total balance of our restricted cash at December 31, 2012 and 2011, was approximately $0.6 million.

We determine the appropriate classification of our investments in marketable securities at the time of purchase and reevaluate such designation at each balance sheet date. We have classified and accounted for our marketable securities as available-for-sale, however we carry these securities at fair value (see below election made to value these financial

instruments at fair market value). The fair value of substantially all securities is determined by quoted market prices.

All marketable securities are classified as available-for-sale securities and are reported at their fair value (level 1). A level 1 measurement under the FASB pronouncements is the first tier of a three tier hierarchy for fair value measurements used in valuation methodologies. This valuation level allows for fair value measurements where the inputs are the quoted prices for the assets in the active markets. All of our marketable securities have quoted market prices and these quoted prices are used to determine the fair value of our marketable securities.

The total quoted fair value of our marketable securities at December 31, 2012, was approximately $1.6 million. This amount was held in the following mutual funds: (1) Doubleline Total Return Bond Fund (Symbol - DLTNX) -$0.8 million; (2) Vanguard High Yield Corp Investor Fund (Symbol -VWEHX) - $0.1 million; and (3) Vanguard GNMA Investor Fund (Symbol -VFIIX) - $0.7 million. The cost basis of these above investments was approximately $1.6 million.

The total quoted fair value of our marketable securities at December 31, 2011, was approximately $5.2 million. This amount was held in the following mutual funds: (1) Doubleline Total Return Bond Fund (Symbol - DLTNX) -$1.0 million; (2) Vanguard Wellesley Income Fund (Symbol -VWINX) - $1.3 million; (3) Vanguard High Yield Corp Investor Fund (Symbol -VWEHX) - $1.3 million; (4) Vanguard GNMA Investor Fund (Symbol -VFIIX) - $0.8 million and (5) Vanguard Short Term Investment Grade Investor (Symbol -VGSTX) - $0.8 million. The cost basis of these above investments was approximately $5.1 million.

Investment Income is earned on marketable securities and consists of unrealized gains (losses), realized capital gains or losses, interest and dividends received, as reported to us from the financial institutions in which they were reinvested, and totaled approximately $0.4 million and $0.5 million for the years ended December 31, 2012 and 2011, respectively. We elected the fair value option permitted under FASB ASC 825 to report the unrealized gains and losses from our marketable securities in our accompanying consolidated statement of operations instead of other comprehensive income and loss. Management believes the fair value option provides a better indication of the Company’s performance.

Trade Accounts Receivable

We record accounts receivable at the invoiced amount and we do not charge interest. We review the accounts receivable by amounts due from customers which are past due, to identify specific customers with known disputes or collectability issues. In determining the amount of the reserve, we make judgments about the creditworthiness of significant customers based on ongoing credit evaluations. We will also maintain a sales allowance to reserve for potential credits issued to customers. We will determine the amount of the reserve based on historical credits issued.

There was no provision for doubtful accounts recorded at December 31, 2012 and 2011, as we have not experienced any bad debt write-offs from any of our customers. Substantially all accounts receivable at December 31, 2012 and 2011, are from the FANR and ENEC contracts (see Note 3-Accounts Receivable – Project Revenue and Project Costs).

Property, Plant and Equipment

Property, plant and equipment are 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 depreciation 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.

Income Taxes

Income taxes are accounted for under the asset and liability method in accordance with United States generally accepted accounting principles. 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. We did not provide any current or deferred income tax provision or benefit for any periods presented to date because we have continued to experience a net operating loss since inception and therefore provide a 100% valuation allowance against all of our deferred tax assets (see Note 8–Income Taxes).

The Company adopted the ASC 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. The Company recognizes interest accrued related to unrecognized tax benefits in interest expense and penalties in operating expenses. The Company has not recognized any interest and penalties in 2012 or 2011.

Foreign Currency

The functional currency of our international subsidiaries and branches is the local currency. We translate the financial statements of these subsidiaries to U.S. dollars using month-end rates of exchange for assets and liabilities, and average rates of exchange for revenues, costs, and expenses. The translation gains/losses for our branch office in Russia were not significant for the years ended December 31, 2012 and 2011.

Patents and Legal Costs

Patents are stated on the accompanying consolidated balance sheets at cost less accumulated amortization. The costs of the patents, once placed in service, will be amortized on a straight-line basis over their estimated useful lives or the remaining legal lives of the patents, whichever is shorter. The amortization periods for our patents can range between 17 and 20 years if placed into service at the beginning of their legal lives. Our patents have not been placed in service for the years ended December 31, 2012 and 2011.

Legal costs are expensed as incurred except for legal costs to file for patent protection, which are capitalized and reported as patents on the accompanying consolidated balance sheets.

Impairment of long-lived assets

Long-lived assets of the Company are reviewed for impairment whenever events or circumstances indicate that the carrying amount of assets may not be recoverable. The Company recognizes an impairment loss when the sum of expected undiscounted future cash flows is less than the carrying amount of the asset. The amount of impairment is measured as the difference between the asset's estimated fair value and its book value. The Company did not consider it necessary to record any impairment charges for the years ended December 31, 2012 and 2011.

Research, Development and Related Expenses

These costs from our Technology business segment are charged to operations in the year incurred and are shown on a separate line on the accompanying Consolidated Statement of Operations. Research and development and related expenses totaled approximately $2.1 million and $2.3 million for the years ended December 31, 2012 and 2011.

Segment Reporting

We use the “management approach” in determining reportable operating segments. The management approach considers the internal organization and reporting used by our chief decision makers for making operating decisions and assessing performance, as the source for determining our reportable segments. We have determined that we have two operating segments as defined by the FASB accounting pronouncement, “ *Disclosures about Segments of an Enterprise and Related Information* ”. As discussed above, our two reporting business segments are our technology business and our consulting services business (See Note 12-Business Segment Results).

Commitments and Contingencies

The Company follows subtopic 450-20 of the FASB Accounting Standards Codification to report accounting for contingencies. Certain conditions may exist as of the date the consolidated financial statements are issued, which may result in a loss to the Company but which will only be resolved when one or more future events occur or fail to occur. The Company assesses such contingent liabilities, and such assessment inherently involves an exercise of judgment.

If the assessment of a contingency indicates that it is probable that a material loss has been incurred and the amount of the liability can be estimated, then the estimated liability would be accrued in the Company’s consolidated financial statements. If the assessment indicates that a potentially material loss contingency is not probable but is reasonably possible, or is probable but cannot be estimated, then the nature of the contingent liability, and an estimate of the range of possible losses, if determinable and material, would be disclosed.

Loss contingencies considered remote are generally not disclosed unless they involve guarantees, in which case the guarantees would be disclosed. The Company’s legal costs associated with contingent liabilities are recorded to expense as incurred.

Retirement 401(K) 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 2012 and 2011.

Recent Accounting Pronouncements

Recently Adopted

In May 2011, the FASB issued ASU 2011-04, Fair Value Measurement (Topic 820): Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. GAAP and International Financial Reporting Standards (“IFRS”). ASU 2011-04 clarifies some existing concepts, eliminates wording differences between U.S. GAAP and IFRS, and in some limited cases, changes some principles to achieve convergence between U.S. GAAP and IFRS. ASU 2011-04 results in a consistent definition of fair value and common requirements for measurement of and disclosure about fair value between U.S. GAAP and IFRS. ASU 2011-04 also expands the disclosures for fair value measurements that are estimated using significant unobservable (Level 3) inputs. ASU 2011-04 was effective for the Company beginning after December 15, 2011. The adoption of ASU 2011-04 did not have a material effect on our operating results or financial position.

In September 2011, the FASB issued Accounting Standards Update (ASU) No. 2011-08, Intangibles—Goodwill and Other (Topic 350): Testing Goodwill for Impairment. ASU 2011-08 is intended to simplify how entities, both public and nonpublic, test goodwill and other intangible assets such as patents for impairment. ASU 2011-08 permits an entity to first assess qualitative factors to determine whether it is "more likely than not" that the fair value of a reporting unit is less than its carrying amount as a basis for determining whether it is necessary to perform the

two-step goodwill impairment test described in Topic 350, Intangibles-Goodwill and Other. The more-likely-than-not threshold is defined as having a likelihood of more than 50%. ASU 2011-08 is effective for annual and interim goodwill impairment tests performed for fiscal years beginning after December 15, 2011. Early adoption is permitted, including for annual and interim goodwill impairment tests performed as of a date before September 15, 2011, if an entity s financial statements for the most recent annual or interim period have not yet been issued or, for nonpublic entities, have not yet been made available for issuance. The adoption of ASU 2011-08 did not have a material effect on our operating results or financial position.

In September 2010, the SEC issued Release 33-9142, that amended the SEC s rules and forms, which removed the requirement for issuers that are neither accelerated filers nor large accelerated filers to obtain an auditor attestation report on internal control over financial reporting. Therefore, smaller reporting companies will not need their auditors to test internal controls; however, management will still need to do its assessment for the years ended December 31, 2012 and 2011. We are a smaller reporting company and our management conducted its assessment of our internal controls over financial reporting in 2012 and 2011. In 2012, we elected not to voluntarily obtain an opinion from our auditors on the Company s internal controls over financial reporting.

Note 2. Net Loss Per Share

Basic net loss per share is computed using the weighted-average number of common shares outstanding during the period except that it does not include unvested common shares subject to repurchase or cancellation. Diluted net income per share is computed using the weighted-average number of common shares and, if dilutive, potential common shares outstanding during the period. Potential common shares consist of the incremental common shares issuable upon the exercise of stock options, warrants, restricted shares, and unvested common shares subject to repurchase or cancellation. The dilutive effect of outstanding stock options, restricted shares, restricted stock units, and warrants is not reflected in diluted earnings per share because we incurred net losses for the years ended December 31, 2012 and 2011, and the effect of including these potential common shares in the diluted earnings per share calculations would be anti-dilutive and are therefore not included in the calculations.

The following table sets forth the computation of the basic and diluted loss per share (in millions except shares and per share amounts):

	2012	2011
Numerator:		
Net loss	$ (4.1)	$ (5.9)
Denominator:		
Weighted-average common shares outstanding	12,491,106	12,376,548
Basic and diluted net loss per share	$ (0.32)	$ (0.47)

Note 3. Accounts Receivable Project Revenue and Reimbursable Project Costs

ENEC and FANR Projects

The total accounts receivable from the ENEC and FANR contracts was approximately $0.6 million and $0.3 million at December 31, 2012 and 2011, respectively. These amounts represent approximately 97 percent and 100 percent of the total accounts receivable reported at December 31, 2012 and 2011, respectively. Approximately 98 percent and 78 percent of the total revenues reported for the years ended December 31, 2012 and 2011 were from the ENEC and FANR contracts.

Total unbilled accounts receivable included in the accompanying consolidated balance sheets and reported in accounts receivable of approximately $0.2 million at December 31, 2012 and 2011, respectively, is for work that was billed to our clients in January 2013 and January 2012, respectively. Foreign currency transaction exchange losses and translation gains and losses for the years ended December 31, 2012 and 2011, were not significant.

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 $0.5 million for the years ended December 31, 2012 and 2011, respectively. The total travel and other reimbursable expenses that have not been reimbursed to us and are included in total accounts receivable reported above from our consulting contracts were approximately $0.1 million at December 31, 2012 and 2011.

Under these agreements, revenue will be recognized on a time and expense basis. We periodically discuss our consulting work with ENEC and FANR, who will review the work we perform, and our reimbursable travel expenses, and accept our monthly invoicing for services and reimbursable expenses. We expect the variation of revenue we earn from these contracts to continue. The termination date of our agreement with ENEC was extended to December 31, 2013, and for FANR was extended to December 31, 2014. These termination dates can be extended upon agreement by both parties.

The provisions in the GCC and Kuwait contracts in 2011 obligated them to pay the Company milestone payments contingent on the achievement of certain substantive deliverables under the contract. The final work product we delivered under the contract with the GCC was to issue a feasibility report on regional cooperation in the development of civilian nuclear power for electricity and water desalination. These milestone events included completion of meetings with all GCC members; delivery of assumptions and methodology; submittal of a discussion paper; delivery of a preliminary report and delivery of a final feasibility report to the GCC members. The Company recognized milestone payments from the GCC as revenue when the Company achieved the underlying contractual milestones. Milestone payments were not dependent on any other future activities or achievement of any other future milestones. The achievement of each of the contractual milestones was substantively at risk and contingent at the effective date of the contract. Substantial effort was involved in achieving each of the milestones. These milestones represent the culmination of discrete earnings processes, and the amount of each milestone payment was reasonable in relation with the level of effort associated with the achievement of the milestone. Each milestone payment was nonrefundable and non-creditable when made. Furthermore, these milestones were considered substantive because the consideration earned from the achievement of each milestone (a) was commensurate with the Company s performance to achieve the milestone, (b) relates solely to past performance, and (c) was reasonable relative to all of the deliverables and payment terms (including other potential milestone consideration) within the arrangement. Total revenue recognized from the GCC contract for the year ended December 31, 2011 was approximately $1.4 million. For our consulting work with Kuwait, total revenue recognized for the year ended December 31, 2011, was approximately $0.3 million. The GCC and Kuwait contracts were both completed in 2011.

Note 4. Prepaid Expenses other Current Assets

Prepaid expenses consist primarily of prepayments made for various insurance policies, rent, deferred project costs relating to our consulting contracts and accounting software licensing costs. Total prepaid expenses and other current assets reported on the accompanying consolidated balance sheets at December 31, 2012 and 2011, were approximately $0.6 million and $0.3 million, respectively.

Note 5. Property, Plant and Equipment, net

The following represents the detail of our property, plant and equipment (in millions), net at December 31, 2012 and 2011:

	2012	2011
Furniture, computers and office equipment	$ 0.1	$ 0.1
Accumulated depreciation	(0.1)	(0.1)
Net book value	$ -	$ -

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 2012 and 2011.

Note 6. Patents and Other Assets

Patents represent legal fees and filing costs that are capitalized and amortized over their estimated useful lives of 17 to 20 years or their remaining legal lives, whichever is shorter, after they are placed in service. There were no patents placed in service for the years ended December 31, 2012 and 2011. In 2012, we capitalized approximately $0.1 million for patent filing costs, for a total investment in patents of approximately $0.6 million as of December 31, 2012. In 2011, we capitalized approximately $0.2 million for patent filing costs, for a total investment in patents of approximately $0.5 million at December 31, 2011.

No amortization expense of patents was recorded in either of the years ended December 31, 2012 and 2011. These patents were not placed in service for the years ended December 31, 2012 and 2011, or in prior years.

Security deposits of approximately $0.1 million at December 31, 2012 and 2011, represent the security deposit placed on the McLean, Virginia corporate offices. The security deposit at December 31, 2012, is reported under the caption prepaid expenses and other current assets.

Note 7. Accounts Payable and Accrued Liabilities

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

	2012	2011
Trade payables	$ 0.2	$ 0.1
Accrued expenses and other	0.2	0.6
Accrued payroll liabilities	0.0	1.0
Total	$ 0.4	$ 1.7

Note 8. 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 2012 and 2011 annual effective tax rate is estimated to be a combined 40% for the U.S. federal and state statutory tax rate. We review tax uncertainties in light of changing facts and circumstances and adjust them accordingly. As of December 31, 2012 and 2011, 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, 2012 and 2011, respectively, are as follows:

Deferred Tax Assets (in millions)

	Total 2012	Total 2011	Deferred Tax Asset 2012	Deferred Tax Asset 2011
Capitalized start-up costs	$ 5.1	$ 5.6	$ 2.0	$ 2.2
Stock-based compensation	21.7	21.1	8.7	8.5
Net operating loss carry-forward	34.4	30.5	13.8	12.1
Less: valuation allowance	(61.2)	(57.2)	(24.5)	(22.8)
	$ -	$ -	$ -	$ -

We have a net operating loss carry-forward for federal and state tax purposes of approximately $34.2 million at December 31, 2012, that is available to offset future taxable income, which will begin to expire in the year 2021. For financial reporting purposes, no deferred tax asset was recognized because at December 31, 2012 and 2011, management estimates that it is more likely than not that substantially all of the net operating losses will expire

unused. As a result, the amount of the deferred tax assets considered realizable was reduced 100% by a valuation allowance. The change in the valuation allowance was approximately $1.7 million and $2.3 million for the years ended December 31, 2012 and 2011, respectively. Many of the Company s operating expenses in its 2007 and 2006 tax years were classified under the Internal Revenue Code as capitalized Startup Costs , which did not begin to be deductible for tax purposes until 2008. The Company files a consolidated tax return with its subsidiaries. The Company is no longer subject to U.S. federal, state, or non-U.S. income tax examinations by tax authorities for tax years before 2009, except that earlier years can be examined for the sole purpose of challenging the net operating loss carry-forwards arising in those years.

Note 9. Commitments and Contingencies

Employment Agreements

We have employment agreements with our 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 us for cause, or upon the death of the officer), if all provisions of the employment agreements are met, we are committed to pay certain benefits, including specified monthly severance.

Operating Leases

We entered into an agreement to lease 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. We are not charged additional amounts for real estate taxes and standard operating expenses. We paid an initial monthly rental fee in the amount of approximately $43,000 in accordance with the sublease agreement. Parking fees, and rent payments increase by a factor of 4% each year thereafter. The monthly straight-line rental expense from August 1, 2008 to December 1, 2013, is approximately $45,000. As a result of the straight-line rent calculation generated by the one free rent period and rent escalation, we have recorded in accrued liabilities a deferred rent credit of approximately $44,000 and $70,000 at December 31, 2012 and 2011, respectively. Rent expense was approximately $0.7 million for the years ended December 31, 2012 and 2011.

Estimated total annual rental payments (in millions) under our operating leases are as follows:

		Total
Year ending - December 31, 2013		0.7
Total minimum lease payments	$	0.7

Note 10. Research and Development Costs

Research and Development Costs

Research and development costs, included in the accompanying consolidated statements of operations amounted to approximately $2.1 million and $2.3 million for the years ended December 31, 2012 and 2011, respectively.

On September 19, 2012, Lightbridge issued Task Order No. 1 (the TO) under our Master Research Services Agreement with Texas A&M University. The scope of the TO includes certain neutronic modeling work to be performed by Texas A&M University for Lightbridge. The results of this work will be used to enhance our neutronic modeling capability using industry standard computer codes. All of the work under this TO is expected to be completed by March 1, 2013. The TO has a fixed total price of $46,666, of which $23,333 is due upon execution of the TO and receipt of invoice, $11,667 due on December 15, 2012, and the remaining $11,666 due the later of March 1, 2013 or delivery of the final report. As of the date hereof, $35,000 of the total amount of $46,666 due to Texas A&M University under the TO has already been paid by Lightbridge.

In addition, we have consulting agreements with several consultants working on various projects for us, which total approximately $10,000 per month.

Note 11. Stockholders Equity

At December 31, 2012, there are 500,000,000 shares of authorized common stock. Total common stock outstanding at December 31, 2012 and December 31, 2011, was 12,526,240 and 12,427,220 shares, respectively. At December 31, 2012, there were 2,264 shares reserved for future issuance, 1,034,996 stock warrants, 1,639,842 stock options outstanding and 43,032 total unvested shares of restricted stock (of which 14,446 unvested restricted stock was issued but not vested at December 31, 2012 and therefore not considered in our total outstanding shares on the accompanying consolidated balance sheet), all totaling 15,246,374 of total stock and stock equivalents outstanding at December 31, 2012.

Sale of Unregistered Securities

During the twelve months ended December 31, 2012, we issued 855 shares of our Common Stock to replace 855 shares that had been mistakenly escheated by the state of Nevada from one of our shareholders, and subsequently sold by the state of Nevada for $1,733. The state of Nevada remitted the proceeds of this stock sale to us, and we issued these 855 common shares back to the shareholder.

Registered Direct Offering and Outstanding Warrants

On July 22, 2010, we completed an offering (the Offering) with certain institutional investors on the sale of 2,069,992 shares of our common stock and warrants to purchase a total of 1,034,996 shares of our common stock for aggregate gross proceeds, before deducting fees to the Placement Agent and other estimated offering expenses payable by us, of approximately $13.7 million. The common stock and warrants were sold in fixed combinations, with each combination consisting of one share of common stock and a warrant to purchase 0.5 shares of common stock. The purchase price was $6.60 per fixed combination. The warrants became exercisable six months and one day following the closing date (July 28, 2010, i.e., exercisable beginning January 29, 2011) of the Offering and will remain exercisable for seven years from the date of issuance at an exercise price of $9.00 per share. The exercise price of the warrants is subject to adjustment in the case of stock splits, stock dividends, combinations of shares and similar recapitalization transactions. The exercisability of some of the warrants may be limited if, upon exercise, the holder or any of its affiliates would beneficially own more than 4.99% of our common stock. This limit may be increased to up to 9.99% upon no fewer than 60 days' notice.

We received net proceeds of approximately $12.6 million after payment of certain fees and expenses related to the Offering. The allocation of the proceeds from the offering, based on the relative fair value of the common stock and the warrants resulted in the allocation of approximately $9.0 million to the common stock and approximately $3.6 million to the warrants which was recorded to additional paid-in capital-stock and stock equivalents.

The value of the warrants issued was calculated by using the Black Scholes Valuation Model using the following assumptions: volatility 99%; risk-free interest rate of 2.38%; dividend yield of 0%, and expected term of 7 years. The volatility of the Company s common stock was estimated by management based on the historical volatility of the trading history of the Company s common stock. The risk-free interest rate was based on the Treasury Constant Maturity Rates published by the U.S. Federal Reserve for periods applicable to the expected life of the warrants. The expected dividend yield was based on the Company s current and expected dividend policy and the expected term is equal to the contractual life of the warrants.

Stock-based Compensation Stock Options and Restricted Stock

Stock Plan

We have a stock-based compensation plan to reward for services rendered by officers, directors, employees and consultants. On July 17, 2006, we amended this stock plan. We have reserved 2,500,000 shares of common stock of

our unissued share capital for the stock plan. Other limitations are as follows:

(i) 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;
(ii) The maximum number of shares of common stock with respect to which options may be granted to any one person during any fiscal year may not exceed 266,667 shares; and
(iii) The maximum number of restricted shares that may be granted to any one person during any fiscal year may not exceed 166,667 common shares.

Total stock options outstanding at December 31, 2012 and 2011, were 1,639,842 and 1,674,065, respectively of which 1,523,536 and 1,345,541 of these options were vested at December 31, 2012 and 2011. Stock option expense was approximately $0.7 million and approximately $1.0 million for the years ended December 31, 2012 and 2011, respectively.

Stock option transactions to the employees, directors, advisory board members and consultants are summarized as follows for the year ended December 31, 2012:

	Options Outstanding	Weighted Average Exercise Price	Weighted Average Fair Value
Beginning of the year	**1,674,065**	**$ 11.37**	**$ 10.74**
Granted			
Exercised			
Forfeited	**(167)**	**$ 6.30**	**$ 5.67**
Expired	**(34,056)**	**$ 9.42**	**$ 7.48**
End of year	**1,639,842**	**$ 11.46**	**$ 10.85**
Options exercisable	**1,523,536**	**$ 11.82**	**$ 11.22**

Stock option transactions to the employees, directors, advisory board members and consultants are summarized as follows for the year ended December 31, 2011:

	Options Outstanding	Weighted Average Exercise Price	Weighted Average Fair Value
Beginning of the year	**1,772,348**	**$ 11.81**	**$ 11.04**
Granted	**87,887**	**$ 5.51**	**4.88**
Exercised			
Forfeited	**(2,833)**	**$ 8.58**	**$ 7.73**
Expired	**(183,337)**	**$ 12.90**	**$ 10.96**
End of year	**1,674,065**	**$ 11.37**	**$ 10.74**
Options exercisable	**1,345,541**	**$ 12.62**	**$ 11.99**

The above tables include options issued and outstanding as of December 31, 2012 as follows:

i) A total of 273,536 non-qualified 5-10 year options have been issued, and are outstanding, to advisory board members at exercise prices of $4.50 to $14.40 per share.

ii) A total of 1,136,748 non-qualified 8-10 year options have been issued, and are outstanding, to our directors, officers and employees at exercise prices of $5.42 to $23.85 per share. From this total, 665,088 options are outstanding to the Chief Executive Officer who is also a director, with remaining contractual lives of 2.9 years to 8.2 years. All other options issued to directors, officers and employees have a remaining contractual life ranging from 2.9 years to 8.3 years.

iii) A total of 229,558 non-qualified 8-10 year options have been issued, and are outstanding, to our consultants at exercise prices of $5.70 to $19.20 per share.

The following table provides certain information with respect to the above-referenced stock options that are outstanding and exercisable at December 31, 2012:

	Stock Options Outstanding			Stock Options Vested		
	Weighted Average Remaining Contractual Life - Years	Number of Awards	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life - Years	Number of Awards	Weighted Average Exercise Price
Exercise Prices						
$4.50 - $8.70	**6.27**	**844,801**	**$ 6.33**	**6.04**	**728,495**	**$ 6.27**
$9.00 - $12.90	**4.94**	**130,037**	**$ 10.46**	**4.94**	**130,037**	**$ 10.46**
$13.50-$18.90	**3.3**	**358,336**	**$ 14.17**	**3.3**	**358,336**	**$ 14.17**
$19.20-$23.85	**2.65**	**306,668**	**$ 22.84**	**2.65**	**306,668**	**$ 22.84**
Total	**4.84**	**1,639,842**	**$ 11.46**	**4.62**	**1,523,536**	**$ 11.82**

The following table provides certain information with respect to the above-referenced stock options that are outstanding and exercisable at December 31, 2011:

	Stock Options Outstanding			Stock Options Vested		
	Weighted Average Remaining Contractual Life - Years	Number of Awards	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life - Years	Number of Awards	Weighted Average Exercise Price
Exercise Prices						
$4.50 - $8.70	**7.07**	**871,195**	**$ 6.38**	**6.44**	**542,671**	**6.48**
$9.00 - $12.90	**5.08**	**152.340**	**$ 10.51**	**5.08**	**152,340**	**10.51**
$13.50-$18.90	**4.26**	**343,862**	**$ 14.14**	**4.26**	**343,862**	**14.14**
$19.20-$23.85	**3.65**	**306,668**	**$ 22.84**	**3.65**	**306,668**	**22.84**
Total	**5.69**	**1,674,065**	**$ 11.37**	**5.09**	**1,345,541**	**12.62**

The aggregate intrinsic value of stock options outstanding at December 31, 2012 and 2011 was $0, all of which related to vested awards. 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 ($1.41 and $2.04 per share as of the close on December 31, 2012 and 2011, respectively).

Restricted Stock Award Activity

	Number of Units	Weighted Average Grant Date Fair Value
Total awards outstanding at December 31, 2011	120,021	$ 6.14
Units granted		$
Units Exercised/Released	(76,989)	$ 5.95
Units Cancelled/Forfeited		$
Total awards outstanding at December 31, 2012	43,032	$ 6.49
Total units vested	-	
Total units non-vested	43,032	$ 6.49
Total shares outstanding at December 31, 2012	43,032	$ 6.49

The following summarizes our restricted stock unit activity:

Scheduled vesting for outstanding restricted stock units at December 31, 2012 is as follows:

	Year Ended December 31,					
	2013	2014	2015	2016	Thereafter	Total
Scheduled vesting restricted stock units	28,739	14,293	--		--	43,032

As of December 31, 2012 and 2011, there was $0.1 and $0.4 million of net unrecognized compensation cost related to unvested restricted stock-based compensation arrangements, respectively. This compensation is recognized on a straight line basis resulting in approximately $0.1 million of the compensation expected to be expensed in the next twelve months, and the total unrecognized has a weighted average recognition period of 1.0 years.

We use the historical volatility of our stock price since January 5, 2006, the date we announced that we were becoming a public company, to estimate the future volatility of our stock. At this time we do not believe that there is a better objective method to predict the future volatility of our stock. We estimate the term of our option awards based on the full term of the award. To date we have had very few exercises of our options, and those exercises have occurred just before the expiration date of the awards. Since the strike price of most of our outstanding awards is greater than the price of our stock, generally awards have expired at the end of the term. We estimate the effect of future forfeitures of our grants based on an analysis of historical forfeitures of unvested grants, as we have no better objective basis for that estimate. The expense that we have recognized related to our grants of options and restricted stock includes the estimate for future pre-vest forfeitures. We will adjust the actual expense recognized as future pre-vest forfeitures as they occur. We have estimated that 1.4% and 3.0% of our option and restricted stock grants respectively, will be forfeited prior to vesting.

There were no stock options granted for the twelve months ended December 31, 2012. Assumptions used in the Black Scholes option-pricing model for the year ended December 31, 2011 were as follows:

	Year Ended 12/31/2011
Average risk-free interest rate	3.35%
Average expected life- years	10

Expected volatility	94.32%
Expected dividends	0

Stock-based compensation expense includes the expense related to (1) grants of stock options, (2) grants of restricted stock, (3) stock issued as consideration for some of the services provided by our directors and strategic advisory council members, and (4) stock issued in lieu of cash to pay bonuses to our employees and contractors. We record stock-based compensation expenses in the caption with all of our other general and administrative expenses. 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.

During the years ended December 31, 2012 and 2011, approximately $1.0 million and $1.5 million respectively, were recorded as total stock-based compensation. Stock-based compensation expense is recorded under the caption general and administrative expenses in the accompanying consolidated statements of operations.

Common Stock reserved for Future Issuance

Common stock reserved for future issuance at December 31, 2012 consists of:

	Shares of Common Stock		Amount
Stock-based compensation	2,264	$	3,125

Note 12. Business Segment Results

We have two principal business segments, which are (1) our technology business and (2) our consulting services business. These business 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. Our Chief Executive Officer and Chief Operating Officer/Chief Financial Officer have been identified as the chief operating decision makers. Our 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 achievement of strategic goals toward future profitability and business segment income before taxes are the primary measures. The following tables show the operations of the Company s reportable business segments for the years ended December 31, 2012 and 2011.

	Consulting		Technology		Corporate and Eliminations		Total	
	2012	2011	2012	2011	2012	2011	2012	2011
Revenue	3,677,596	6,356,424	-	-	-	-	3,677,596	6,356,424
Segment Profit Pre Tax	719,158	1,411,615	(2,064,568)	(2,349,749)	(2,711,664)	(4,930,873)	(4,057,075)	(5,869,007)
Total Assets	601,803	277,211	600,596	537,075	4,941,257	9,704,501	6,143,656	10,518,787
Property Additions	-	-	-	-	936	1,297	936	1,297
Interest Expense	-	-	-	-	-	-	-	-
Depreciation	-	-	1,577	2,120	26,780	24,842	28,357	26,962

Note 13. Subsequent Events

The Company has implemented the most recent FASB accounting pronouncement for reporting subsequent events. This standard establishes general standards of accounting for and disclosure of events that occur after the balance sheet date but before the consolidated 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, 2012, up through the date these consolidated financial statements were issued and no subsequent events occurred that required disclosure in the accompanying consolidated financial statements.

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.

LIGHTBRIDGE CORPORATION

Date: February 28, 2013 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 on February 28, 2013.

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